# Make Videogames History: Game preservation and The National Videogame Archive

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**ABSTRACT**
This paper introduces and describes the UK-based National Videogame Archive, detailing the process leading to its creation and the core methodologies and aspirations of the project. It places the work of the NVA within the wider contexts of preservation, player culture and academia and describes initial projects undertaken by the NVA to supplement core preservation activities.

**Author Keywords**
Games, preservation, National Videogame Archive, archiving

**INTRODUCTION: THE NATIONAL VIDEOGAMES ARCHIVE**
On 30 October 2008, after many years of planning, development and negotiation, The National Videogame Archive (NVA) was formally launched. A partnership between Nottingham Trent University's Centre for Contemporary Play (CCP) research group and the National Media Museum (NMeM) in Bradford, the NVA is the UK's first official collection of videogames and gaming cultures. The partnership brings together critical games studies, audience development, curatorial, conservatorial and museological expertise and enjoys the support of world-leading, DCMS funded storage, exhibition and object handling facilities. The NVA is a major heritage project that places videogames squarely alongside such esteemed archives as the William Henry Fox Talbot Collection and
Royal Photographic Society Collection and recognises the role of videogames within – and *as* – popular culture. To celebrate this landmark event in the preservation of our national cultural heritage and to demonstrate the level of industry support for and engagement with the project, the launch event saw the donation of some high profile objects that might otherwise never have been seen by the public or tell their stories. For instance, Sony's London Studio offered the original prototype *EyeToy* camera complete with its handwritten '#1' sticker of authenticity. Some 10,000,000+ shipped units later [12], it is easy to overlook the importance and innovativeness of *EyeToy* in further blurring the boundary between the real and the virtual and paving the way for Wii, Project Natal and other visceral, corporeal, motion and gesturebased gaming experiences. Of course, where London Studio had been concentrating on the eyes and on developing domestic applications for computer vision research, Harmonix were busy working on the ear candy and we were delighted to that part of the team travelled across the Atlantic to donate a complete set of prototype *Rock Band* controllers and games at the 2009 GameCity festival.

Over the past year, these fascinating inaugural objects have been joined by an ever-expanding array of items ranging from one-of-a-kind hardware prototypes; rare and unusual devices such as the Nintendo *Starlight Fun Centre* [25]; examples of the 'everyday', 'ordinary' consoles and gaming hardware from decades past and present; pristinely boxed collections of games; complete sets of magazines; as well as more fragile materials such as game design documentation hastily scrawled on rough paper or napkins. Interest in the NVA has been considerable and we have been inundated with offers of donations from companies in the games industry and private collectors alike. In addition, an army of people offering their services (often freely simply in order to be involved in the project) reminds us of the passionate nature of gamers as well as the absence of formal collections of games – or opportunities to celebrate and promote games and gaming cultures.

'Gaming cultures' is an important term here and reflects an important decision taken by the NVA team at the very outset of the project planning phase. This is not simply a repository of code nor is it merely an archive of games. Our rather more ambitious aim is to collect, preserve and exhibit objects and artefacts that tell the fullest range of gaming stories (see the 'NVA Mission Statement' for a fuller discussion). As such, and as evidenced by some of the objects in the brief list of acquisitions above, we are

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concerned with the production of games as much as the games themselves. Moreover, what happens to them in the hands of their players is of paramount importance to us. Industry-text-audience is perhaps far from a revolutionary way to study or analyse the media, but a consideration of the circuit-loop of videogames presents some real challenges and opportunities for the archivist, curator and exhibition designer. This essay is an attempt to highlight some of the questions and challenges we face as the field of game preservation emerges as well as offer some thoughts on the relationship between videogame play and collecting/curatorship. While there has been a fair amount of work in the field of archiving and curating digital arts [3], there is little extant research on preserving or exhibiting videogames from which we can draw. The field is an emerging one and we do not pretend to have concrete answers at this stage though we we will showcase a number of approaches as well as some specific projects that manifest our intent and purpose and that we hope will make a useful contribution to the conversation.

Before we commence with our discussion of these strategies and projects, however, it is useful to consider some of the background to the NVA as it reveals much about the current state of formal games archiving activity in the heritage sector and within the industry itself. Moreover, our journey towards the formation of the NVA highlights the existence of a deeply-embedded discourse that is in tension with our archival intentions and that may been seen to restrict or even effectively close down discussion of games as cultural heritage.

**IT'S AROUND HERE SOMEWHERE…**
One of the unexpected consequences of writing *100 Videogames* [21] and our subsequent feasibility research for what would become the NVA was the realisation that the formal archiving of videogames was not currently being undertaken in any systematic way in this country.

Importantly, this lack was felt not only at a national level within the heritage sector, but also within the industry itself. In the development of our previous publications, most notably Inside Game Design [22], our discussions with developers and publishers revealed markedly varying levels of in-house archival activity which in some cases consisted of little more than cardboard boxes stuffed full of production artwork, pre-release builds burned to DVD-Rs, boxart scamps and press clippings. Where code was archived, this was typically in the form of maintaining the already-existing versioning and bug-tracking systems and so revolved around preserving extant mechanisms rather than developing new ones, Similarly, as most of this activity was designed for internal use and consumption only it appears more likely to be motivated by commercial imperatives and software development best practice than by a desire to contribute to the curation of cultural heritage. Priceless insights into the development process collected not out of sense of preserving popular cultural heritage but rather out of a altogether more vague and definitely more personal sense of importance to the individuals involved. This was *their* work and much as one might pin up children's pictures on the fridge, so too were these artefacts and documents of videogame production collated though in perhaps an even more haphazard manner than the parental art curator and with fewer opportunities for display. As such, when undertaking some consultancy for a major UK publisher, it became surprisingly difficult to find the finalised copy for a specific game's instruction manual (save for buying it at retail) let alone exploring the documentation's developmental iterations.

It is our assertion that at least part of the problem here appears to arise from a continued institutional lack of cultural confidence. While public proclamations and rhetoric about the size and economic importance of the videogames industry are commonplace, the lack of formal and systematic archival activity whether at a public or private level seems to speak quite eloquently of the crisis in confidence as to the cultural value of the products and processes of these industries. We suggest that at least one of the reasons for this apparent undervaluing of videogames, gaming cultures and development practice arises from a deep-seated attitude towards technology, progress and obsolescence that colours much thinking of games as a medium both within and without the industry.

**THE BEST IS YET TO COME?**
Retailers' shelves heave under the weight of new titles and industry bodies take every opportunity to proudly boast of incredible national and global sales figures. President of Nintendo Satoru Iwata [9] recently announced that over 50 million Wii and 100 million DS consoles had been sold worldwide while, according to the Entertainment Software Association [5], 'On average, nine games were sold every second of every day of 2007'. In the UK, government spokespeople proudly proclaim this as 'one of our most important creative industries' [24]. However, despite all this, the simple fact is that videogames are disappearing.

This is partly a matter of physical deterioration. Made of inherently unstable plastics coated in flameretardant chemicals, cartridges, consoles and joysticks discolour, turn brittle, and eventually crumble to dust. But this is more than a materials conservation issue. However, while this is an important part of the NVA's work, we do not wish to concentrate on such matters here. Instead, we wish to focus on how videogames have come under threat because we, whether as players, as academics, or as members of the global industry, simply do not – simply *are* not – encouraged to place value on old games. The best game is always the next game.

As Newman [19] has outlined elsewhere, the global videogames industry, games journalism and, in particular, advertising and marketing discourses, do a highly effective

job of fixing audience's attentions on the forthcoming release while attitudes towards backwards compatibility clearly communicate the irrelevance of a technologically-limited past as new consoles not only usher unheralded levels of performance but also comprehensively sever links with those that they replace.

> Examining a selection of titles from September 2007 is revealing. The overwhelming majority of articles and features focus on previewing forthcoming titles that are still in development, many of which have no confirmed release dates and some of which may never see a release if history is a precedent. In PSW, some 77 per cent of the articles centre on previews of games in development while for *Xbox 360 World* the figure is 85 per cent, with *Nintendo: The Official Magazine* opting for something akin to futurology in dedicating 90 per cent of its non-advertising material to discussion of as-yet-unreleased games. Indeed, its preview of the forthcoming *Resident Evil: Umbrella Chronicles* is presented under the banner, 'The Next Best Game in The World Ever is...' highlighting the temporary nature of this accolade and the inevitability that a new game will claim the title next month. Moreover, reflecting the pleasures of immersion in this culture of the imminent release, 'XBox World 360' includes an 'Anticip–O–Meter' ™ with most of its previews as an index of the excitement the gamer is, or should be, feeling. [19: 33]

For further evidence of the supersessionary tendency, we need only consider the markedly different ways in which the word 'legacy' is used. In everyday parlance, as in the terminology of the culture and heritage sectors, 'legacy' conjures images of bequests, inheritance and the continuity of generations. For the technology industries, however, 'legacy systems' are a liability. 'Obsoleted' hardware and software that, despite the best efforts of supersessionary discourse, is still in use must be supported and catered for. Even more telling is the videogame industry's continuing campaign against the pre-owned, secondhand and rental markets. In putting forward Nintendo of America's case, Reggie Fils-Aime states that, 'We don't believe used games are in the best interest of the consumer' [23].

Attempting to justify what seems like a position more obviously favouring corporate profit and software sell-through, he continues, 'We have products that consumers want to hold onto.' While game preservation theorists and practitioners would not argue with this, the claim does not chime well when we consider the handling of backwards compatibility. Nintendo's most recently released console, the DSi, removes the GameBoy Advance cartridge slot that its DS and DS Lite predecessors shared. In the absence of new GameBoy Advance consoles at retail, this platform and its games are rendered 'legacy systems' in one swift stroke.

In some senses, videogames are bound up in same the teleological tensions that undermine the longevity of all new media. Chun [2: 1] rightly notes that, in contrast with more open terms like multimedia, 'new media' has always been somewhat problematic. Unaccommodating, '…it portrayed other media as old or dead; it converged rather than multiplied; it did not efface itself in favor of a happy if redundant plurality'. The very newness of new media and of videogames as the apotheosis of the interactivity and multimodality they promise [17], their gleam and shine, is quickly tarnished as they are replaced by ever-newer, ever more exciting, capable and 'revolutionary' technologies whose promise and moment in the limelight is, in turn, equally fleeting. As Franzen [6] has noted, obsolescence and the trail of abandoned, superseded systems is a natural, even planned-for, product of an infatuation with the newness of new media. For Kline et al [13], the obsession with obsolescence leads to the characterization of the videogames industry as a 'perpetual innovation economy' whose institutions 'devote a growing share of their resources to the continual alteration and upgrading of their products.' However, the reduction of videogames to no more than transient technologies that are, whether 'new' or 'old', always inevitably poor imitations of an imaginary, perfect and perfectible future, has serious consequences. Gitelman [7:4] observes that the rotary phone and the eight-track cartridge are now used only by antiquarians having been obsolesced and rendered at best kitschy and chic or perhaps simply redundant and useless, but perhaps more worryingly (and questionably) asserts that, 'Neither silent film nor black-and-white television seems right anymore, except as a throwback'.

With these points in mind, a key concern of the NVA is the increasing attention paid to the development of a videogame literacy that can disentangle the technologies of delivery from the modes of representation and structure from the ludic pleasures of the experiences of performance and sharing, production and consumption. To value videogames as cultural heritage means to step outside the discourses of supersession and obsolescence and the synonymy of videogames and technology. As Jenkins [10:13] observes,

> History teaches us that old media never die – and they don't even necessarily fade away. What dies are simply the tools we use to access media content – the 8-track, the Beta tape...Delivery technologies become obsolete and get replaced; media, on the other hand, evolve.

Against the backdrop of a carefully manufactured sense of dissatisfaction with the technologically inferior past (and even an unease with the present as magazine previews

excite us about the in-development, asyet- unreleased, and inevitably brilliant title), institutional concern is mounting for the plight of videogames and their status as part of popular cultural heritage. While there has been some sporadic exhibition activity (e.g. the *Game On* exhibitions in London), it is comparatively – and surprisingly – recently that organisations such as the *International Game Developers Association* (IGDA), have turned their attentions to preservation and the celebration of videogames' histories. As Ernst [4] reports, the Electronics Conservancy's *Videotopia* exhibition noted in 2001 that 'There are no archives for computer games'. While this comment is now obsolete, it has only recently become so as the game preservation effort is very much in its infancy with the *IGDA Game Preservation SIG*'s 'White Paper on Game Preservation' is only just published, for instance [14].

The embeddedness and voracious recirculation of supersessionary discourse in advertising, marketing and journalistic messages of the games industry and the consequent obsession with the next-generation, and the inevitable and unstoppable obsolescence of old technologies which have been indelibly linked to the quality of gameplay experience, fixes attention on the future rather than the past. It follows that videogaming's past is more usually invoked as a measure of how far the present or next generation has progressed [1].

**BECAUSE WE CARE: THE PLAYER AS COLLECTOR – GAMEPLAY AS CURATORSHIP**
Of course, this does not mean that extensive collections do not exist, just that formal institutions of memory, the games industry and universities have some considerable catching up to do. Even the briefest survey of *eBay* reveals a considerable trade in 'obsolete' games and ephemera and while, like much fan activity, this is not necessarily indicative of a widespread audience practice, it is nonetheless demonstrative of a tangible resistance to the supersessionary messages of marketing and a genuine love of old games and gaming experience.

We should not be in any way shocked that fans acquire sometimes vast collections of gaming materials, of course. Indeed, as Jones [11] has observed, the videogame player is almost primed to undertake this kind of activity as gaming can, at least partly, be understood as the act and art of collecting. Games such as *Animal Crossing* make this tendency most manifest by challenging their players to collect objects and artefacts – from natural history through to works of visual art – so as to fill the initially-empty in-game Museum's cases. While almost all videogames from *The Sims* to *Katamari Damacy* can be considered to engage their players in collecting and collection management work to some extent, *Animal Crossing* is perhaps the most pertinent example of the indivisibility of the gamer/archivist. Moreover, the permeability of the boundary between the fan's collection of toys, dolls, posters and the other treasured objects of merchandising and the manipulation of inventories, acquisitions and equipment lists that we see in the menus and gameplay imperatives of videogames ensures an extensiveness and scope of fan collecting and archival work, while its sociality and the value placed on private hoarding, public sharing and the processes of research '…bridges to new levels of the game' [11: 48]. Perhaps we should be as unsurprised that their focus on collecting makes videogames similar to *eBay* as we are to the realisation that *eBay* with its competitiveness, its winning and losing states, and its inexorable countdown timer, is nothing if not a game?

The acquisition of memorable experiences through fan collecting, the curatorial work of gameplay and fans' creation of formal archives of games and game ephemera speaks of a serious tension in videogame culture that is aggravated, perhaps even created, by the dominant discourses of renewal and revolution. As Franzen [6] demonstrates in his essay 'Scavenging', the acquisition of specific 'outdated' or 'outmoded' technologies or the refusal to let them go in the face of functional obsolescence, is a part of a complex series of negotiations with the modern world in which identities and cultural politics are played out. In the denial of the culture of the continual innovation and upgrade there is not only a demonstrable aesthetic regard for the technologies and systems of the past as objects of beauty and as artefacts, but also a strongly politicised resistance that flows through the deliberate affiliation with the 'obsolete'. As he notes on finding that the rotary telephone he still uses at home is now languishing in a museum exhibit of 'obsolete technology',

> I prefer the reproachful heaviness of my rotary [telephone], just as I prefer the seventies
> clunkiness of my stereo components for the insult it delivers to the regiments of tasteful black boxes billeted in every house across the land
> [6: 199]

This is not simple Luddism, however. Even faced with the inconvenience and incompatibility that this rotary telephone delivers as it fails to operate with automated, touch-tone services, Franzen's fondness for the device appears to grow. It is both a historical totem, a marker of its time and timelessness, and a disruptive counterblast that stands in opposition to the sterility and uniformity of the touch-tone. While we may view these obsoleted technologies whether they be rotary phones, eight track cartridges or Atari 2600 consoles, as inevitable and natural 'victims of the market', we must be mindful that their owners, and in the case of videogames, their players, make a considerable emotional investment in them. I have elsewhere [18, 19] begun to discuss the presentation and management of identity through the politics of platform allegiance, but we should remember also that these 'technologies' deliver experiences of gameplay and performativity and sociality that carry

great meanings for gamers. To simply write-off these activities, these pleasures, these rich, diverse and potentially formative ludic experiences, and even these products, as obsolete is not only a deceitful confidence trick but also significantly undervalues videogames and the cultures and practices of play and production.

The negotiations performed around 'obsolete' videogames and consoles have become complex as pockets of resistance have grown up and institutions have begun to turn their attentions to formal preservation. Accordingly, scrutiny of the emergent cultures and practices of 'retrogaming' are hugely revealing. Although the videogames industry, and in particular its advertising and marketing departments, may have allowed these games to slip from their radar, fans self-consciously and conspicuously continue to pledge their allegiance. Taking advantage of *eBay* and car boot sales, private collectors amass vast hordes of games and ephemera while, in recent years, publications such as *Retrogamer* (Imagine Publishing, UK) have emerged to explicitly cater for this growing but still niche, grassroots interest. As Hillis et al [8] have noted, this is only partly about the acquisition of the objects themselves but also represents a desire on the part of the player/collector to acquire 'closer association with the channels of desire urging its acquisition'. As such, and in keeping with discussions in the broader heritage sector on the potential tyranny of the institutional designation of the canon [15, 14], the NVA is keen to explore the histories, roles and value of fans both as archivists and as videogame researchers.

There is an important caveat here, however. There is a danger of caricaturing gamers as uniformly careful, sensitive curators and collectors. We should be acutely aware that alongside the collection of memorable experiences and veneration of the original game object that we note above, p2p and bittorrent sites offer a very different view of videogames.

(St)ripped down to the barest of code, ROMs deny the gamer the paratextuality of the instruction manual or boxart. In fact, divorced from its context and robbed of its materiality, ROMs perhaps serve to make the original game even more distant. More tellingly, ROMs are typically distributed by the thousand in zipped files. And so, in just a few minutes, entire console back-catalogues – every game released in every territory – are available for browsing and playing on a PC or Mac. The completism of the collections allows detailed scrutiny of differences in Japanese versus European releases, for instance, and can be seen as a vital investigative resource. However, that these ROMs are packaged into collections of many thousands speaks implicitly of these games' perceived value [20].

To some extent, we might argue that officially sanctioned retro collections perform a similarly doubleedged function that demonstrates the tension between the cultural and economic value of old games. Customer feedback on packages such as the *Sega MegaDrive Ultimate Collection* is revealing. The concern seems centred more on the putative monetary value of the package than seeking to justify or question the scope of the collection.

> 'Wtf, only 40 games?', 'I wont be getting this as one disc could hold the entire arsenal of consoles and games from commodore to sega saturn(Maybe even Dreamcast'.

> "Ultimate" Collection? 32Mb of games on a Blu-ray disc?…here are 40 Megadrive games at a total of 31 Megabytes of data. This was taking the Michael on a DVD release for the PS2 (or even on a UMD for the PSP), but for a format that can store 50 Gigabytes of data, it's an insult. Sega's entire back catalogue of Megadrive games only comes to around 800 Megabytes - they could fit that several times over on a DVD.'

## WHAT ARE WE DOING?
We must be clear, however, that while the existence of fan collections (whether reverential and sensitive to the original object or bittorrented accumulations of ROMs dislocated from their hardware and context) is indicative of an interest in gaming histories, the motivation of fans of whichever type is typically quite different from that which guides the formal institution of memory such as the museum or archive. The NVA, for instance, like any institutional undertaking of its kind is not intended to be completist. For the fan, however, completism is very often one of the driving principles as Hills [8] and others have noted. Furthermore, not only is the scope of the NVA is broader than games and ephemera but, more important still, its intention is to make these materials publicly available rather than objects of private curiosity and pleasure. Accordingly, for the NVA, interpretation is key. The NVA is not simply a repository of objects – it is not simply a collection. However fascinating or rare they might be, the objects themselves do not always communicate particularly effectively. At one level, it may be that production documentation, technical drawings or level designs are unintelligible to the uninitiated. Moreover, these documents, even if 'readable', may require considerable contextualization in order to be understood as part of what remains for many a somewhat opaque production process. It may also be that the games themselves are not particularly amenable to being understood or appreciated outside of their intended context. While Coin-Op titles are typically designed to attract potential players and explain their basic mechanic and aim, home PC and console titles often make no such concessions. One of the major challenges faced by any exhibitor of games or educator of games studies students is to allow complex, non-linear games with branching structures that might be contingent on conscious or performative choices to speak. Based on lessons learned

from the GameCity festival (www.gamecity.org), the NVA proceeds from the perhaps somewhat heretical position that games are not always best understood through play. Developing mechanisms and strategies for public display and interpretation is among the most pressing and interesting of our current research projects at the NVA and is essential if we are to avoid recreating a Coin-Op arcade in a museum gallery.

Despite these differences in intention, as well as the attendant dependencies on professional museological practice, there is much to learn from the private fan collector and it is essential to see the efforts of game preservation professionals in concert with the undertakings of fans and their archives and collections as being complementary rather than in competition.

In addition to our ongoing programme of acquisition and conservation activity as as part of our ongoing research into exhibition and display strategies, the NVA is involved in generating original materials that both help to develop understanding of games and gaming cultures and that form a valuable part of the collection resourcebase itself. Here, we will briefly outline just two of the projects that we feel are illustrative of our approach and the scope of our work.

The advent of the DVD as a domestic movie format did much to popularise the audio commentary in which somebody intimately associated with the movie's production, most often the director or key production and cast members (or in the case of the special edition release of Verhoeven's *Basic Instinct* (2002) feminist critic Camille Paglia) discuss details of the production and reception of the piece. Initially a means of demonstrating the technological affordances of DVD and distinguishing the package from VHS in the marketplace, audio commentary/commentaries have become *de rigueur* – for movies, that is. The NVA's *Director Commentaries* project brings the deep insights into the production process that we have become accustomed to with DVD to the gamemaker's art and craft. The project commenced with Martin Hollis and Dave Doak (formerly of Rare) discussing the creation of the Nintendo 64 title *Goldeneye 007* and offered the gaming audience a glimpse into the myriad complex design decisions, compromises, and chance occurrences that comprised the creative process as well as the developmental politics operating at studio and publisher level that ground the activity in the humanity of personal and professional relationships. By making these audiovisual commentaries freely available and allowing gamers to see the development team playing through and explaining their games and the conditions in which they came to be, we hope to heighten the popular appreciation of the game form as it is seen from a new perspective and deepen the knowledge of game production as technological and creative process. A full programme of Director Commentaries is currently under development with titles as diverse of *Geometry Wars*, *Elite* and *Monkey Pole Climb* released later this year.

The second project which we believe illustrates our desire to think beyond the simple acquisition of collection of objects or their exhibition and display in perspex cases with information labels is the *Save the Videogame* campaign. On one level, *StV* is an awareness raising campaign that promotes the work and presence of the NVA. However, more importantly, the campaign encourages the consideration of games as vital parts of popular culture and within their particular lived experience. Through the act of recording a video pledge to offer their support to the NVA by highlighting a game (or part of a game) that should be saved for posterity, *StV* involves the audience in the process of considering their emotional responses to games and gameplay and, by extension, encourages them to consider them alongside music, film, television and literature as part of the backdrop to their life. Moreover, StV marks the beginning of an oral history project that recognises the importance of players as meaning-makers and the malleability of games that come to life in the hands of their audiences, players and fans.

**THE FUTURE OF GAMING'S PAST**

Throughout this essay, we hope to have given some insight into our motivations and aims for the NVA and some of the challenges we face not least of which is associated with the general tendency to fetishise future developments which effectively closes down the discussion of old games and relegates them to legacy systems or marginalises them as retro curios. To reiterate the point we made at the outset of the essay, we are very much at the beginning of the game preservation journey and we are still in the process of mapping our research priorities. We are, however, greatly encouraged to find a groundswell of support from within the videogames industry that has steadily grown over the past few years. Equally, we are heartened to find ourselves working alongside complementary project teams such as the IGDA's Game Preservation SIG whose message is wholly consonant with ours. Time is of the essence, however, as materials continue to decay, fan texts disappear and development teams disband taking their stories and shared experience with them. Indeed, as Henry Lowood [14] notes, we need to act 'before it's too late'.

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