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Where have all the games gone? Explorations on the cultural significance of digital games and preservation

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PUBLISHER

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VERSION

NA (Not Applicable or Unknown)

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REPOSITORY RECORD

Barwick, Joanna, Adrienne Muir, and James A. Dearnley. 2019. “Where Have All the Games Gone? Explorations on the Cultural Significance of Digital Games and Preservation”. figshare. https://hdl.handle.net/2134/5325.

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Where have all the games gone? Explorations on the cultural significance of digital games and preservation

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ABSTRACT
It is now 50 years since the development of the first computer game but despite the proliferation of digital games in our society - with an industry which is flourishing and an average of 9 games sold every second of every day in 2007, it seems that these products are not as valued as the products of other cultural industries, such as film and television, and they are being excluded from the preservation of our digital heritage.

This paper will focus on research interviews undertaken with people in the academic community. It will highlight that the growing academic interest in digital games is being hindered by a lack of research collections to support historical study. Researchers acknowledge that the study of digital games is a relatively new discipline and that outside academia, there is still little understanding of their cultural significance. However, they recognise the importance of protecting games as part of our digital heritage to ensure that future generations are able to understand the development of a valuable aspect of our social history. In other words, this research has underlined that games are considered a culture worth studying and something in need of preserving.

Author Keywords
Digital games, preservation, cultural heritage, academics,

INTRODUCTION
Digital games are part of many people's everyday lives: they are an entertainment; a way to relax; something to share between friends (virtual and physical) and family. For many, especially a generation which grew up in the 1980s, digital games have been part of their childhood; they are part of their present and will be there in their future. Yet, despite this apparent proliferation of digital games in our society, they seem to be shrouded by negativity and they are a poor relation in terms of their perceived cultural value in comparison to other cultural industries, such as music and film. They are not generally considered to be an important part of our cultural or digital heritage and, to date, have received little acknowledgement in the academic literature on digital preservation. It is true that the preservation of digital games is beginning to receive some attention, the Library of Congress funded project, 'Preserving Virtual Worlds'; the KEEP project and other similar activities are evidence of this; but, despite these important initiatives, there has still been no research into perceptions towards digital games and how these might influence preservation decisions. These areas have been the key focus of the research study that will be discussed in this paper. The overall aim of this study is to provide a definitive answer to the question, "are digital games something with a history worth preserving and a culture worth studying"?

The limited research into the preservation of digital games was justification for an exploratory study and in this paper, its context will be explored in relation to five main areas: the size and strength of the digital games industry; the negative image of digital games; consideration of the meanings of terms such as cultural heritage and preservation; the growth of academic interest in game studies and a review of current preservation activities. Having reflected on these key reference points, this paper will provide an outline of the aims and objectives of the study and the methodology that has been used. This will lead into a discussion of the current status of the research findings, with particular reference to the results of interviews with academics and researchers. It will highlight that there is a genuine desire to study the culture of digital games, which reinforces the importance of preserving its history.

Breaking New Ground: Innovation in Games, Play, Practice and Theory. Proceedings of DiGRA 2009

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THE SIZE AND STRENGTH OF THE GAMES INDUSTRY

Digital games are often classed as an aspect of 'new' media but it is now 50 years since the development of the first computer game and in this period the industry has overcome serious set-backs, such as the crash of the games market in the early 1980s, and it has succeeded in securing a strong place in the entertainment market. In US, according to statistics from the Entertainment Software Agency (ESA) the digital games industry was worth $22 billion in 2008 [13]. In UK, the Entertainment and Leisure Software Publishers Association (ELSPA) reported that £4.03 billion was spent by consumers in 2008 [14], with sales of games reaching an "all time high" of 82.8 million units [4] and, despite falling to fourth in the world's ranking of game producers, the UK games industry remains extremely significant to the country's economy:

"the games industry has a fraction of the profile that the film and television industries enjoy, despite contributing 30% of the UK's media exports." [38]

Year-on-year increases of software sales suggest a rise in popularity of gaming: an estimated nine games were sold every second of every day in 2007 [13]; in the US, videogame sales were up 22.9% in 2008 [13] and up 23% in UK [4]. In addition to these figures, with the growth of access to Broadband and faster connections, online gaming is becoming increasingly prevalent. Blizzard, the developers of the popular Massively Multiplayer Online Role-Playing Game (MMORPG), *World of Warcraft*, reported over 10 million subscribers in 2008 [43]. Furthermore, despite the "continuing myth of the videogame audience" [27], with the release of products such as the Nintendo Wii and DS and recent changes in their advertising campaigns, the games industry is embracing a new audience:

"It's taken more than 20 years for video games to enter the mainstream but recent marketing efforts have shown that companies are heavily targeting older consumers and it appears to have worked. The gift-buying demographic has shifted, to a degree, from older people buying for younger ones, to older kids buying for parents and even grandparents"[24].

Demographics show that the average gamer is 35 years old. 26% of gamers are over 50 and there are more adult female players than boys under 17 [13]. These figures demonstrate that digital gaming is becoming increasingly significant to an increasing number of people and it is interesting to consider digital games as 'mainstream' because, as the UK Trade and Investment report states, gaming still has a fraction of the profile of other cultural industries and furthermore, its image has often been negatively portrayed in the media. Is this changing too?

A POOR RELATION TO FILM AND TELEVISION?

The debates about violence and digital games are familiar, as is the typical argument that children who shoot zombies in a virtual game environment are 'desensitised' to violence in the real world. This negative image has been pervasive in the media and, as Neiburger suggests:

"Video game detractors argue that playing games is at best recreational, and at worst desensitizing and degenerate - no match for the educational and literacy value of reading a book." [25]

In extreme cases, playing digital games has been blamed as a direct cause of violent action: the influence of *Doom* on the Columbine shootings is perhaps the most infamous but there have been a large number of cases in which violent acts have been blamed on the perpetrators 'obsession' with particular games – the recent stabbing in Nottingham, UK of Matthew Pyke was attributed to an "online obsession which became a real life murder" (BBC 2009) and at the time, the headline in *The Telegraph*, was "War games fanatic Matthew Pyke killed by gamer from Germany" [37]. Obsession and addiction are other negative criticisms of digital games: in 2005, a South Korean student died after playing an online game consistently for 50 hours [5] and in 2007, a man died in China after playing for three consecutive days. In some countries, these and similar events have lead to clinics being set up to help people with video gaming addiction. The negative impact that gaming has on people's lives has received a high profile in the media but these attacks are not unfamiliar. In the Byron report, Tanya Byron states that "new media are often met by public concern about their impact on society" [7] and film, television and some genres of music have received similar criticisms: early Jazz musicians for example, were accused of being "devils who were destroying 'good' music" [34]. However, film and television are now widely accepted as part of our every day lives and they are often praised for the high quality of their creative output and the educational value of their work: awards such as the BAFTAs are recognition of these attributes and institutions such as the British Film Industry have an accepted role in the preservation of the culture of these industries. At the same, despite the recent inclusion of videogame awards into BAFTA's remit, games have remained sidelined from our cultural heritage and their preservation has been overlooked. One of the main reasons for this is the nature of the digital games industry. As a cultural industry, it relies on the sale of new releases and it has endorsed the disposability of older titles: earlier versions are inferior as the new titles have new characters, new settings and improved graphics. Therefore, in an increasingly disposable society, is there any real value in the preservation of these objects?

WHY DO WE PRESERVE CULTURAL HERITAGE?

In order to consider the specific issues of the preservation of digital games, it is useful to understand the context of why we preserve cultural heritage. The term 'heritage' relates to the concept of inheritance in terms of what history leaves behind for future generations: cultural heritage relates to the cultural legacy of past generations. The *Oxford English Dictionary* definition of the term 'cultural

heritage' is that which is "characterized by or pertaining to the preservation or exploitation of local and national features of...cultural...interest" [28]. This definition is too broad and lacks clarity: it is more useful to consider Koboldt's definition because it separates 'features' into tangible (art, architecture or games) and intangible assets (language and customs), with an emphasis on artifacts, or 'what we produce':

"a collection of tangible objects related to the cultural development of a society that are inherited from past generations and are valued by contemporaries not only for their aesthetic values or for their usefulness, but also as an expression of the cultural development of a society" [20].

Cultural heritage has a contemporary value, as well as being significant to the development of society. Other authors echo this conclusion; indeed, there is a broad consensus about the value of cultural heritage. Firstly, cultural heritage is recognised as an important part of society's identity: as Lowenthal acknowledges, "the relics of the past are necessary to identity" [22]. He also proposes a direct link between the impulse to preserve and nationalism, a link suggested in the *Oxford English Dictionary* definition, with cultural artefacts considered "a foci of group consciousness" [22]. In a similar conclusion to Lowenthal, UNESCO state that cultural heritage "embodies the symbolic values of cultural identities", but they also suggest that it "constitutes a fundamental reference for structuring society" [39]. The view of cultural heritage as 'a reference for structuring society' relates to others' views on its' significance: Deegan and Tanner assert that civilization's foundations are based upon "our ability to pass information and knowledge, whether technical or cultural, from one generation to another" [10] and in the *Report of the Task Force on Archiving of Digital Information* (1996), it is suggested that "the ability of a culture to survive into the future depends on the richness and acuity of its' members sense of history". These two views – cultural heritage as central to identity, often national identity, and as the foundations of civilization - represent the key reasons that protecting cultural heritage is considered to be so important.

Cultural heritage is seen as an essential way for future generations to learn about "what we think, what we do and what we produce" [33]; and preservation is a key component in how this information is shared: this is emphasised by the *Oxford English Dictionary*'s inclusion of the term in its definition. Preservation is defined by Deegan and Tanner as:

"the continuous process of creating and maintaining the best environment possible for the storage and/or use of an artifact to prevent damage or degradation and to enable it to live as long a lifetime as possible" [10]

These processes are necessary because, as Deegan and Tanner observe "culture is at constant risk" [10]: this is echoed in the report, *Preserving Digital Information* (1996), which states that "cultural memory is...far from secure" [36]. Other authors also highlight the transient nature of cultural heritage and why this means that preservation becomes important; During states:

"...because the past is thought of as other and vanishing, efforts to preserve it become more and more strenuous." [12]

This is reiterated by Lowenthal, who suggests:

"We value our heritage most when it seems at risk; threats of loss spur owners to stewardship." [21] Without positive action, and the 'continuous processes' of preservation, important information and resources are damaged, destroyed or lost and it is seen as the responsibility of national preservation organisations and institutions, such as museums and libraries, to safeguard against these losses. Furthermore, it is through national policy initiatives and legislation, such as the *Legal Deposit Libraries Act* (2003), which ensures the protection of published works but excludes film and sound recordings, that these responsibilities can be met.

There is a useful example of why this positive action is necessary from the history of television. Many early television and radio programmes, including the popular *Doctor Who* series, were lost because there were no preservation policies in place; however, since 1981, the Independent Broadcasting Authority has made preservation a compulsory clause in its contracts with companies [12]. (Similar circumstances saw the loss of many early Hollywood films.) This change in policy reflects a wider acceptance of television as an important part of media history and a valuable aspect of popular culture. It also highlights the complexity of preservation decisions: if the wrong decisions are made, things can be lost forever. This is especially true in the digital environment. So what about digital games?

THE CURRENT STATUS OF GAME PRESERVATION

Although the preservation of digital games has not been appropriately addressed in the academic literature on digital games, there is evidence that preserving these cultural artefacts is beginning to receive some attention. A growth of academic interest in digital games has lead to some research institutions, mainly in US, beginning to develop games collections. The Stephen M. Cabrinety collection at Stanford University is one of the most notable examples, as the "first archival and library collection of digital games in the US" [11] but other American institutions, for example the Centre for American History at the University of Texas and the University of Illinois, have also established collections to support their teaching and research needs. Some museums have also started to recognise the significance of games, notably the Computerspiele Museum in Berlin, the Strong National Museum of Play in US and the National Media Museum in UK, with the launch of the National Videogame Archive in 2008. At present, these initiatives have primarily focussed on physical collections

and although these efforts are significant, the lack of academic research into the relevance of preserving these artefacts does not corroborate their importance.

ACADEMIC INTEREST IN DIGITAL GAMES

Considering the definitions of cultural heritage and preservation demonstrates that in order for digital games to be preserved, there has to be recognition of their 'aesthetic value', their 'usefulness' and their value as 'an expression of the cultural development of a society'. Alongside their increased popularity, Lowood acknowledges that there is a "growing scholarly interest in the study of games and related interactive media" [23]. Early games theorists, such as Caillois, saw games as highly worthy of study because they reflect the culture from which they stem. He argued that games "necessarily reflect its [society's] culture patterns and provide useful indications to the preferences, weaknesses and strength of a society at a particular stage of its evolution" [8]. Digital games theorists also see value in games for this reason: Aarseth sees digital games as "the most fascinating cultural material to appear in a very long time" [1] and Kucklich affirms that digital games are "cultural products with deep roots in the culture they stem from" [32]. It is for these reasons that academic interest in digital games has grown and organisations such as the *Digital Games Research Association* (DIGRA) play an important role in supporting research in the field. The development of the discipline of game studies has seen a rise in the numbers of games courses in UK: a UCAS search shows 329 courses available in 2009, ranging from Foundation Year to Masters degree level (UCAS), and this does not even include the courses which may run games modules as part of a broader course specification. This growth of academic interest suggests that there is an awareness of the significance of digital games and a recognised contemporary usefulness. To facilitate continued study, preservation will prove vital but in order to fully understand the needs of researchers and the challenges of preserving these aspects of our cultural heritage, a fuller investigation of the issues is necessary.

INTRODUCTION TO THE RESEARCH

A lack of research into the cultural significance of games was justification for an exploratory study into the status of the preservation of digital games. There is a wide consensus that preservation efforts require collaboration, especially in the area of digital preservation, because "the problem is far larger than one group or individual can solve"[13]. Jones and Beagrie expand on this, suggesting reasons why collaboration is important:

"There is an increasing need to go beyond the confines of individual organisations, or even countries, to maximise the benefits of the technology, address issues such as copyright, and also to overcome the challenges cost-effectively." [19]

The key stakeholders in the preservation of digital games are the creators (the games industry); the users (research community) and the heritage institutions. From an initial review of the preservation of games, it was apparent that there was a potential need from the users, and interest from the research community, but the extent of the heritage sector's involvement and interest of the games industry was unclear. Having identified these main stakeholders in the preservation of digital games, it was necessary to focus on the most appropriate approach for the study in relation to the key aims and objectives.

The overall aim of the study is to evaluate the cultural and historical significance of digital games in order to assess the importance of their preservation; therefore, the interpretation of the meaning of culture is a key element. The constructionist view is that "social phenomena and their categories are not only produced through social interaction but that they are in constant revision" [6]. This paradigm underpins this study because it is accepted that culture is a product of society; that the actions of individuals affect how it is perceived and their perceptions have implications for its revision. In this way, the perceptions of stakeholders are fundamental and it is necessary to focus on the individual's view of the world around them and the subjective meaning they apply to this. Weber describes sociology as:

"science which attempts the interpretive understanding of social action in order to arrive at a causal explanation of its cause and effects" [6]

This relates closely to the aims and objectives outlined for this research: it is about gaining a "sense of understanding of phenomena" [40] in this context the cultural and historical significance of digital games; to interpret the reasons for people's perceptions towards digital games (its cause) and the implications for preservation (effects).

In order to achieve these aims, a qualitative approach has been taken and semi-structured interviews have been used. In the early stages, a 'criterion' or 'purposeful' sampling approach was used but as this research is exploratory, a 'snowball' sampling approach has been adopted in the latter stages of the research. This sampling approach in which "the researcher makes initial contact with a small group of people who are relevant to the research topic and then uses these to establish contact with others" [6] has been beneficial to the research process, as new contacts have been made through the expertise of the initial group. Interviews have been held with academics and researchers in the field of games studies, representatives from the games industry and professionals from appropriate memory institutions. In addition to these groups, further interviews have been held with representatives from the various online preservation groups, such as the *Software Preservation Society*, and a range of case studies have been carried out to gain a wider understanding of the current status of digital game preservation. This paper will focus on the themes identified in the interviews with the academic and research community.

PERCEPTIONS OF ACADEMICS AND RESEARCHERS

The knowledge, experience and status of heritage institutions is essential to the success of preservation initiatives but collaboration with the industry and the potential users of the collection is also important because, as Cortada [in 23] suggests, recognition of the significance of material often comes from outside the institutions. If collections are designed to support research, it is only through communication with these users that satisfactory policies can be defined. Understanding the current status of academic interest and the potential needs of researchers in relation to digital game collections is therefore an important aspect of this research and in interviews with this group, four main themes have emerged. These themes are the growing significance of digital games and changing perceptions towards them; the development of the discipline of game studies and the need for collections to support this.

Cultural significance of games

Digital games are seen as very much part of people's everyday lives: a pastime which has become increasingly popular and which is becoming a mainstream entertainment activity. Liz Evans, an academic at Nottingham University, identifies games as an important part of her childhood; Derek Robertson, development officer at Learning and Teaching Scotland, refers to games as "a cultural reference point for children" and Professor James Newman from Bath Spa University, observes:

"for a whole generation of people, games have occupied…an important place in their childhood, their adolescence, in their explorations of self and identity, in their leisure time." [26]

These opinions complement the game sale statistics and the changing demographic of gamers but they also highlight the status of digital games as an important part of the lives of so many people. This prevalence of games in people's lives, particularly for recent generations, is seen by academics as an indicator of their relevance to contemporary culture, as Evans observes:

"You cannot deny its current cultural importance and that is not going to go anywhere. If anything, it is only going to increase." [15]

Beyond this contemporary value, academics and researchers are conscious of their wider significance: this is expressed in relation to other media, which are already accepted as culturally significant. James Dearnley, Loughborough University suggests that games are "as important as books"; Liz Evans comments "in terms of importance to number of people, they are much more important than something like opera" and Derek Robertson states that they are as "important as the Lumiere brothers films". This comparative evaluation of the significance of games is also evident in James Newman's observation:

"I think they are as culturally significant as any other media form. So if we say that games aren't then I think that we have to accept that a whole bunch of other stuff isn't." [26]

Mathias Fuchs, Salford University, suggests that games are the "lead technology" of our generation in the same way that television was the lead technology of the 1950s.

According to Evans, "cultural objects are the things that people choose to be a part of and choose to interact with, be that games, TV, or opera or sculpture or a newspaper." She concludes:

"if there is a place for the study of cultural objects, which I personally believe there is, then games have to be a part of that". [15]

These views demonstrate that digital games are accepted by academics to be part of the 'cultural development of society' and the growth of academic interest in digital games is directly related to this.

Development of game studies

There has been a change in perception towards digital games within academia, as Iain Simons, the Director of GameCity at Nottingham Trent University, observes:

"There didn't seem to be much acknowledgement in broader academia that these things could be non-trivia and used for other things if you took the guns out. It was a few years until this became academically, in a broader sense academically, acceptable." [35]

James Newman echoes this:

"We do not have to justify why we are talking about games anymore. It seems they are becoming less of a media non gratis and there is a recognition that there is something interesting and different about them." [26]

It seems that it has become more acceptable to study games and this has extended into teaching about games. According to Liz Evans, more and more departments are offering games courses. Certainly, there is evidence that institutions are prepared to support game studies: James Dearnley believes that his institution recognises that "games are relevant" and he specifically acknowledges the effect of other institutions moving into this area on his department. The study of games is identified as a 'forward looking approach'. James Newman thinks this is because "games are sexy" and universities were hoping to attract students with these 'sexy' new courses:

"It is kind of institutional short-hand for forward-lookingness. They are certainly very voguish things." [26]

These views are supported by evidence of a growing number of games courses available at institutions. This growth in interest in digital games reflects their increasing significance but it is interesting to consider whether this extends beyond the academic community.

Changing perceptions towards digital games

The negative image of digital games was discussed in the interviews: Dave Green, Communications Director of London Games Fringe, observes that "they are considered a time-wasting activity" and Aylish Wood, from the University of Kent, comments that they are considered "geeky and for young men"; however, most of the discussions focus on the fact that these perceptions are changing. James Dearnley observes that "games are taken more seriously now" and James Newman suggests "it is certainly more acceptable to describe yourself as a gamer". In reference to his work with games and learning, Derek Robertson acknowledges:

"I think if I had started this 3 or 4 years ago, there may have been more outrage." [31]

This change in attitude towards digital games is felt to be attributable to the coming of age of a generation, which has grown up with games. Liz Evans observes that her generation is "one of the first which grew up with gaming as an integral part of your household" and James Newman sees games being accepted by young people as "part of a broader media diet". He makes an interesting observation about these changes in perception:

"I think that their cultural significance is probably recognised but not institutionalised. The wider population are quite happy to talk about games - there is a certain level of nostalgia and they have the same resonance and meanings to people's lives as other media." [26]

These changes in perception are important in relation to preservation. Preservation decisions are taken based on perceptions of value and as demonstrated with the example of the loss of early television history, if our actions do not reflect these changes in perception, important aspects of our cultural heritage are lost.

Loss of gaming history

With this development of academic interest in game studies, there comes an awareness of the longer-term significance of digital games. Duncan Best, Events Manager at ELSPA, observes:

"From a sociological point of view, Grand Theft Auto will have something to say in 20 years time. It is as simple as that and like any other art from, it needs to be archived because of that."

Aylish Wood summarises this position:

"if you take games seriously and have a desire to preserve your cultural heritage, then games are part of that." [42]

James Dearnley refers to games as "part of our digital heritage" and Liz Evans is conscious of the need to understand the history of gaming:

"I think knowing where it has come from and understanding its history, just like understanding the history of any art form, of understanding television, film, literature, drama, anything, I think it is important to study it." [15]

However, it is acknowledged that this becomes difficult when this history is lost and the loss of these potential research materials is already affecting academics' work. Pinchbeck sees accessing original material as a "fundamental problem" and James Dearnley states:

"most of us have a representation of what has been lost, particularly in 70s and 80s, and the early history of games." [9]

Liz Evans refers to the frustration of research material disappearing:

"And now it has gone forever and I can never look at it which was very frustrating and I cannot even find it archived anywhere." [15]

This is an experience shared by James Newman:

"The stuff is disappearing….there is no place where we can actually look at this stuff." [26]

These experiences demonstrate that there is an awareness that digital games are at risk and the problems that this causes for research. This evidence is justification for concern about the issues of the preservation of digital games.

Summary

Digital games have become a reference point in many people's lives, which is an indicator of their contemporary significance. Furthermore, the growth of academic interest in digital games is directly related to their position as an "expression of the cultural development of our society" because researchers have recognised the contemporary 'usefulness' and 'aesthetic value' of digital games. For these reasons, there is growing aknowledgement that digital games should receive the same recognition and appreciation as other cultural and media forms – the BAFTA videogame awards are evidence of this. However, in academia there is recognition that this significance is more then just a contemporary one: digital games have something to say about the way we live and it is acknowledged that is important to understand the effect that this has had on our daily lives and the way in which we will view our future. For these reasons, the culture of games is certainly considered to be worth studying.

In accordance with Cortada's acknowledgement that the awareness of the significance of material often comes from outside preservation institutions, it is clear that there is recognition of the importance of digital games from the academic community. In relation to the preservation of the history of games, there is a realisation that the origins of a phenomenon are an essential component of this awareness. However, not enough is being done. Academics and researchers have firsthand experience of what has already been lost and there is sense of urgency about preventing

these losses from continuing. Certainly in order for continued research into games, it will be essential that digital games become accepted as an important aspect of our digital and cultural heritage and institutions respond with preservation efforts.

CONCLUSIONS

This paper is an overview of the first part of a longer study into the cultural importance of digital games and the significance of their preservation. The context of the study has been explored in relation to the growth of the games industry and the increased popularity of digital games in society. The negative image of games has been examined and questions asked about the relevance of the preservation of these objects, in relation to the concepts of culture, cultural heritage and preservation. It is clear that there is a growing interest in the study of gaming culture: game studies has developed over the last ten years into a significant discipline and through interviews with academics and researchers in this field, there is evidence that it is viewed as important to protect and preserve these cultural artefacts as part of cultural heritage. For this to happen, it will require recognition of the importance of preserving digital games from other stakeholders: discussing these issues with institutions and the games industry will be the next objective in this research study.

Making predictions about what will be significant in the future is a difficult task: attitudes and perceptions change – this is emphasised by the example of the lost television programmes and radio broadcasts. The growth of interest in digital games suggests that attitudes are changing and digital games are beginning to be recognised as significant: the academics and researchers echoed this with their experiences. However, the fragility and disposable nature of digital media does not allow for a 'comfort zone' and if the wrong decisions are taken, materials could be lost forever. This means that prompt action and well-defined criteria for selection are essential but this will only be possible through a fuller understanding of the potential long-term significance of digital games. Lowenthal suggests that we value our heritage most when it is at risk [21], it is hoped that highlighting the experiences of academics will prompt action to protect and preserve digital game history.

REFERENCES

1. AARSETH, E., 2001. Computer game studies: year one. Game studies: the international journal of computer game research, 1(1). Available at: http://www.gamestudies.org/0101/editorial.html
2. AVEDON, E.M. and SUTTON-SMITH, B., 1971. The study of games. London: John Wiley & Sons.
3. BBC, 2009. Web murderer given life sentence. BBC news, 11th May 2009 [online]. Available at: http://news.bbc.co.uk/1/hi/england/8040178.stm
4. BBC 2009. Record high for videogaming sales. BBC Technology, 7 January 2009 [Online]. Available at: http://news.bbc.co.uk/1/hi/technology/7814272.stm
5. BBC 2005. South Korean dies after gaming session. BBC news, 10 August 2005 [online]. Available at: http://news.bbc.co.uk/1/hi/technology/4137782.stm
6. BRYMAN, A., 2004. Social research methods. 2nd ed. Oxford: Oxford University Press.
7. BYRON, T., 2008. Safer children in a digital world: executive summary [Online]. London: DFES. Available at: http://www.dfes.gov.uk/byronreview/
8. CAILLOIS, R., 1962. Man, play, and games. Thames and Hudson.
9. DEARNLEY, J., 2008. Interview with James Dearnley at Loughborough University. Conducted by Joanna Barwick.
10. DEEGAN, M. and TANNER, S., 2003. Digital preservation and the future of culture. London: Facet.
11. DiGA,. Digital Games Archive [website]. Available at: http://www.digitalgamearchive.org/home.php
12. DURING, S., 2005. Cultural studies: a critical introduction. Abingdon: Routledge.
13. ESA,.Entertainment and Software Association [website]. Available at: http://www.theesa.com/
14. ELSPA,. Entertainment and Leisure Software Publishers Association [website] Available at: http://www.elspa.com/
15. EVANS, L., 2008. Interview with Liz Evans at Nottingham University. Conducted by Joanna Barwick.
16. FUCHS, M., 2008. Interview with Mathias Fuchs, Salford University. Conducted by Joanna Barwick.
17. GEERTZ, C., 1975. The interpretation of cultures: selected essays. London: Hutchinson.
18. GREEN, D., 2008. Interview with Dave Green, London Games Fringe. Conducted by Joanna Barwick.
19. JONES, M. and BEAGRIE, N., 2001. Preservation management of digital materials: a handbook [Online]. British Library. Available at: http://www.dpconline.org/graphics/handbook/
20. KOBOLDT, C., 1997. Optimising the use of cultural heritage, In HUTTER. M. and RIZZO, I. (eds.), Economic perspectives on cultural heritage. London: MacMillan Press, pp.50-73.
21. LOWENTHAL, D., 1998. The heritage crusade and the spoils of history. Cambridge: Cambridge University Press.
22. LOWENTHAL, D., 1985. The past is a foreign country. Cambridge: Cambridge University Press.

23. LOWOOD, H., 2004. Playing History with Games: Steps towards Historical Archives of Computer Gaming. Paper presented at the Electronic Media Group Annual Meeting of the American Institute for Conservation of Historic and Artistic Works Portland, Oregon, June 14, 2004. Available at: http://aic.stanford.edu/sg/emg/library/pdf/lowood/Lowood-EMG2004.pdf

24. MINTEL 2008. Video Computer Games – UK – September 2006. Leisure and Intelligence: UK, MINTEL Reports.

25. NEIBURGER, E., 2007. Games... in the Library?; Video games support the curriculum and develop a new form of literacy. School Library Journal, (July 1st), pp. 28.

26. NEWMAN, J., 2009. Interview with James Newman, Bath Spa University. Conducted by Joanna Barwick.

27. NEWMAN, J., 2004. Videogames. London: Routledge.

28. OED online. Oxford: Oxford University Press. Available at: http://dictionary.oed.com

29. PINCHBECK, D., 2009. Interview with Dan Pinchbeck, University of Portsmouth. Conducted by Joanna Barwick.

30. REUTERS 2007.

31. ROBERTSON, D., 2008. Interview with Derek Robertson, Learning and Teaching Scotland. Conducted by Joanna Barwick.

32. RUTTER, J. and BRYCE, J. (eds.), 2006. Understanding digital games. London: SAGE.

33. SALEN, K. and ZIMMERMAN, E., 2004. Rules of play: game design fundamentals. Cambridge, Mass.; London: MIT.

34. SELDES, G., 1957. The seven lively arts. New York: Sagamore Press.

35. SIMONS, I., 2008. Interview with Iain Simons at GameCity, Nottingham. Conducted by Joanna Barwick.

36. TASK FORCE ON ARCHIVING OF DIGITAL INFORMATION, 1996. Preserving digital information: report of the task force on archiving of digital information [Online]. Washington DC: Commission on Preservation and Access and Research Libraries Group. Available at: http://www.oclc.org/programs/ourwork/past/digpresstudy/final-report.pdf

37. THE TELEGRAPH, 2008. War games fanatic Matthew Pyke killed by gamer from Germany. The Telegraph, 25 September 2008 [online]. Available at: http://www.telegraph.co.uk/news/3080737/War-games-fanatic-Matthew-Pyke-killed-by-gamer-from-Germany-police-think.html

38. UK TRADE & INVESTMENT, 2007. Playing for keeps: challenges to sustaining a world class computer games sector [online]. London: UK Trade & Investment. Available at: https://www.uktradeinvest.gov.uk/ukti/fileDownload/Finalpdf(LR)AD2695Mono1Games.pdf?cid=410528

39. UNESCO,. What is cultural heritage? UNESCO [website] Available at: http://portal.unesco.org/culture/en/ev.phpURL_ID=1473&URL_DO=DO_TOPIC&URL_SECTION=201.html

40. WALLIMAN, N.S.R., 2005. Your research project: a step-by-step guide for the first-time researcher. 2nd ed. London: Sage.

41. WILLIAMS, R., 1987. Keywords: a vocabulary of culture and society. London: Fontana.

42. WOOD, A., 2009. Interview with Aylish Wood at University of Kent. Conducted by Joanna Barwick.

43. WORLD OF WARCRAFT,. World of Warcraft [website] Available at: http://www.worldofwarcraft.com/index.xml