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Introduction

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Australia often doesn't appear as a topic in digital gaming circles, and when it does two topics are inevitably mentioned. First, a surprisingly large number of well-known titles have been made in Australia, both by internationally-owned and local studios. *La Noire* (2011) was developed by Sydney-based Team Bondi, *Fruit Ninja* (2010) is developed by Brisbane-based Halfbrick Studios, and *The Sims Freeplay* (2011) is developed by Melbourne-based Firemonkeys Studios. Further, Australian-based development teams are frequently core contributors to larger projects, such as *Bioshock* (2K Games, 2007) and *Medieval II: Total War* (Creative Assembly, 2006). Second, for many years Australia had a bizarre digital game classification system, which was as arbitrary as it was draconian. This meant many games released elsewhere in the world were not released in Australia (e.g. *Postal 2* (Running With Scissors, 2005)), only released after having specific content removed (e.g., *Saints Row IV* (Volition, 2013) and *South Park: The Stick of Truth* (Obsidian

Entertainment, 2013)) or else were permanently withdrawn from sale (e.g., *Manhunt* (Rockstar North, 2003)). The most noteworthy example being the global delay that it caused for the international release of Bethesda Game Studios' *Fallout 3* (2008). The "realistic" portrayal of drug use meant that it was refused classification in Australia, and Bethesda decided to change that particular element of the game for its global release.

Navigating between such competing historical conditions, the articles that we have collected here represent approaches by contemporary Australian scholars in the study of digital games. They responded to the provocation 'What is Game Studies in Australia?' the topic of the inaugural conference of the Digital Games Research Association Australia (DiGRAA). This event, held on 17th of June 2014, was a meeting of academic researchers, critics, designers, developers, and artists focused on developing a discussion of what game studies 'is' in Australia. The conference focused special attentiveness both to diversity and any particular regional issues that delegates chose to address. These articles illustrate the breadth and variety of approaches which were discussed.

The inaugural DiGRAA conference built on previous research conducted in Australia, something that has largely been publicly defined by the Australian governments strong interest in the social impact of gaming, though has also fomented growing research trajectories in the country. In 1999 the Office of Film and Literature Classification (OFLC) published the lengthy report "Computer Games and Australians Today" (Durkin and Aisbett 1999). Commissioned in 1995, the report responded to the growing significance of video games in Australian life, and at the time it was "one of the largest projects ever conducted into the nature of computer game play" (1999, ix). While the focus of the report was on how aggressive content was "experienced and perceived", it also raises other issues, such as: "time use, implications for social interaction, gender differences in play and attitudes, and consumers' uses of the classification system for computer games" (1999, ix).

Since then, the Interactive Games and Entertainment Association, a local industry lobby group has commissioned a series of reports on the Australian video game market. With six issues published roughly every two years from 2005 to 2015, these reports are based on large-scale random-sample interviews with Australian households, and present a useful macro-analysis of local patterns of video game use and consumption. The most recent report presents the finding that since 2012 more than 9 in 10 households in Australia own a "device for gameplay" (Brand & Todhunter, 2015, 1). The consistent rate of these research reports has also allowed trends to be identified; the latest report notes that between 2005 and 2015, the proportion of women who have identified as video game players has increased from 38% to 47%, which leads the authors to suggest that "female representation equal to males among gamers is imminent" (Brand, Borchard, & Holmes, 2012, 9). Equally, these reports have tracked the average age of video game players in Australia from 24 in 2005, to 33 in 2015.

Alongside research by government and industry, Australian and Australian-based scholars have been involved in researching games for decades. The growing importance of the video game was signaled by the—now expatriate—Newcastle-born scholar McKenzie Wark in a 1994 article "The video game as an emergent media form." Australian-based scholars working in a number of fields have made important contributions to the study of digital games, particularly John Bank's (2013) work on the relationship between game developers and players, Catherine Beavis's (Beavis, O'Mara & McNiece 2012) research on the connections between gaming and literacies, Bernadette Flynn's (2003; 2004) work on the virtual spaces of games and how gaming reconfigures domestic space, Sal Humphrey's (2008) work on community governance in MMOs, Sue Morris's (2003) analysis of the "gaming apparatus", Angela Ndalianis's (2004; 2012) analysis of game aesthetics, Melanie Swalwell's (2003) ethnographic work on LAN gaming, and her more recent work on game histories and archiving (Swalwell, 2012), not to mention Larissa Hjorth's (2010) work on mobile games, and her collaborations with Ingrid Richardson (Hjorth and Richardson 2014)

and Dean Chan (Hjorth and Chan 2009). Australian-based on-line journal *M/C – Media & Culture* published pioneering special issues on video games in 1998 (edited by Paul McCormack) and 2000 (edited by P. David Marshall and Sue Morris). The relevance of game studies in Australia was cemented in 2004 with special issues of *Media International Australia* (edited by Chris Chesher and Brigid Costello) and *Scan: Journal of Media Arts Culture* (edited by Patrick Crogan and John Potts) dedicated to video games.

The five articles in this special issue illustrate the great diversity and innovation taking place in Australian game studies today, and cuts across from leading figures in the field, to early career researchers and PhD scholars.

The first article, by Helen Stuckey, Melanie Swalwell, Angela Ndalianis and Denise de Vries, 'Remembering and Exhibiting Games Past: The Popular Memory Archive,' discusses the online collaborative research portal 'The Popular Memory Archive'. This portal acts as a repository for collecting and exhibiting the production and reception histories of Australian and New Zealand micro-computer games of the 1980s. The project was developed by the authors as a means to collect and share the memories of those who lived and played their way through this period. The article examines the activity on the site, to date and evaluates the significance of existing contributions, in order to consider the discursive, inclusive, and questioning practices of the community that regularly uses the portal.

The second article, 'Conceptualising Inspiration Networks in Game Design,' by Xavier Ho, Martin Tomitsch and Tomasz Bednarz examines the concept of inspiration and proposes a design process for inspiration networks using post-survey data from Global Game Jam. They argue that 'inspiration networks' offer a novel way to discover emergent game genres, that have nevertheless displayed a large influence. From their findings, the researchers offer three key design implications: a need for designer to appreciate "thinking with networks," the importance of identifying emerging game genres, and

support for an intuitive, visual approach to browsing for concepts and ideas.

The third article, '"Blackout!": Unpacking the Black Box of the Game Event,' by Steven Conway and Andrew Trevillian proposes a new ontology for games. The author's develop the SOC (Social/Operative/Character) model for analysts and designers by synthesising phenomenology, Latourian Actor-Network Theory and Goffmanian frame analysis. The model demonstrates the network of objects within the 'Black Box' of any game, illuminating how each object (from player to memory card to sunlight) may move between three levels of the Game Event: Social World, Operative World and Character World.

The fourth paper in the special issue, '*Tokimeki Memorial Girl's Side*: Enacting femininity to avoid dying alone,' by Tina Richards, critically examines a Japanese dating simulator video game with a female protagonist. Through analyzing the game mechanics, Richards argues that the game assumes and reinforces a range of cultural norms and social expectations in relations to gender performativity, heteronormative courting and dating, relationships and intimacy.

The final article in the special issue, 'Affect, Responsibility, and How Modes of Engagement Shape the Experience of Videogames,' by Kevin Veale examine how the mode of engagement in videogames shapes the players experience of the fiction. He argues that it is particularly difficult to separate the experience of playing a videogame from the textual element of the fiction. What sets the experience of videogames apart from other forms of mediated storytelling is that the player can come to feel responsible for events and characters within the fictional world of the videogame.

These collected articles mark a moment in Australian Game Studies where scholars and practitioners from around Australia reflected on the diversity within Australian games scholarship and creative work. This work constantly responds to, and is reinvigorated by,

engagement with global scholarship yet is shaped by local conditions and experiences.

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Remembering and Exhibiting Games Past: The Popular Memory Archive

Helen Stuckey, Melanie Swalwell, Angela Ndalianis & Denise de Vries

ABSTRACT

The Popular Memory Archive is an online collaborative research portal for collecting and exhibiting the production and reception histories of Australian and New Zealand micro-computer games of the 1980s. Proposed as a resource for both historians of technology and media, and the public, the site provides the means to collect and share the memories of those who lived and played their way through this period. This article surveys activity on the site and offers some preliminary evaluation of the significance of the online contributions. From this we consider the discursive, inclusive and questioning practices of the portal as a means of exhibiting historic games.

Keywords

Game History, Digital Heritage, Games Preservation, Videogames, Museums, Curation, Fan Culture, Online Communities

Introduction

Play It Again is a game history and preservation project focused on locally-written digital games in 1980s Australia and New Zealand. It is a collaborative project with the Australian Centre for the Moving Image (ACMI), Ngā Taonga Sound & Vision (formerly the New Zealand Film Archive) and the Berlin Computerspiele Museum. In October 2013, we launched the Popular Memory Archive, an online collaborative research portal. The portal provides a way to disseminate some of the team's research, but importantly, it also provides a mechanism for collecting information, resources and

memories from the public about 1980s' computer games. The Popular Memory Archive begins from the premise that in the 1980s games were often the first point of contact with microcomputers, and that in researching the reception of 1980s digital games, the memories of players are key. The ambitions of the Popular Memory Archive are to build resources for historians of technology and media, as well as the interested public, about this significant moment in computing history. The site provides the means to collect and share the memories of those who lived and played their way through this period.

This paper surveys the activity of the Popular Memory Archive over the first eight months of it going live. We reflect on the expectations of the project and discuss the significance of the contributions received online.

The Popular Memory Archive is also conceived as a form of exhibition. It addresses the question by Henry Lowood as to whether videogames are artefacts or activity (Lowood 2004). The site presents the material history of games, their design and their cultures of play. We propose that the Popular Memory Archive's database structure offers the potential to promote more inclusive exhibition practices through its ability to provide new discursive practices online and support multiple narratives. The Popular Memory Archive utilizes some traditional museum components – combining story metaphors with classification and didactics. Its search interfaces, however, allow content to be accessed in more open and non-hierarchical ways. This structure liberates the work from the representation of a singular curatorial interpretation, supporting the contribution of users and allowing for fragmentary and plural interpretations.

The Popular Memory Archive

The Popular Memory Archive has two main functions:

- To display some of the results of research on local 1980s digital game titles to the wider community in a combined online exhibition and discussion environment.

- To invite the wider community to contribute their perspectives so that memories, artefacts and information can be collected about this popular medium.

Microcomputer games from the 1980s era – the moment when everyday users first came into contact with computers – hold significant heritage value. Until now, the numbers of digital games held in public Australian and New Zealand collections have been very small. More generally, they have consisted of collections addressing computing's material history.

The 2010 "Preserving Virtual Worlds" report identifies the important work of lay historians and their efforts in building online collections, as well as developing tools for emulation and preservation (McDonough et al. 2010). The report proposes that one of the immediate steps that archives and museums can take to assist in the long term preservation of games is the development of systems that are accessible by, and can accept contributions from, the gaming community. The Popular Memory Archive offers one possible model for documenting the cultural memory around early digital games (Stuckey, Swalwell, and Ndalianis 2013).

HISTORY OF PRODUCTION

The Popular Memory Archive seeks to balance a history of production in the specific national contexts of 1980s Australia and New Zealand with a history of use and reception. In researching the history of production, we have sought to compile information on as many locally produced 1980s games titles as possible. The Play It Again project has identified more than 900 locally written titles (700+ from Australia and 200+ from New Zealand). From this, we have selected a shortlist of 50 or so titles, which form the online exhibition/ archive.

The Popular Memory Archive database is designed to support a range of perspectives about these games, providing a wide-ranging source

of information about them. The data is categorized and tagged to cater for different themes to be discovered and appended. For example, pathways following games from a particular year, a person or company, a genre or a platform can be generated (see Figure 1).Structured as a database, the Archive allows visitors to find their own narrative pathways through the information on display. Where exhibitions in the gallery use spatial narratives juxtaposing objects and grouping them to create relationships and generate stories, the online database provides a series of hypertextual possibilities for building meaning.
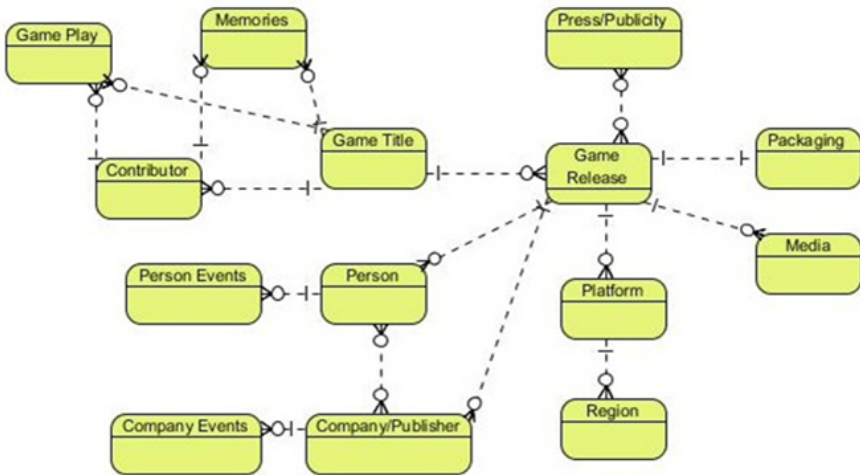

Figure 1: Conceptual Diagram of Popular Memory Archive

Alongside the online exhibition, there is an associated online program of 'events' in the form of a curated blog with a host and guest(s) on monthly themes. Our selection of titles for the shortlist has been conducted with this unfolding public program of guests in mind, to ensure that particular curatorial themes are illustrated. Such themes include: the work of pioneering companies, including Beam Software; the rise of the bedroom coder; local scenes and local themes; legal issues for game archivists; and a focus on the collector. Other criteria informing our shortlist selections are: important game designers; formal innovation/pushing technical limits; popular or

nationally significant platforms; overall representation and balance; and consideration of the quality of the games. Selections have been based on existing information, interviews and conversations with game designers, as well as systems we already have hard and software for. As much as possible, the project focuses on a breadth and depth of platforms, themes, and contrasting attributes.

The Popular Memory Archive organizes information into conventional searchable categories of classification for games: creators, companies, platforms and dates. The blog posts, however, create additional framing narratives that offer new perspectives to examine the material. The archive also invites visitors to navigate their own way through the collection using searches, tags and keywords.

HISTORY OF CONSUMPTION

Rather than focused on the evolution of technology the Popular Memory Archive seeks to understand the rise of the microcomputer and the cultural significance of early videogames in terms of a history of use and interaction. This is in keeping with Patricia Galloway's call for the importance of personal knowledge in comprehending personal computing (Galloway 2011). It also echoes the observation Oudshoorn and Pinch make: "Whereas historians and sociologists of technology have chosen technology as their major topic of analysis, those who do cultural and media studies have focused primarily on users and consumers"(Oudshoorn and Pinch 2003). Collections with their object focus have privileged a history of the evolution of technological artefacts, this casts1980s games as archaeological and static objects that exists only in the past, we instead consider that these dynamic forms from the past continue to inflect game culture through memory.

As Joanne Garde-Hansen relates, for thinkers Henri Bergson and Paul Ricoeur "memory, remembering and recording are the key to existence, becoming and belonging"(Garde-Hansen 2011). While their objects of study are different to our own, the intent is similar:

memory is understood as a collective, social, and oral phenomenon that encourages "a history from below". Arguing a case for "connected memory", Garde-Hansen recognizes the extent to which our memories are mediated by our media, forming a dynamic relationship that (partially) constitutes our personal and collective identities and what she calls "the construction of our lifeworlds".

Videogames are more than inert, digital code. Games theorist James Newman argues that the act of playing a videogame cannot be adequately considered or appreciated without a deep understanding of the ways in which it is enmeshed within and informed by its cultures and communities, all of whom contribute to the collective knowledge of videogame culture (Newman 2008; Newman 2012).

Recognizing that game culture in the 1980s was highly participatory, hands on, and often characterized by a DIY ethic, the project aspires to create a history of games as they have been used and experienced. We are centrally concerned with making links with a wider audience, connecting historical research into early gaming with those who lived and played their way through this period (as well as those who didn't but are curious). The collation of information about selected game titles is intended to drive the program and act as a prompt to elicit participation and materials from audiences. We want to hear about what people did with early computers and games: what games they played, what games they wrote themselves; what these games mean and meant to them, now and then; what records they have; and what difference their involvement with games made. It is hoped that contributors will add to the knowledge base not only their memories and experiences but also artefacts in need of preservation such as images, videos, documentation, and information about programmers, designers and publishers. For the duration of the Popular Memory Archive's active life (expected to be around 18 months) users can submit comments, images, video and other files to the site. Participation is possible through uploading game capture, screenshots, photos, and the like.

FAN KNOWLEDGE

Before examining some of the resources that the Popular Memory Archive has delivered, we need to detour briefly to foreground an earlier (and still on-going) phase of the research, namely our engagement with fan communities (Stuckey and Swalwell 2013). It was fan communities who, years ago, took the initiative to document and preserve historic games long before there was any institutional discussion on their cultural value. Operating outside institutional structures, such groups have been able to advance their work with minimal bureaucracy: they are agile, highly focused on what can be niche-fields of inquiry, and able to draw on the combined knowledge of large communities, and operate along gift economy lines (Baym 1999; Baym and Burnett 2009; Ndalianis 2009; Jenkins 2006; Jenkins 2002). Whilst many have also been involved with creating specialized techniques to help with game preservation, it is the collective intelligence that fans have of games which is of most interest to us in the context of the Popular Memory Archive. Fans have knowledge about the playing of games, the played games and the played with game (Kraus and Donahue 2012; Lowood 2008; Newman 2008; Newman 2011).

The research team, ACMI, and Ngā Taonga recognize that it is the games community that currently holds knowledge about the history of digital games. In considering our approach to exhibiting information about – and seeking to collect documentation of – games, we have looked to the databases created by retro computer game fan sites such as Hall of Light, World of Spectrum and Lemon64. Some of these sites have existed for nearly two decades and have evolved over time, refining their catalogues and the opportunities they present for engagement as the web has grown to support more complex data and more possibilities for participation. Having engaged in this protracted iterative design process, these sites set the standard for how a popular memory archive should function. They have produced archives that strive to address the complex nature of videogames and also reflect how an active user community searches and engages with this material. Sites such as these — built around digitally native

content by a digitally literate community — can provide memory institutions with a blueprint for what sites seeking to elicit popular memories about games might look like (Stuckey and Swalwell 2013).

CONTRIBUTIONS TO THE POPULAR MEMORY ARCHIVE AND THEIR SIGNIFICANCE

Fan discourse issues from a situated knowledge that is based on lived experience. Fans and players typically understand games as a set of experiences. Gamers — sometimes motivated by nostalgia and by a personal past with the software and hardware — often frame games in an intimate dialogue. This information provides insight and understanding about historic games that cannot be communicated from experiencing the games themselves.

For example the comments that we have received on the Popular Memory Archive in response to a blog post on the memorable loading scream from Beam Software's *The Way of the Exploding Fist* (Beam Software, 1985) focus not just on the game itself, but where people played it, who they played with, and even how they played with the game.

Stu232 recalls the shock of the loading scream and how he took advantage of the killer leg swipe move which, once mastered, gave the player a noted advantage in what was otherwise a very challenging game. His comment is a knowing wink to those players who used this exploit to play through the game.

> "Looks like I'm not the only one to have been caught out by that fecking scream during the load! <smile>

> My mate told me to sit close to the TV (apparently the manual advised this – according to my lying friend). I was sipping a glass of cola and all of a sudden that SCREAAAAAAAAAM happened and my cola went everywhere. <smile>

> Absolutely loved the game, I was the master of sitting on my bum and leg swiping everyone that came close <wink>"

Whilst the scream is not actually part of the gameplay, it is in people's memories a defining part of the game. Dave Farquar's introduction to the game was at a friend's house where he learnt more than just gameplay tricks. His comment also remind us how early tape games were commonly copied and shared amongst friends. He writes:

> "I remember that scream too. – I got my introduction to the game in 1988 or so. I was at my best friend's house, and he said, "Watch this," then cranked the volume at just the right time and freaked his younger sister out with that sound effect. So of course I asked for a copy, took it home, and did the same thing to my younger sister. Ah, youth."

Beam Software were one of the earliest companies to create a fast loader – the 'Pavaloada' – and devise a way to add sound and animation to the tape load sequence. Whilst to audiences today *The Way of the Exploding Fist's* tape loading scream might appear inconsequential, it was momentous in its day. It can be difficult to appreciate the innovation and achievements of early video games as rapid technological change renders the most sophisticated features of 1980s games crude to contemporary audiences. As the 2010 "Preserving Virtual Worlds Report" notes, context is critical for creating an understanding of games for future users and researchers (McDonough et al. 2010). An understanding of both the social and material conditions of the consumption and reception of these early games is difficult to collect, preserve and display. Comments such as those of Farquar and Stu232 communicate something of the context in which gameplay took place. Documenting player memories is one way to approach this issue and to record the experience of these games beyond the screen.

Uploads

We are collecting images of people playing computers from the era.

Like the comments on *Way of the Exploding Fist*, such images provide context as to how people played games in this era. One black and white image contributed by Jenny Scott shows a grandfather and grandchild silhouetted and concentrating on playing an unidentified early version of 'tennis' on a small television in 1981. Pictured in a living room, it shows the surrounds in which domestic gameplay took place in this era. A later image also contributed by Jenny Scott shows her daughter, Katie, sitting in a lounge chair with a joystick playing a space shooter (probably a *Gyuss* clone?) on a Commodore 64 (see Figure 2). The Commodore 64 has both a tape and disc drive. It is set up on a side table and appears as an ad hoc intervention in the space. Alan Laughton has shared an image of him and his young daughter playing on a Tandy CoCo (TRS-80 Colour Computer) lent to him at Christmas 1984/85. They too are in the living room and the computer is propped up on a fruit box connected to the family TV. Toys are scattered around the floor and the computer blends into the landscape of family entertainment. In comparison, Kevin Phillips' photo from 1989 shows his workstation with his faithful ZX Spectrum, 14" Kambrook TV set and National cassette recorder set up on a kitset computer desk. It illustrates a time when the home computer was not only becoming a more familiar part of the furniture, finding its way into teenagers' bedrooms and even dedicated computer rooms, but furniture was being designed especially for it.

Figure 2: Katie Scott, playing on a Commodore 64 purchased Christmas 1985.

The archive documents a time when computer games were emerging as distinct cultural artefacts from within the burgeoning culture of home computing. In the early 1980s computer games were not well established as commercial products and users of personal computers mostly got their games from typing in listing from magazines or swapping them at software meet-ups. New Zealander Kevin Philips recounts how his first foray into programming was via the book *34 Amazing Games for the 1K ZX81*. His post includes images of the book featuring games like "Golf" and "Along the Wire" that have about 16 lines of code to enter. His next post offers game capture of a collection of ZX Spectrum games that he discovered on an old cassette and got working again under emulation (see Figure 3). These were games he had typed in from magazines in the 1980s, as he explains:

"That's pretty much where and how I think many people

(including myself) built their skills in games programming. I recall getting new magazines each week, sitting at home and typing in loooong listings of games to play. Sometimes they were awful, sometimes they were pretty cool… If it was a great game, it got saved. These days, its funny to think how much time I'd spend typing in a game to just type "NEW" and start a new one… Without saving…."

These early games are missing from most histories of videogames as they are frequently authorless, often copies of arcade games and not valued as design (Swalwell 2008). They were, however, many people's first encounter with both games and computing.

Figure 3: *Typed in games of the 1980s – ZX Caveman*

Philips wrote a lot of games in the 1980s, but he was not a commercial developer. He describes them as something to do on the microcomputer, "write games, play games and make pictures in *Melbourne Draw*". Some of his work has survived on cassettes and others as printed out code listings. Many were 'clones' such as his *Mine Sweeper* game. Others were inspired by games he had enjoyed. *Gemrun* (1987) is based on the popular *Boulder Dash* (First Star Software, 1984). Not only has Philips made his old games available to download through links accessible from the Play it Again site, he has also shared a design document he created for a clone of the arcade game *Centipede* (Atari, 1981). This document illustrates his process of first working out his ideas on paper, including checking all the calculations before beginning to code. His old design notebooks record his techniques for addressing recurrent design issues, such as pre-shifting sprites, collision detection and other challenges on the ZX Spectrum (see Figure 4).
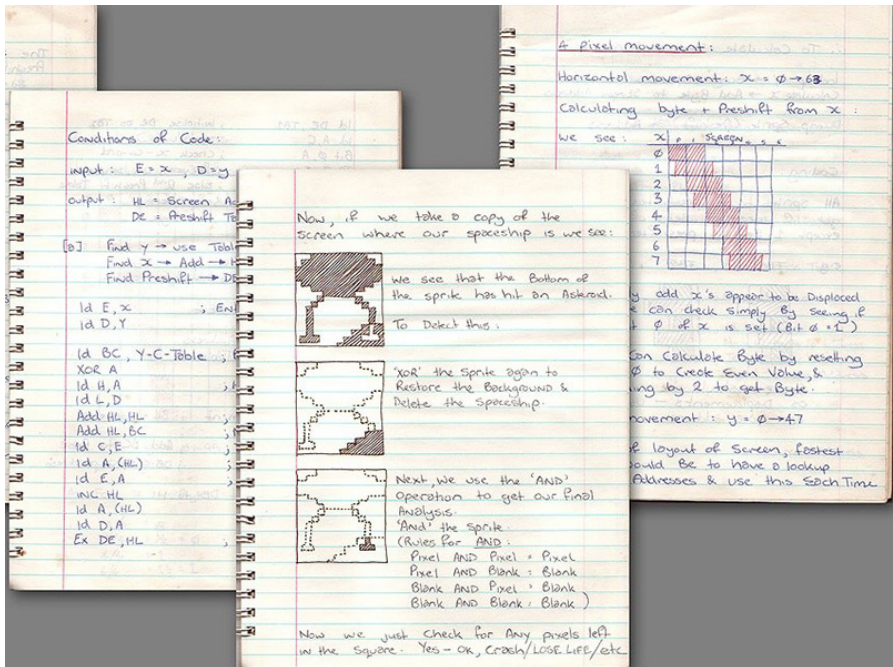

Figure 4: Kevin Philips' Sprite Algorithms notebooks

Game designers have also contributed their recollections of the era, including Veronika Megler, one of Beam Software's earliest employees and co-designer of Melbourne House's huge hit, the graphic text adventure *The Hobbit* (1982). Having left Beam after completing the game in 1982, she describes her astonishment at discovering the impact the game had on players in the 1980s, recounting stories from her encounters with fans who have tracked her down to share their memories.

Professional Australian game developers John Passfield (Interactive Binary Illusions, Krome, Pandemic, Right Pedal Studios), Matthew Hall (KlickTock, Hispster Whale), and New Zealander Carl Muller (who has worked at large international developers including Probe Software and Jakks Pacific) discuss how they got started designing games back in the 1980s, as home coders. Muller and Hall reveal the importance of how-to-books for their formative game design experiments. Muller and Passfield share tales of selling their early designs. Muller recounts how he typed one of his designs into the display computer at a local shop, as his own system did not have enough RAM to run it, and the shop owner sold a copy of the game then and there to a keen customer. The schoolboy Passfield published his game *Chilly Willy* (1984) — a *Pengo* clone – through Honeysoft, but never told his friends at school as he thought it would seem too 'nerdy'. In the comments to Passfield's blog, 'Leon' shares that whilst he also published his games in this era, like Passfield he hid his hobby from his school friends.

These conversations between early designers and others in the community have served both as a form of fact checking, and to unearth more information. For instance, Leon offered a correction to the RAM size of the VZ200, the Dick Smith computer that Passfield mentioned in his text. Meanwhile, New Zealand game designer, Mark Sibly (of Blitz fame), alerted us to the fact that the gameplay video posted on the site was not actually of 'his' *Dinky Kong* (1984), but of a game of the same name from the era (his was for the Vic 20, not the Oric). This is a common issue confronting game historians, particularly working with games that are clones or homages to other

games. From this exchange, we were able to not only correct this error, but also identify a number of Sibly's other games.

A very pleasing outcome of the kind of knowledge and skill sharing made possible through the portal concerns Alan Laughton's involvement from the Microbee Software Preservation Project. Laughton accepted the challenge of converting a listing of a game written by Australian designer Matthew Hall (Hipster Whale). Created on his primary school's Microbee, Matthew Hall's text adventure *Jewels of Sancara Island* (1988) had survived the last thirty or so years as a Turbo Pascal listing (see Figure 5). Finding the game listing on the Popular Memory Archive, Laughton OCRed it, correcting errors that crept in before compiling it for the Microbee. The game can now be downloaded and played.

```
PARROT : begin
            If object_location[parrot] = pocket then
              WriteLn('Put it down! It''s driving me MAD!')
            else
              WriteLn('It looks like trouble!');
          end;
POLE : WriteLn('It is very strong.');
SWITCH : WriteLn('You could reach it with your hand.');
FLARE_GUN : begin
                If flrs <> 1 then
                  WriteLn('You have ',flrs,' flares left.')
                else
                  WriteLn('You have one flare left.');
            end;
GROUND_HOLE : WriteLn('At the bottom, a small passage veers off.');
AXE : WriteLn('It looks very sharp!');
WELL : WriteLn('You can see a handle attached to the well.');
BUCKET : If bucket_bool then
            WriteLn('It is full of water.')
          else
            WriteLn('It is empty.');
SLEEPING_GUARD : WriteLn('She has a smile on her face.');
WOOD : WriteLn('It has been freshly cut.');
SHELL : begin
          WriteLn('It has some writing inside.');
          WriteLn('It says :');
          WriteLn('        PROPERTY OF KING NEPTUNE.');
          WriteLn('  If found, please take to nearest bay and give');
          WriteLn('a good blow. Reward for return.');
        end;
```

Figure 5: Matthew Hall, Jewels on Sancara, Turbo Pascal listing, detail from Commands 5

Local Histories of Technology

Whilst there is a growing body of material on the history of games, this has most often been centred on the United States, Japan and more recently the United Kingdom. There is a paucity of scholarly and collection information on the history of games from the 'periphery'. It is the focus of only a few historico-cultural studies. These include work on Finland, the former Czechoslovakia, and New Zealand (Saarikoski and Suominen 2009; Saarikoski 2003; Suominen 2011; Svelch 2011; Swalwell 2007; Swalwell 2009; Swalwell and Davidson). In her work on the early history of New Zealand games, Swalwell advocates the need to pay attention to local specificities and anomalies in the stories of games production and how these points of difference reveal that the historiography of technology, whilst in part global, is also culturally specific (Swalwell and Davidson).

As our project is focused on Australian and New Zealand games, we are in part shaping conversations as local, by virtue of the games we have selected and the guests we are featuring. Examples of specifically local stories include responses to a post on Microbee user groups. The Microbee was a microcomputer (originally a kit computer) that was designed and produced in Australia. Cheap and affordable it was adopted by several Australian State Education Departments for computing in schools.[1] These user group memories include the all-important software-swap and programming assistance that — in an era of little commercial software and support — was the bedrock of user meetings. Laughton recalls that the Melbourne Microbee Users Group (MBUG) had a library of 186 discs of Public Domain software, an invaluable source of generic and locally-written software for users.

Education games present another part of the local story. *Pieces of Eight* (1986) — an educational graphic text adventure for the Apple II, Commodore 64 and TRS80 — was played in schools across Australia and offered many young Aussies their first encounter with the computer. *Pieces of Eight* presented such a fun and engaging experience it launched a thousand gamers, many of whom have since

trawled retrogamer sites looking for information on this title, unaware that it was in fact produced by the Queensland Department of Education. 'DG' recalls on the Popular Memory Archive how Jacaranda Software's *Goldfields* (1986) game — where you play a new arrival keen to make their fortune in the gold-rush era — "was a beloved part of the history classes for year 4 and 5 students" at St Joseph's College, Nudgee in the early 1990s. Educational titles such as *Goldfields* also came with extensive teacher notes and classroom kits, which valuably document suggested methods of incorporating games into the curriculum. Despite their reach and impact, these early educational titles have, to date, been left out of more established game histories.

We are not pursuing the local to the exclusion of the non-local, however, and oftentimes the local and global histories overlap, such as the way that the vagaries of international publishing law informed and underpinned the creation of Melbourne House, an Australian publisher with a U.K. identity. It is no exaggeration to say that Melbourne House, with their Australian-based development studio, Beam Software, were significant players in the U.K. games publishing scene of the 1980s. Meanwhile, a Dunedin-based duo, Andrew Bradfield and Harvey Kong Tin, spent years writing their two games for the Atari computer, *Laser Hawk* (1986) and *Hawkquest* (1989), and these had commercial releases through the U.K. publisher, Red Rat. Finally, we are also attentive to the ways in which imported titles and products such as gaming magazines helped to shape local gaming cultures.

ONLINE AUDIENCES

For some years, museums have been inquiring into how Web 2.0 can be used effectively to provide access to, and engagement with, collections. Much of the discussion has been about trying to excite and engage online audiences by offering access to digital images of collection objects and working with social networks on Facebook and blogs (Russo et al. 2008; Simon 2007; Carreras and Mancini 2010; Kelly 2010). Some museums have experimented with engaging

gamer communities online. In the lead up to their 2012 exhibition *The Art of Videogames*, the Smithsonian invited online audiences to partake in the curatorial process by nominating their preferred games from existing short-lists. The Smithsonian curatorial team prepared the lists of games and organised them by platform and genre. It was an inspired marketing move that reached out to core audiences and told them that their knowledge and opinions were important to the cultural institution. It was, however, structured in a way that constrained the curatorial narrative. Perhaps aware of how partisan games audiences can be, the lists were already dominated by the 'usual suspects' and the act of curation by popular vote ensured that the final selection included no surprises or allowed for more deeply considered examinations. It was an exercise in reductive classification, shutting down possibilities for meaning. Its focus on the evolution of graphics and gaming systems championed the dominant narrative of technological advancement, sacrificing more critical narratives about the creation and reception of videogames.

The *100 Toys* project at the Indianapolis Museum of Childhood offers a more considered example of the Museum working with online audiences on questions of play. They asked online audiences to vote on the toys that defined childhood, from a selection of 100 in their collection. Voters were also asked to share their memories of playing with the toys, thus contributing knowledge directly to the collection. The museum received 24,000 votes and 600 stories on their online portal. They then used this information to provoke discussion, such as comparing the curator's top 20 list to the crowd-sourced list. There was a 70% overlap between the curator's choice and the crowd's. This observation served to make the six different toys on each list a focus for numerous interesting questions.

The online space offers new opportunities for the Museum to engage with its audiences. In 2001, Patterson Sims noted that the Museum of Modern Art (MoMA) receives more visits to their site than their building. Sims proposed that the web acts not as "a lure for the museum" but rather exists as a parallel museum.[2] A recent "curatorial experiment" exploring this concept is MoMA's *Design*

and Violence exhibition (2013-ongoing). It interrogates the polite assumption that good design is benign and aesthetically pleasing, one that curator Paola Antonelli finds the museum guilty of perpetuating (Burke 2013). The exclusively online exhibition is discursive in structure, organised as a series of posts, each of which focuses on a piece of design. Each object is presented with a short essay by an invited expert whose text concludes with a question that invites response. The resultant discussions by visitors form part of the exhibition, presenting contested understandings of both the object and the concepts discussed.

Curators Antonelli and Hunt argue that they wanted to publish online rather than show in the gallery because they wanted a dialogue with the public. Envisaging exhibition as a conversation — an exchange of information where the museum can learn – also freed them to address work that is not owned by MoMA and work that cannot be collected and displayed in a conventional sense, from cattle runs for slaughterhouses to prison panopticons.[3] Whilst *Design and Violence* has a strong curatorial narrative, it is not didactic but inclusive in its approach (Antonelli 2013).

The promotion of more inclusive practices is celebrated by Fiona Cameron and Helena Robinson in their examination of museums providing online access to searchable collection databases (Cameron and Robinson 2010). They argue that "Museums must devise a way in which the need to provide expert and scholarly information can co-exist with an acknowledgment of the fragmentary, arbitrary, and plural nature of object interpretation" (Cameron and Robinson 2010 p172). In their analysis, they argue that digital database construction and digital narratives can work together to enable users to link information in ways not previously possible. Databases allow for museum 'objects' to be interrupted in a variety of ways, emancipated from narrow and exclusive cultural, disciplinary and museum-based understandings from curatorial specialty areas. Whilst their research accepts that audiences need the Museum to provide some structure and scholarly interpretation, they argue that users desire to work with more fluid and malleable structures and information retrieval

tools, which can facilitate the creation of multiple narratives around collections.

SIGNIFICANCE FOR THE MUSEUM

The Museum of the 21st century has shifted from an object focus to one of access and experience (MacDonald and Alsford 2010). As videogames are defined by their promise of interactivity, it is tempting to assume that they will simply offer themselves up as an experience in the gallery. Observations by games theorist and academic Brendan Keogh suggest that it is not so straightforward. He recalls his initial excitement at the chance to play *System Shock* (Looking Glass Studios 1994) at the ACMI *Game Masters* exhibition in 2012, quoting designer Warren Spector's amazement at seeing the working game in the gallery when the "devs" themselves struggle to get it running. On reflection, Keogh finds playing *System Shock* in the gallery less than edifying. The game reveals little about itself in the short game time possible in the gallery. He finds it hard to see past the "obscure old controls" let alone determine what makes the game culturally significant (Keogh 2012). In the exhibition, the game, whilst narratively contextualised within Spector's career, is basically presented like a work of art, left to reveal its inherent value through audience engagement, rather than have its story told through associated documentation and display. Keogh's admission is a reminder of how mute games can be in the gallery, and how quickly objects of technology become estranged when they are divorced from their original social and cultural conditions of use (Gitelman 2006).

Moving Beyond the Object Focus

Operating online, the Popular Memory Archive already entails a shift beyond the Museum's historic object focus. The hypertexual nature of the database also means that games are located within multiple narrative readings. For example, Beam Software's *The Hobbit* can be contextualized through a multitude of associations: Beam's other games; text adventures; the platforms it played on; adventure clubs; games made in 1982 as well as the specific stories of its production

and reception. These 'stories' are presented in a variety of voices from the scholarly, to the designers, and fans. These voices have different tones, to pick up on an earlier point about fans' passion, passionate voices are engaging in a way that the measured tones of the Museum are not. In examining the effects of "Discussion Exhibitions" at the London Science Museum, Ben Gammon and Xerxes Mazda note that one of the motivations for visitors to read the comments of others is that the emotive language of visitor's comments is more compelling than display didactics (Gammon and Mazda 2009). The passion of the retro gamer and fan captures a sense of the lived experience and its importance to the user. Oral histories, even fragments thereof, provide a nuanced and embodied relationship with the work.

CONCLUSION

Games exist as both text and performance. James Newman has argued for the centrality of play in preservation, arguing that the discipline of Game Studies has established that games come into being though the act of play.[4] In this article, we've focused on player memory as a valuable resource, but we are also committed to making it possible for users to play historic games. It need not be an either/or thing.

The next step for the Popular Memory Archive is to incorporate versions of games to play in the browser. This creates challenges, both technical and legal (in April 2014 the Archive's curated blog addressed copyright issues for orphaned and abandoned works). We also recognise that some game aficionados are extraordinarily committed to the gaming experiences they have had in the past, to the extent that their motivations and concerns may not sit easily with the more critical concerns of game historians and curators. Swalwell has written of some "game lovers'" refusals to recognise the realities of needing to display games in ways that differ from their original presentation. Some consider any departures 'inauthentic', a position that she argues is based upon the common sense notion that history is about 'the way it really was'. Critical scholarship will sometimes

come up against those who adamantly continue to privilege the 'original experience' above all else (Swalwell 2013).

Nevertheless, situated amongst stories of its production, reception and the culture of the era — yet divorced from its historic hardware – our rationale is that playable games located within the Popular Memory Archive's web of information might offer more meaningful play experiences than in the gallery. Online, the emulated games will be liberated from their status as museum 'objects'. Audiences should not expect them to offer identical experiences to those they presented in the 1980s. Rather they become part of what net.art preservationist Anne Laforet would describe as an archaeological assembly of fragments helping audiences to imagine a "plausible state of what the original situation could have been" (Laforet 2007). The Popular Memory Archive presents how an online exhibition/ collection might blend the voices of game designers, players and retro-computing hobbyists with those of the historian and museum professional to produce a richer understanding of videogames from this era in computer culture.

ACKNOWLEDGMENTS

ENDNOTES

[1] The Microbee made its debut as a kit computer in 1982 and after

winning a tender from the New South Wales Education department quickly graduated to a prebuilt version. Its last model, the Matilda, ceased production in 1990. In 2012 Microbee re-released a limited edition version of their original kit computer.

[2] Quoted in Graham and Cook p.179 (Graham and Cook 2012)

[3] The site also allows them to show work that does not sit comfortably with MoMA's collection policy and governance. Antonelli has previously spoken about MoMA's refusal to let her collect a Beretta semi-automatic pistol for the Design Collection and its concern about collecting violent videogames. (Antonelli 2013)

[4] Newman asserts that some of the materials that we might ordinarily think of as being part of the contextualising ephemera that situate the original game, may be potentially capable of telling the story better than the game itself, in particular walkthroughs and strategy guides.

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Conceptualising Inspiration Networks in Game Design

Xavier Ho, Martin Tomitsch & Tomasz Bednarz

ABSTRACT

This paper examines the concept of inspiration and proposes a design process for inspiration networks using survey data from Global Game Jam. Global Game Jam is a 48-hour game development competition that invites anyone to participate worldwide. The study illuminates the presence of the famous 'six degrees of separation' effect in these inspiration networks, leveraged to model ideations as related concepts, identifying four major lodestars. It follows research through design, embodying the body of knowledge in the inspiration network as a design artifact. Inspiration networks offer a novel way to discover game genres that have not yet been formally recognised, but have displayed a large influence. The findings offer three design implications: an understanding gained by "thinking with networks", the ability to identify emerging game genres, and the support for intuitive, visual browsing of ideas. Formalisation of inspiration network poses an open field for research.

Keywords

Game Design, Game Culture, Game Development, Game Jam, Ideas, Inspiration Networks, Brainstorming, Visualisation

INTRODUCTION

Creation of new ideas has been described under many synonyms and related case studies: the 'aha!' moment (Gruber 1981), insightful problem solving (Metcalfe and Wiebe 1987), incubation (Smith and Blankenship 1989), and stroke of insight (Taylor 2006), to list a few.

Vandenbosch et al. (2001) provide a summary of different theories. It's notable that all theorists agree good ideas could come to us at any moment. Csíkszentmihályi and LeFevre (1989) set out to find the best time and proposed their theory of *flow*, which suggests we perform at an optimal level when the tasks at hand require a certain degree of skills and provide an ample challenge.

Crites (1971, p. 291) remarked in his article, *The Narrative Quality of Experience*, "the forms of cultural expression are not historical accidents." The way people speak and the choice of diction are always linked with cultural context, the time and the place from which the language was expressed. In that premise, game development and game culture are no exception to Crites' observation. Genre is the style of expression; mechanisms, the dictionary. Since cultural change is gradual and combinatorial in nature (Popova 2011), ideas are reused, combined, adapted, remixed, twisted, flipped, and perhaps another hundred more ways. Just as modern science builds on existing knowledge and theorems, human creativity, too, builds upon inspiring ideas to fashion.

This article explores game design ideas generated from brainstorming activities. It is not a theoretical piece on *why* ideas exist (e.g. Ronald et al. 2010), nor *how* ideas are generated (e.g. Tschang and Szczypula 2006; Hagen 2009, 2010; Kultima and Alha 2011), but *what* ideas are created, used, and *how they are connected* by their source of inspiration. We pose the research question, "What are inspiration networks in game design?" and specifically, "What inspiration networks can be found in Global Game Jam?"

The theoretical basis is that there are no truly original game designs. We do not mean that no designs are novel, but states that no designs or design ideas are *wholly* original, which is to say they must have an origin of inspiration. If an idea is truly original, there would be no familiar ground or indication for communicating the idea, alienating its audience in the process. Hence, an idea must be inspired: there must be an external source of illumination, beyond the self (Thrash and Elliot 2003). In the sense "everything is a remix" (Ferguson

2011), we see that ideas are reused, combined, connected. We think of ideas as a connected network.

Game development competitions, or *game jams,* have become popular. A community-driven database shows that at least five game jams are on concurrently worldwide1. Some jams run on a regular basis. For example, *Ludum Dare* (Latin meaning "to give a game") runs in April, August and December each year. *Global Game Jam,* which our study draws its data from, takes place each January. Game jams are usually guided by a central theme. Competing teams have to make games from start to finish within a time frame. *One Game A Month* events runs every month for the whole month. For Global Game Jam, the time limit is 48 hours.

Due to the short nature of Global Game Jam, games that come out of it are usually simple prototypes with a single focus. This makes them ideal for studying their creators' brainstorming and design processes. However simple games may be, game design is a multidisciplinary craft, including (usually all of) visual art, computer programming, sound design, and gameplay design (Preston et al. 2012, p. 59). In order to work with these skill sets, game jam participants must make quick decisions efficiently and effectively in the game jam. Participants often work in a waterfall fashion (Arya et al. 2013, p. 37), which is to say jammers have little time for design iterations. Ideas are sometimes generated quickly using experimental toolkits with observed learning outcomes (e.g. Kultima et al. 2008; Kultima and Alha 2011).

The evolution of culture is an ever-turning wheel; no human decisions or actions will stop it from turning. Human activities motivate only its direction. We laid out our research interest in the nature of idea evolution and how that can be applied to game studies. In the following section, we will describe the implicit assumption underlined in the connectivity of ideas, the diverse sources of inspiration, and the phenomenal small-world effect (Watts and Strogatz 1998). The section after documents our research

methodology to examine Global Game Jam design inspiration, and a section following with findings and implications for discussion.

THE IMPLICIT INSPIRATION NETWORK

In the timeless piece, *Music and Moonlight*, Sir Arthur O'Shaughnessy (1874, pp. 2-3) captured the concept of inspiration beautifully (revised with modern punctuations):

> A breath of our inspiration is the life of each generation: a wondrous thing of our dreaming—unearthly, impossible seeming. The soldier, the king and the peasant are working together in one, till our dream shall become their present, and their work in the world be done.

The definition of inspiration has not changed much for over a century. The English word 'inspiration' originally meant to take in "divine guidance". It stemmed from Old Latin *inspirare*, meaning "to breathe in" (Harper 2013). In modern English, getting inspired can mean having a "sudden brilliant or timely idea" (Oxford Dictionaries 2013).

We coin the term *inspiration network* as a cluster of connected ideas with similar sources of inspiration. A network is a set of nodes with links that connect them. Because networks can be very heavily connected, they are sometimes called complex networks. Complex networks been used to model citation networks (Garfield 1955; Price 1965; Hummon and Doreian 1989; Vazquez 2001; Albert and Barabási 2002, p. 53), blogospheres (Adar and Zhang 2004), design networks (Eckert and Stacey 2000; Grace 2011, p. 19), Wikipedia networks (Schönhofen 2006; Zlatic et al. 2006; Brandes et al. 2009; Massa 2011; Aragon et al. 2012) and births and deaths (Schich et al. 2014), to name a small percentage of the works available.

The concept of an inspiration network can be traced back to Garfield's (1955) citation network. It was first proposed to ease the search of previously published literature and provide a critical system to rank the value of contributions. One decade later, Price (1965) showed that

citation networks could be used to catalogue journals and classify research papers. Many researchers followed citation networks. Hummon and Doreian (1989) investigated the formation of the DNA theory and identified the critical path of theory coming into existence. They did so by constructing citation networks on 40 of the most cited papers. Adar and Zhang (2004) used hyperlinks in blog posts to construct a network around blogospheres and used their data to derive a ranking system. It is worth noting that half a century since its birth, Garfield's pioneering work in 1955 was reprinted in 2006 in *International Journal of Epidemiology* with a new title: "A New Dimension in Documentation through Association of Ideas."

Around that time, online platforms attracted much attention in using networks as a model for research. *Wikipedia* provided implicit networks of collaborative authorship in different languages (e.g. Zlatić et al. 2006; Brandes et al. 2009), allowing scholars to identify authors' social structures (e.g. Massa 2011; Aragon et al. 2012). These implicit networks are not artificial but naturally occurring (Adar and Zhang 2004). In contrast, *LinkedIn*'s professional networks and *Facebook*'s friendship graphs are explicit networks, connecting profiles in a system. A network snapshot is static, whereas a changing network over a period of time is considered as dynamic or temporal (Schich et al. 2014).

Thrash and Elliot (2003) painted the theory of inspiration with three characteristics: transcendence, motivation, and evocation. Transcendence describes the event in which we see a better vision of what is possible, but does not yet exist. Motivation illustrates the aspiring momentum, a feeling that drives us to do something new. Evocation depicts the action we take as a result of being inspired, and that inspiration must be external, beyond the self. Thrash and Elliot (2004, p. 958) followed up to define the nature of inspiration as a transmission of ideas. There has to be source of inspiration ("being inspired by") and a destination ("inspire to do").

The transmission of knowledge is the implicit link in an inspiration network. With a sufficient selection of ideas, we can see a small

network forming, an evolution of ideas taking place. Through social extensions we may observe the famous 'small-world network' theory, made popular by the film *Six Degrees of Separation* (Guare 1990; Watts and Strogatz 1998). The theory states that if you know someone who knows someone else, who knows someone else, and so on, the furthest distance of social connections on average is six. Since ideas are constantly being shared between individuals, I argue that inspiration networks must also be part of the small world phenomenon, and the findings should present small clusters of ideas.

An inspiration network is an epistemology model with two elements: an idea (or a manifest thereof) and a link that describes knowledge transmission taking place. Elements can be textual, such as the Global Game Jam survey data used in this study, but inspiration networks can be extended to encompass pictorial, aural and other records. We borrow Vandenbosch et al.'s (2001, p. 109) systematic definition, a "concept or plan formed by mental effort" to describe an idea. In addition, we also consider an idea manifest, such as a game, also as an idea, since the manifestation often embodies the idea itself. They can be physical, lately in more digital and virtual forms. As designer Chimero (2012, p. 50) wrote, a design artifact "is often a physical form, such as a poster, brochure, pottery, painting, or sonnet, but also includes the choices that alter a work's context and placement. Increasingly, these 'artifacts' are becoming less physical, and may take the form of an application, website, or even an experience."

Metcalfe (2007) explored the construction of connected ideas extensively in his work. In order to aggregate responses from ethnographic data, he organised the data into affinity diagrams, which are groups of notes that share a topic (see Beyer and Holtzblatt 1999) and drew links intuitively between affinity groups to form a problem network. He framed the problem space using that network, noting the 'six degrees of separation' small clusters. He does not specify how he drew the connections, except using a designer's intuition, but remarked the problem network "needs to be about 10–15% of connections compared to nodes, else the resulting network becomes too cluttered" (2007, p. 146).

Hagen (2009) examined 25 games published in Sweden in the first decade of the 21st century to find out which parts are "recycled" in these games. He found idea recycling from the same domain (e.g. from games in the same genre or from the genre itself), from narrative and visual art (e.g. films and books), from human activities (e.g. competitive sports or playful events), and from technology and artifacts (e.g. academic research and experimental prototypes). However combined, innovation tends to happen when the source of inspiration is borrowed from a more distant domain than the more dominant one. In some cases, the compounded ideas could turn out to be more effective than the sum of its parts (Tschang and Szczypula 2006).

GLOBAL GAME JAMMING

Turner et al. (2013, p. 1) praised game jams to have "become an important rite of passage and baptism event, an exploration space and a central indie lifestyle affirmation and community event." To Turner et al., game designers are artists who create works, or games, whose focus is not about the commercialisation of the outcome, but the process of experiencing the creation of a game in a social context. Other motivations exist as well, including learning a new tool (Fowler et al. 2013a), collaborate in a team environment for self-improvement (Preston et al. 2012), or to be plain, "Getting a chance to make a game with other awesome people in a very short time" (Reng et al. 2013).

Yamane (2013) examined one of Japan's Global Game Jam site and found the promotion of prototyping was a strong motivation for participants to try it out. The 48-hour duration of game jams fosters quick thinking and decision making, and often the best way to evaluate a decision is to make it and find out. This kind of learning by design practice echoes El-Nasr and Smith's (2006) suggestion that modifying, or *modding* a game could produce positive learning outcomes. In other words, implemented ideas are favoured over ideas that are merely present on paper.

Game designers often conform their work into an established genre

in the market, such as a 'first-person shooter' or a 'side-scrolling platformer', and borrow familiar elements from other games, real-life activities, or historical events (Hagen 2009). A study in a previous Global Game Jam found that primary source of inspiration came from the theme, popular gameplay mechanics, other video games, and game genres (Zook and Riedl 2013). Hagen (2012) coined the term lodestars2 to describe the 'designed player experience', the collection of typical mechanics and the desired set of challenges in game design. In Hagen's view, game design can be seen as a combination of recycled ideas, and this process of recycling is to take a group of lodestars into the game design, toss out the ones that don't fit, and bring in new lodestars until the game design is complete.

Many studies on game jams focused on the potential for better learning outcomes. Preston et al. (2012) found that jammers on average have better academic performance than non-jammers, and that attending game jams are perceived as beneficial for improving skills, which also corresponds to Fowler et al.'s (2013a) finding. Reng et al. (2013) described game jams as "an important learning space with characteristics known from communities of practice." Scholars agree that game jams are a great environment for learning the process of game development as a team.

An inspiration connects in new ideas, and the types of connection of ideas are plentiful. Observed connections from the survey are displayed in Table 1. In this process, it is crucial to have an open mind, to think of idea connections as a diverse event and experience that could come in any flavour, and broadening the possibility of new discovery. To adapt these concepts with a domain, for example, game design, we considered both the type of event and the type of ideas. "Making a voxel sandbox game like *Minecraft*" could be a 'genre assimilation', for instance, and "porting our shooter game from PC into mobile touch screens" could be 'title translation'.

Idea Connection	Example Observation
Similar Origins. Share a common ancestral origin of thought.	"Most teams, including mine, ended up boiling the theme down to the idea of 'perspective'" [P1695].
Assimilation. Belong to similar schools of thinking and mental processes	"It's very similar to the game that won [another competition]" [P99].
Reference. Make a tribute, mention, or parody of other ideas.	"Like American McGee's take on Alice, Through the Looking Glass reinterpreted the tropes of Mario from the perspective of a drug addict . . ." [P1488].
Motivation. Cause a heightened sense of arousal in an individual.	"The idea . . . started forming naturally along the way, and before we knew it we were all talking about [the same idea] . . ." [P1291].
Evocation. Drive someone to act.	"I just built a game I wanted to play" [P603].
Transcendence. Provide new insight.	"New idea came up when another member joined that had much more sense with theme of jam . . . " [P83].
Refinement. Move or frustrate someone to change something for the better.	"Our scripts collectively threw somewhere around 800 compiler errors at us . . . so we quickly printed out all of our cards . . . and switched to a physical game format" [P1531].
Combination. Compose several ideas that work well together.	"We all had different interpretations but eventually agreed upon an idea that was a combination of several we had come up with" [P505].
Adaptation. Place into a different problem domain.	"We tried to come up with an idea involving the theme, but since none was found, we started crafting a game that was later adapted to fit the theme" [P1081].
Reuse. Refurbish for a similar purpose.	"[The theme] matched a pre-existing idea" [P144].
Transmediation. Transform an idea into another form of medium.	"It was a game based on [a novel character] and how he saw things differently than his partner" [P1731].

Table 1: *List of observed idea connections.*

Not only are idea networks qualitative, such as a description of a game and its source of

inspiration, but they are also quantitative, for example, how many game are similar to it (counting the number of assimilations), and how well received is the title (counting the number of audience reach), if such data is present. By using the numeric relations between ideas, we can begin to see a general understanding of the idea space via the network itself, and interact within it. This interactive understanding helps the design researcher frame the problem space (Schön 1983; Grocott 2011). These qualitative data are implicit to a network, as it depends on the size of the network itself as well as the density of connections, but the trend is immune to the varying windows and size; the more data is input into a network, the more definite the result becomes (Garfield 1955).Constructing Inspiration Networks

Our research aim is to understand what a game design inspiration network is. Our Global Game Jam survey data serves as a corpus. Connected ideas form clusters, hinting at potential trends. We follow a variant methodology of Zimmerman et al.'s (2007) research through design, in combining Schön's (1983) and later Grocott's (2010) reflection-in-action methodology. This separates our research from an ethnographic study; our result is primary the design artifact itself. In brief, the design artifact (the inspiration network) embodies our knowledge of research, and this knowledge can enable other scholars in their research. More importantly, our design process can be applied and repeated as a design methodology in future studies.

After Global Game Jam 2014 came to completion, a survey was administered by the Global Game Jam Research Committee. We proposed to analyse a portion of the survey, which aligns with our research aims in understanding the ideation process at game jams. We obtained university ethics approval and received data from the Global Game Jam Research Committee for analysis. Each individual record was identified by numeric identifiers and could not be traced back to the original respondent. A second numeric identifier was provided to link respondents together from the same participating team.

Games that come out of Global Game Jam are small in design scope and often focused in a single type of gameplay. Participating jammers

are given a central theme to incorporate into their games, this year's theme being "We don't see them as they are, we see them as we are". Global Game Jam 2014 gathered 23,198 game developers across 488 jam sites from 72 countries to make a game in 48 hours, with 4,290 games submitted. The relative simplicity in game design and the size of the competition makes an ideal source to study an idea network for a time-constrained event. At the end of the jam, a 60-question survey was sent out to all the participants, and 1,815 respondents were recorded.3

According to the survey report, the average Global Game Jam 2014 participant was 25 years old with a bachelor's degree and has published between 2 to 3 games in the past. 72% of the teams were formed at least partly before the jam, and 67% of the respondents developed new connections and worked with someone they did not know before. While the average participant reported the theme was only "somewhat" inspiring, they also reported general satisfaction (3.9 out of 5, n=1,671), enjoyed their game jam experience (4.3 out of 5, n=1,689) and had a lot of fun (4.5 out of 5, n=1,681). Participants strongly indicated that they would participate again next year (4.6 out of 5, n=1,684). Not every question required an answer, hence the difference in the total number of recorded data.

We employed a mixed method to analyse our data set (n=1,815) and separated qualitative and quantitative questions. Not all questions were required. Respondents rated the theme "somewhat" inspiring (3.1 out of 5, n=1,346), even though they considered the theme "a lot" (3.8 out of 5, n=1,343). Qualitative data (n=1,356) were free-response answers to open-ended questions regarding their brainstorming process, how they used their theme, and if they changed their idea halfway through the jam.

The theme for Global Game Jam 2014 was "we don't see things as they are, we see things as we are." Jammers worked in groups and brainstormed with time constraints in mind. In our findings, one respondent recalled vividly about their brainstorming session: "The theme … made us think about perception and opposing world views.

Early on in our design discussions we agreed that we wanted the core mechanics to express some sort of idea related to these ideas. Through word association, we brainstormed a lot of different possible thematic directions for our game, then narrowed those down based on design risk, implementation risk, and personal [preferences and interests]" [P1585].

Most teams worked the theme into their game design, but many of them expressed that the theme was "somewhat vague" and "offered no clear restriction". We hypothesise this was because themes from previous years were more concrete; for example, in 2011, "Extinction" was the theme and in 2013, "Sound of a heartbeat". This year's theme was relatively more abstract. For the most part, the theme was considered during the game design stage. One respondent summarised how the theme was used: "The theme seemed pretty vague, but it did trigger the initial idea for our game. In the end, the theme was neither a huge help or a huge hindrance. It certainly wasn't essential to our game, but it was certainly identifiable in our game" [P131].

Some participants used brainstorming techniques such as word association and mind mapping, both of which generate idea networks. Ideas were written down freely at the start, and the best ones are decided usually by voting. One respondent recorded, "We mixed [our ideas] together and had an anonymous no-judgement voting on ideas. The top three ideas were re-voted upon to determine the best idea for the theme" [P1021].

Gradually, ideas that were implemented would be favoured over the ones that aren't. Jammers were pressed for time, and so if an idea didn't work in implementation, it would be quickly scraped and be replaced by another one. One respondent recalled, "We started by brainstorming what the theme even meant. Then we used a thought-map to narrow down the ideas. We then did quick tech prototypes of our top ideas to see which was viable, before making a final decision" [P1092].

The free-response data was encoded by tagging phrases which signify or represent an idea, for example, a game design idea, a thought process that could generate ideas, or an object that could inspire other ideas, as outlined earlier. The tags were in nature the type of idea itself, for example, "brainstorming", "change of mind", and "frustrations". After a sizeable set of tags was created, we began to construct an affinity diagram (Beyer and Holtzblatt 1999) and grouped similar ideas together. We limited ourselves to a two-tier affinity diagram to preserve the balance between generalisation and details. When a response contained multiple key phrases that signified different ideas or processes, we treated them as separate ideas in our affinity diagram. While this lengthened the research process, it ensured each idea stood by itself.

In the meantime, the authors manually performed keyword extraction for each record. We later used these keywords to construct the links between ideas, so we chose to identify subcategories that are more concrete. For instance, one response was "In our game, you can transform between a child and an adult. The child sees the world in a certain way, the adult sees the world in another way" [P48]. The main idea here was 'transformation', and the subcategories were 'adult' and 'child'. To prevent idea boundaries from becoming too blurry to be of any value, we merged identical (or at least sufficiently similar) ideas into one, saving ourselves from more work later. For instance, we considered 'transformation' and 'change perspective' as the same category, and there were many games which employed that idea.

After the encoding was complete with an affinity diagram, we started by picking one column and place it on the canvas. We chose to place the diagram in a circular fashion and only employ arcs, similar to that of Lombardi's diagrams (2000). To construct the connections, we placed ideas that share the same tag closer to each other, and drew a line between two ideas that shared the same subcategory. This process was repeated until the column was exhausted, and we picked a relatively similar column and repeated the process until the affinity diagram was exhausted. To keep the inspiration network on topic, we excluded records that weren't directly related to ideation

or brainstorming. For example, "technical issues" was one of the omitted columns. Figure 1 shows our result using a subset of our dataset (n=178), a sufficient number of samples such that small networks could be observed.

VISUALISING INSPIRATION AS A NETWORK

The human eye is observant in recognising patterns and focal points. For instance, if we were to examine the most parodied games in the mobile space of 2014, we might be able to pick up popular game titles upon visual inspection of a network, and understand the dense and sparse areas of the data space (Auber et al. 2003). A visual representation of a network has an effect on human audience and induce appreciation (Judelman 2004), provides hints and reference (Holmquist and Skog 2003; Manovich 2011) and it supports the process of data analysis (Keim 2002; Stasko et al. 2008). The aesthetics of the network drawing could aid in understanding of sequential events (Twidale and Nichols 1996), reinforce memorability (Borkin et al. 2013), and uplift the potential for interdisciplinary works (Samsel 2013). To make the process more accessible to researchers and analysts, many have continued to maintain an initiative in the area of network visualisation software (e.g. De Nooy et al. 2005; Reas and Fry 2007; Viegas et al. 2007; Bastian et al. 2009; Bostock et al. 2011), which has fostered a rich field of visualisation research and encouraged many interested individuals to explore datasets.

Global Game Jam 2014
Idea Network Visualisation v0.1c

Theme: "We don't see things as they are, we see them as we are."

Design by @Xavier_Ho
http://jumptoglide.com
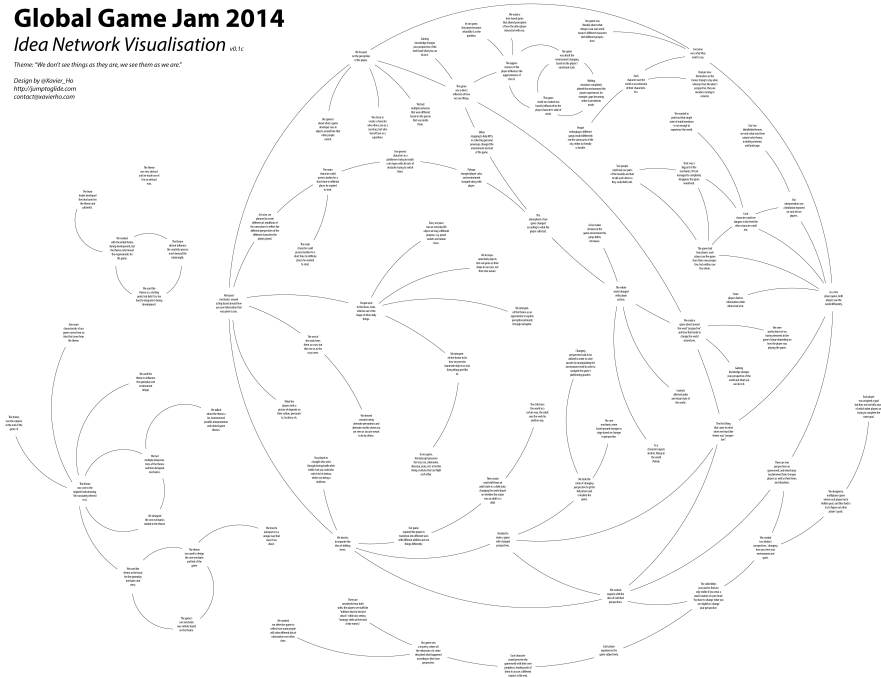*contact@xavierho.com*

Figure 1: Global Game Jam 2014 Inspiration Network Visualisation4 (full resolution included in endnotes).

Visualisation created from inspiration networks have also been explored as an object of art. Lombardi (2000) in particular expressed the events of financial exchanges and the entities involved as curvature drawings of network graphs by hand. His drawing style often followed a series of aesthetic arcs and expressed a strong sense of direction by the dynamics of lineflow, and they are an inspiration to our network visualisation. Many scholars have worked on algorithms in attempt to reproduce its aesthetics (e.g. Duncan et al. 2010; Chernobelskiy et al. 2012; Eppstein 2013). This paper is not an algorithmic instruction to computerise the act of drawing, but to conceptualise the elements of drawing and exemplify the meanings of elements within the drawing itself.

To effectively design a visual drawing of an inspiration network, we must first find a visual metaphor appropriate for the message. Rather than a generic drawing, a visual metaphor "in aesthetic perception and

its objects is more conspicuous, salient" (Aldrich 1968, 75). Datasets may have natural metaphors that are inherently visual or sequential, for example, geographic and time (e.g. Raper 2012; Schich et al. 2014) and flight numbers (e.g. Krebs 2002). The style of visualisation also has an impact on the level of insight that could be observed (Vande Moere et al. 2012). At any rate, inspiration networks do not have a direct mapping to any intuitive spatial representations. The challenge, then, is the quest to define a visual metaphor suitable for the data space, optimised for understanding and free exploration.

One major principle for the ease of exploration is a planar drawing, that is to say, the lines do not cross each other unless the intersection is a connection (Masucci et al. 2009). Good examples surround our daily lives; for example, maps of metro public transportation would be terrible if the train lines had crossings that were not an interchange, incorrectly presenting travel information and causing great inconvenience (Hong et al. 2006). For the graph to be obvious at first glance, it must follow that principle.

Secondly, graphs that contain too many nodes would look too crowded, overloading the audience with indistinguishable information. This may be used to display density, such as using transparency and overlaying multiple transparent layers to emphasise heavier areas of data (Vande Moere et al. 2012), but as far as network visualisations go, they lead to too much clutter. Fortunately, inspiration networks, like many others, are likely to display features of small-world networks (Watts and Strogatz 1998), as clusters of grouped, inter-connected nodes would form. Auber et al. (2003) leveraged this characteristic and proposed to reduce information by re-representing a cluster of nodes as one parent node, in effect generating a hierarchical display, progressively revealing information based on the semantic zoom (Auber et al. 2003). *Google Maps* implements an excellent example of progressive display. After all, we live "in an age of information overload" (Roland and Bawden 2012, p. 226).

FINDING INSIGHT FROM INSPIRATION NETWORK

Using the inspiration network in Figure 1, similar ideas are identifiable by the 'islands' they visually form. Some ideas are more or less a unique outlier and have only a couple of connections. One idea was a lone wolf: "The theme was very abstract and we made use of it in an abstract way" [P66]. Reflecting the "somewhat" rating of the theme, some respondents reported the theme "did not influence the creativity process much beyond the initial night" [P40] and they "didn't try too hard to integrate [the theme] during development" [P84]. Contrasting that group, there is another cluster of responses which reported positively about using the theme. These jammers not only "brainstormed possible interpretations and related game themes" [P21] but also "used the theme to influence the gameplay and environment design" [P185]. One team said "the theme was the surprise at the end of the game :D" [P206].

From the islands we found many jammers played with the idea of 'player interpretations'. Many teams took the theme in developing the art direction for their games. One team created "different art renditions of the same place to reflect the different perspectives of the different characters" [P217], while another team focused on the perception of the player, deriving "concepts using alternate perceptions and alternate worlds where you are seen as you are meant to be by others" [P120]. It is interesting to note that some jammers reported "people tend to find faces, tools, vehicles out of the shape of other daily things" [P76], for example, perceiving "inanimate objects as real, living things just like us . . . like a baby girl who perceives her toys (car, submarine, dinosaur, pony, etc) to be like living creatures that can fight each other" [P196], finding "power sockets [which look like] human faces" [P209], in effect, they allowed the players to "explore perception primarily through metaphor" [P46].

The gameplay from 'changing perspectives' and 'transformation' was described by one respondent to be "the most obvious path" in making the games [P164]. To start, one jamming team "required the player to transform into different sizes with different abilities and see things

differently" [P175]; another game allowed the player to "shift from an adult state to a child state, changing the world based on whether the avatar was an adult or a child" [P218]. This type of game design forced the player to "change what [the characters] are … to change your perspective" [P85]. In order to proceed further into the game, the player must take on another perspective or role, switching between game avatars.

When jammers considered cooperative or multiplayer options, the theme inspired the concept of 'hidden information'. When the game reveals different information to each player, it introduces dynamic and conflict, or the need to trust each other. One respondent recalled, "Trust was a big part of the mechanics. If trust managed to completely disappear, the game would end," because in the game "each character could see dangers in the level the other character could not" [P81]. Another team with a similar idea designed their game levels such that "two people could only see parts of the hazards and had to talk each other so they could both exit." They also recollected experiencing great humour when one player deliberately lied to the other, causing their avatars to die [P115].

There were also games which changed based on the players' actions, for which we call them 'reactive games' here, for example, in one game, "the player becomes what kills it as the predator" [P204], allowing the losing party to gain some upper hand by taking a comparatively stronger form with a chance for revenge. The games may also shift depending on the aggressiveness of the player, for instance, when a player acts nicely, the non-player characters and the environment also acts friendly and serene; however, if the player chooses to act aggressively throughout the game, they will encounter similar reactions during the game. The actions could either be "stopping to help NPCs or collecting personal powerups," which "changed the environment and end of the game" [P147].

DISCUSSION ON LIMITATIONS AND DESIGN IMPLICATIONS

We note three design implications learned from game design inspiration networks. The first is an understanding gained by "thinking with networks". The design process to construct an inspiration network is a traversal of networks in nature, which assists our understanding in the connectivity of ideas. In our experience, it was more efficient to start drawing with the larger clusters, as they will provide a healthy number of connections at the start. The designer has more than just the inspiration network as well; we gained insight from the initial process of constructing the affinity diagram, providing us a high-level overview and a new perspective. By identifying subcategories of ideas, we had a second, more implicit layer of understanding on the domain of game design ideas. It is this process of reflection-in-action that illuminates insight in our research (Schön 1983; Grocott 2010). The inspiration network which embodies the connection of ideas can also be distributed to others, transmitting understanding visually.

From the inspiration network we observe the small-world effect. The visual drawing suggests ideas are indeed inter-connected. Since inspiration networks have connectivity, the second design implication offers an ability to identify emerging game genres, such as 'player's interpretation', 'changing perspective', 'transformation', 'reactive games' found in the dataset. The inspiration network allows us to examine the existing relationship between ideas and idea formations, telling a visual story of the construction of ideas. However, as ideas become many, the visualisation becomes too small to read given a fixed-size display, for example, a 24-inch computer monitor. On the other hand, When printed as contemporary or information art in a physical environment, audiences will read a picture up-close when they are presented as tall as themselves (Rav-Acha et al. 2005), which also may inspire curiosity. Digitally, we could support the action of 'zooming' by attaching an interaction with the mouse scroll to see up close, or implement multi-scale visualisations (Auber et al. 2003).

The third design implication is that inspiration networks support intuitive, visual browsing of ideas. The visualisation allowed us to examine the body of knowledge intuitively, retrieving and comparing

ideas at ease to formulate a formal understanding. If our data set was linked with the games themselves, we have a two-dimensional graph: one in idea-idea connectivity and one in idea-game connectivity. This would enable an audience to browse existing Global Game Jam games not only by title, genre, country, keywords, but also the similarity in idea, design, process, and output. The potential for this application is a future work of our research roadmap.

This study is limited to the scope of Global Game Jam 2014, and with a survey participation rate at only around 7.5% of the total participants (1,815 out of 23,198), our data could not fully represent the population. While the image of the entire network could be extremely interesting to some, we feel the portions which we have compiled into an inspiration network provide ample room for inspection. Secondly, the survey was administered in English, and naturally it may have excluded many jammers from the ability to reply. In the future, perhaps an international study comparing different cultures speaking different languages could be of interest. Because the dataset is only compiled from a survey, the result can only be derived from the jammers' self-reflection. There is therefore an opportunity to conduct an ethnographic study on-site. We also do not know how the ideas evolved throughout Global Game Jam, because most participants only responded to how their final product used the theme; few noted how the ideas were changed.

CONCLUSION

We proposed an array of contextualised idea connections from Global Game Jam participants, and examined them for common sources of inspiration. Our design process generated a graph drawing that we coin an inspiration network, which supported our investigation in understanding the relations of ideas. The design of an inspiration network suggests that the small-world effect does indeed exist in it, and the visualisation allows us to retrieve insights relatively quickly, given the understanding gained from constructing the network itself. Global Game Jam has been a great opportunity to investigate the ideation and brainstorming processes in game design, and thanks

to the 48-hour time constraints, the ideas developed were relatively simple and well-focused. Our findings also suggest that given both idea-idea relations and idea-game relations, one can find similar games with related sources of inspiration. Future work of our research includes formalising the drawing and design process of an inspiration network, employing a computer-assisted program to quicken the network generation process, investigating the properties of an inspiration network and what other insights we may extract from it through user studies, and the application for historical exploration.

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Endnotes

1. The most up-to-date database is probably CompoHub (http://compohub.net/), a community-maintained website that hosts a timeline graph of what is on the calendar.

2. Previously at DiGRA Australia, our submission used an incorrect term, 'lodestone'. The authors regret making that error and have made the amendment in this paper.

3. These data were derived by the Global Game Jam from a survey conducted following the 2014 Global Game Jam. The Global Game Jam specifically disclaims responsibility for any analyses, interpretations, or conclusions.

The full resolution of Figure 1 is available via this link: https://github.com/Spaxe/papers/blob/master/

Conceptualising%20Inspiration%20Networks%20in%20Game%20Design/
Figure-1-print.png

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"Blackout!" Unpacking the Black Box of the Game Event

Steven Conway & Andrew Trevillian

ABSTRACT

In this article we propose a new ontology for games, synthesising phenomenology, Latourian Actor-Network Theory and Goffmanian frame analysis. In doing so we offer a robust, minimal and practical model for the analyst and designer, that clearly illustrates the network of objects within the 'Black Box' of any game, illuminating how each object (from player to memory card to sunlight) may move between three levels of the Game Event: Social World, Operative World and Character World. Abbreviating these worlds, a shorthand for the model is SOC (Social/Operative/Character).

Keywords

Ontology, Frame Analysis, Actor-Network Theory, Object-Oriented Ontology

INTRODUCTION

"When many elements are made to act as one, this is what I will now call a black box." (Latour 1988, p.131)

Noisy Neighbour

Playing *FIFA 14* (EA Canada 2013) on my new Xbox One, I am engrossed. My team, SurReal Madrid, are struggling to make it beyond the middle of the English Premier League. Losing to West Ham United is not going to help matters. Suddenly a noisy neighbour outside my window interrupts, a particularly garrulous species of

bird, either cheering my team on or booing from the sidelines; it's hard to know. Momentarily, my conscious experience moves from the game to the window, and I peer out to get a better view of my beaky assailant.

I cannot make the bird out amongst the bushes, and return to my game. It takes a few seconds but I manage to once again reorient my focus towards the game world, belief in my team as more than an arrangement of pixels on my television returns. I lose the match as the bird becomes louder than before; his orientation becomes clear – another fussy, over-entitled fan booing his team off the pitch.

The loading screen fades, replaced by an email from my chairman, admonishing me-as-manager for swearing on the sidelines during the match. I am baffled, and, as ever, turn to Google for answers. It turns out that the Kinect 2.0, packaged with the Xbox One, tracks environmental noise during FIFA 14. If the user is heard to swear by the Kinect, he or she will receive such an email.

Yet no such swearing occurred. Indeed, my only contribution was a mournful silence throughout the match. Then it dawns on me: that bloody bird has cost me a slap on the wrist from the board. The Kinect had, all by itself, moved the bird from the world of nature straight into the game world, not so much as even notifying me of the intrusion.

How am I to comprehend such a moment? Metalepsis? Paratextual? Non-diegetic? Did the machine do this? The operator? The bird? Is it real? Virtual? Both?

Capturing The Game Event

The narratological concept of metalepsis is not a satisfactory description, as the bird's intrusion is an unexpected consequence of the Kinect's sensitivity, certainly not intended by the author as an aesthetic strategy; similarly it is not paratextual in any official capacity, and if categorized as such would broaden the definition of the term so far as to render it meaningless. The bird is non-diegetic, for sure, but not in the same way that a floating health box is non-

diegetic, or a soundtrack: it is not a *designed* non-diegetic, but instead some egregious, anomalous invader. It is also neither operator nor machine, and therefore Galloway's 'four moments' model (2006) breaks down in this instance.

If we hoped to map out such a relation (bird to Kinect) for design purposes, Schell's (2010) elemental tetrad finds no space for a cheeky fowl; Hunicke et al's MDA (Mechanics, Dynamics, Aesthetics) (2004) framework, ultimately concerned with the intended designer-player relationship, may designate environmental sensitivity via the Kinect as part of the mechanics, but offers little insight in regards to the bird's existence: beginning with the assumption that a game is a dialog between designer and player, the model is understandably silent on the question of squawking animals.

Taking his cue from Haraway's concept of the cyborg, Latour's accounting for the non-human, and Deleuze's articulation of ethology, Seth Giddings ponders the moment of play, the 'Game Event' as we will discuss, in his article *Events and Collusions: A Glossary for the Microethnography of Video Game Play*:

> "The event is constituted by the coming together in play, the collusion of material and imaginary elements: the operations of games (their conventions, rules, and prescriptions), embodied knowledge and technicities (and pleasures, anxieties, frustrations, imagination), play practices (role play, toy play), screen media images and characters, virtual game worlds (and their physics, automata, and affordances), and all sorts of bodies." (2009, p.156)

Keogh (2014) ruminates upon similar issues in regards to games criticism, whilst Apperley and Jayemanne (2012) have recently called attention to a long-overdue turn towards the material in Game Studies. We align ourselves with this trajectory, and hope to move the argument forward through introduction of a model that facilitates the mapping of these heterogenous parts, and their relationships with one another, as generative of the Game Event.

GENESIS OF OUR MODEL

Theoretical Influences

In devising our model we have drawn primarily upon the sociology of Erving Goffman (1972; 1973; 1986), various aspects of phenomenological work (Ash 2013; Clark 2003; Dourish 2004; Heidegger 2008), and the phenomenological sociology of Alfred Schutz ([1945] 1962), particularly his focus upon the generation of intersubjective meaning. Relatedly, the concept of affordance, as developed through the ecological psychology of James J. Gibson and its adaptation by Donald A. Norman (2002), is brought into our understanding of this meaning-making process. We also incorporate Actor-Network Theory (ANT) (Latour 1988; 1993; 2005) and the Object-Oriented Ontology (OOO) of Graham Harman (2011) as a means of extending meaning-making labour to the variety of non-human actors present within the Game Event; indeed, Harman's OOO may be productively understood as the combination and modification of Latour and Heidegger's worldviews.

One of Harman's most original contributions thus far has been to reinscribe Latour's ANT with essence: Being precedes relationality. Briefly, an object is never fully exhausted through its relations to other objects: my access to an apple is different to the way fire, a knife or a worm access it. Yet no entity has privileged access to the real object (as opposed to sensual object): none can touch its essence. Instead the apple object is accessed indirectly, through each relating object's specific affordances.

Our model follows Harman: *no object in the Game Event is fully exhausted by its relation to any other object*. Each object in the network always holds something in reserve and is therefore able to transform the situation. While some objects may have particular meanings at particular moments for other objects, this is always open to change.

Phenomenology

Phenomenology can be briefly summarised as the philosophy of

human experience. A central concept we borrow from phenomenology is 'intentionality': this describes the way in which cognition is directed towards a world, its objects and events. Subscribing to the hermeneutic phenomenology of Martin Heidegger (2008), expanded upon by Gadamer (1976) and Ricoeur (1981) amongst others, we understand any object's relation to another as, fundamentally, an act of interpretation, inseparable (indeed reliant upon) each object's capacities (i.e. affordances) and context. Following this, we also leverage for our model an understanding of experience that collapses any Cartesian dualism. As Dourish summarises:

> "The nature of being – how we exist in the world – shapes the way that we understand the world, because our understanding of the world is essentially an understanding of how we *are* in it. So Heidegger rejected the dualism of mind and body altogether. He argued that thinking and being are fundamentally intertwined." (2004, p.107)

Heidegger's term for the human being, *Dasein*, 'being-there' (often summarised as being-in-the-world), emphasises the embodied, situated nature of cognition. Building on this, Heidegger offers two primary modes of interaction with equipment (defined as tools oriented towards a particular end): *zuhandenheit* (ready-to-hand) and *vorhandenheit* (present-at-hand). When, due to my competence at being-there, I act through an object that withdraws from conscious circumspection, yet mediates my action, it is zuhanden. Yet if the object fills my intentionality, it is vorhanden. For example in typing a sentence the keyboard is zuhanden; I am not aware of each individual keystroke as I type, my fingers have a proprioceptive intelligence and locate the appropriate keys without conscious effort. Yet in writing *this* sentence a key jams; the keyboard is now *unready*-to-hand and I am beset by aporia. The object appears now slightly alien to me and I begin thinking on each keystroke as I ponder the jammed key's material and shape: it becomes vorhanden.
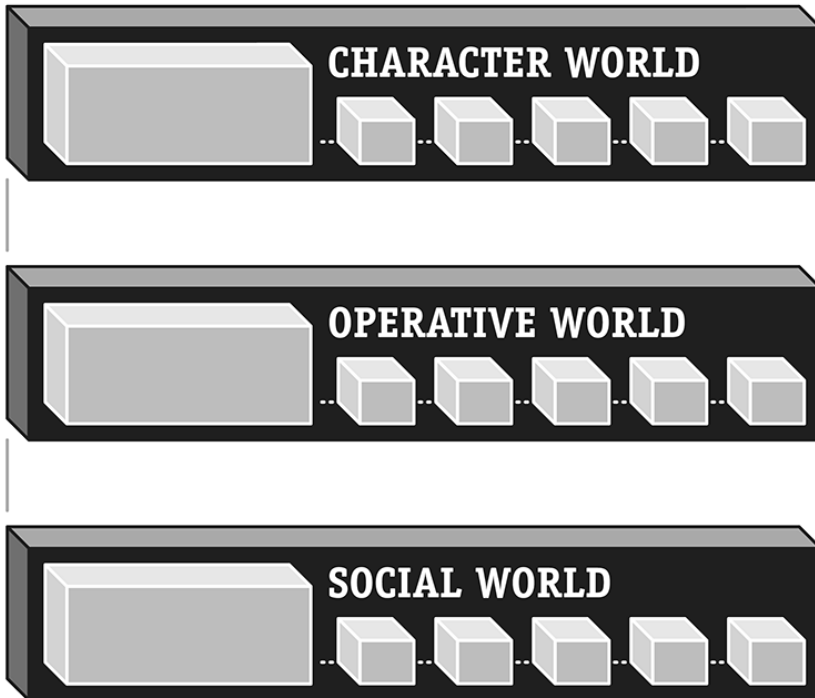
Figure 1: Three levels of the Game Event: the Social World, the Operative World and the Character World.

Crucial to our model is the way in which the object's hermeneutic orientation changes between three levels of the Game Event: the Social World, the Operative World, and the Character World (see Figure 1). For example the human player, as *Dasein*, maintains the capability to switch levels moment to moment, literally between milliseconds in some instances, such as playing in a crowded street on a mobile phone: immersed in the Character World I tap my thumb against the screen to make a dialog choice, I switch to Social World and check the street name, then to Operative World and check the score, and so on. This all may happen in the space of a second or two.

One must always exist in the Social World for a Game Event to take

place: obviously I must be in an environment that already affords console gaming before I can play *FIFA 14*. Therefore *FIFA 14* is the confluence of many objects, often invisible to the analyst: from the macro-scale objects (for example electricity, broadband infrastructure and government policy) to the micro (a television of appropriate specification, console apparatus, furniture). Therefore if one's intentionality is oriented towards the Character World (the world where object relations take on symbolic meaning, allowing us to speak of 'shooting' and 'jumping' in digital games as opposed to 'pressing the right trigger' or 'pressing the A button') then we take for granted that the player always-already inhabits the Operative and Social World; it is simply that these worlds have withdrawn from my direct attention, for the moment, in a zuhanden manner.

Informing our articulation of these worlds is Alfred Schutz' ([1945] 1962) work that expanded upon Husserl's initial notion of the 'life-world' (lebenswelt): that orientation towards a realm of being in which a 'natural' attitude can be taken, in which we assume a constancy of meaning and structure. Schutz' expansion was concerned with the generation of intersubjective meaning, how this structure and meaning ossifies into a common life-world shared between people through the invention and sharing of interpersonal symbols. Fundamental to this is Schutz' assertion that the life-world is a space of embodied action and *inter*action, "our bodily movements – kinesthetic, locomotive, operative – gear, so to speak, into the world, modifying or changing its objects and their mutual relationships" (Schutz [1945] 1962, p.209). Across time, Schutz believed multiple realities are formed, different worlds of structure and meaning that branch from the initial life-world, or as Goffman might say, primary frameworks that feed into secondary ones. Schutz was also, to our knowledge, one of the first phenomenologists to recognise the autonomy of objects, the non-human within the life-world, and to accord to them a degree of agency, which as mentioned is a metaphysical premise of our model.

Frame Analysis and Object-Oriented Ontology

Erving Goffman was an habitual taxonomer of the social. Through his system of 'frame analysis' (1986), Goffman was interested in

explaining how we understand social reality, i.e. what we regard as authentic in a particular situation, and how we attune our performance to suit. When we talk of the 'everyday', Goffman would explain this as shorthand for our experience with a 'primary framework' (1986, p.21), a macro framework instantiated by society at large: workplaces, malls, cafes, supermarkets, roads. Secondary frames are 'transformations' (1986, p.156), described well by Deterding as "instances where a strip of experience that is organised and intelligible in terms of a primary framework is transformed – modelled on the primary one but altered systematically in terms of the 'second' frame" (2013, p.62). There are two modes of transformation: 'fabrication', where one or more participants attempt to convey a false understanding of the situation, e.g. con artists, pranksters etc., and 'keys', "the set of conventions by which a given activity, one already meaningful in terms of some primary framework, is transformed into something patterned on this activity but seen by the participants to be something quite else" (Goffman 1986, p.43-4). Again, Deterding summarises eloquently that "keys are *intentionally equilibrial transformations* – all participants are supposed to be jointly aware of and upholding the transformation – whereas fabrications are *intentionally disequilibrial* ones" (2013, p.62, emphasis in original).

Keys then, are essential to play: what could be construed as unlawful assault can be rekeyed as boxing; running may be rekeyed as a race; moving tokens on a board may be rekeyed as *Chess*. But crucially, rekeying is only valid if the transformation of the situation is mutually accepted by all present, human and non-human. For example the affordances of a heavy wooden table resolutely resist my attempts to rekey it as a soccerball. Our model is therefore concerned with keys, rather than fabrications: though the latter is of interest, we locate it on the margins of play, associated with triflers, spoilsports and cheats. We hold that any fabrication is likely, at some point, to result in the Game Event prematurely breaking down.

Epistemologically, then, Goffman advocated a constructivist view of reality, an intersubjective process of meaning creation. In this

manner one's 'reality' has an inherently unstable character, since the environment can undergo resignification at any moment, as does the 'self', since the performance required of a person may also demand alteration to suit a new situation:

> "Starting with the traditional notion of the individual as self-identified with the figure he cuts during ordinary interaction, I have argued some frame-relevant grounds for loosening the bond: that playfulness and other keyings may be involved which sharply reduce personal responsibility; that often what the individual presents is not himself but a story containing a protagonist who may happen also to be himself; that the individual's presumably inward state can be shared around selectively, much as a stage performer manages to externalize the inner feelings of the character he enacts." (1986, p. 541).

Following Graham Harman's (2011) Object-Oriented Ontology and its fusion of Latourian and Heideggerian principles, we propose to extend this mutability of identity to all object-relations, not just the human. This is not simply to advocate a sociomaterial perspective, that the meaning of an artefact only comes into being when enacted by the human or society at large. Instead, as per Harman's OOO, we argue that the meaning generated by an object's relationship to the human is just one example of many *interpretations* generated through different object relations: the DualShock 4 controller has a different relationship to the human player than it does to the PlayStation 4, electricity and *Infamous Second Son* (Sucker Punch Productions 2014).

Also, we hold that changes in one object relationship have demonstrable effects upon the network. For example when playing *Infamous Second Son* one possible activity is graffitiing public space: spray-painting various walls, roofs and monuments within the game world. In those moments, the game gestures for you to switch your grasp of the DualShock controller, to hold it as a spraycan; the DualShock's LED changes to match the colour of paint. This

modification of the *Infamous Second Son*-DualShock relationship attempts, in turn, to rekey (or as we will come to, *upkey*) the human-DualShock relationship. If I accept this attempt, I may now perceive my controller not as zuhanden (ready-to-hand), a cyborgian extension of my body within the Operative World, but instead as this strange vorhanden (present-at-hand) phenomenon within the Character World, the *DualShock-as-spraycan*, demanding new modes of perception, both ocular and tactile, in a novel, but momentarily jarring way for the player.

Though Goffman was clearly aware of certain impacts the non-human may have upon the frame, there is little doubt his discussion maintains a sociomaterial accent. For example, "I argue that the meaning of an object (or act) is a product of social definition… The meaning of an object, no doubt, is generated through its use" (Goffman 1986, p.39). Our model sees little value in asymmetrical dichotomies and flattens these relations: yes the human interprets the meaning of the object, but vice-versa the object supports definition of the human. A human cannot be a driver without a car, or a swimmer without water. Again Deterding offers insight:

> "[A]ctors and environments always find themselves in a moving equilibrium of relative alignment or misalignment… on the one hand, framing is a process continually open to contestation and change, including actors' active reconfiguration of objects and settings to suit a (re)framing… settings and objects partake in the institutionalisation of frames, and specific settings and objects suggest, support, resist specific framings." (2013, p.119)

Correspondences between sociomaterialism and Latour's Actor-Network Theory (ANT) are clear; Latour simply takes this relational ontology to its only coherent metaphysical conclusion. In *We Have Never Been Modern*, Latour describes actors (by which he means both human and non-human) as "endowed with the capacity to translate what they transport, to redefine it, redeploy it, and also to betray it"

(1993, 81). Though following Latour in ascribing agency to the non-human, we once more follow Object-Oriented Ontology (OOO) in using the term 'object' instead of 'actor/actant' both to avoid any anthropomorphic connotation, and to stress the ontological (but *not* epistemological) status of objects, as Levi Bryant offers:

> "[T]here is only one type of being: objects. As a consequence, humans are not excluded, but are rather objects among the various types of objects that exist or populate the world, *each with their own specific powers and capacities*." (Bryant 2011, p.20, emphasis added)

Therefore we are not advocating a radical reductionism, as if we should compare humans directly to Chess pawns, mobile phone apps and *Deadpool*. Instead, we proceed from the premise that, prior to analysis, we cannot assume a hierarchy with the human at the apex. For instance when playing football, rain, wind and potholes often defeat my body; indeed severe enough rain or wind breaks the Game Event entirely. As Ian Bogost offers, "many people misconstrue object-oriented ontology as a singular material affair, as a reductionism: "everything's an object." But instead, proponents of OOO hold that all things equally exist, *yet they do not exist equally*" (2010, online, emphasis in original).

Adaptation

Following feedback, we have simplified and adapted aspects of the ontological and epistemological paradigms drawn upon to enhance clarity and diagnostic capability. In particular we have radicalised Goffman's concept of keying, influenced primarily by Fine's (1983) Deterding's (2013) and Linderoth's (2012) application of these terms in discussing tabletop and digital games. Though aware that 'upkeying' and 'downkeying' were invoked by Goffman to describe only accidents, miskeyings of frames, we follow Linderoth (ibid.) in adapting upkeying and downkeying as fruitful orientational metaphors describing one's disposition within a frame: the more one upkeys, the more one commits to the role within the Game Event; the more one downkeys, the more one assumes disinterest in the

focused encounter (detailed in Section 3a), for example withdrawing as Character Player but remaining as Social Actor.

We do, however, intend to have our cake and eat it too. That is to say, we do still take on board part of Goffman's meaning, in that the upkeying or downkeying initiated by an object is always a dangerous manoeuvre, always at risk of being rejected by other objects to which it relates. This is due to the tension inherent to any frame, the network of objects that comes together momentarily to define the situation, as Goffman expands:

> "[T]ension here refers… to a sensed discrepancy between the world that spontaneously becomes real to the individual, or to the one he is able to accept as the current reality, and the one in which he is obliged to dwell… the coherence and persistence of a focused gathering depends on maintaining a boundary, so the integrity of this barrier seems to depend upon the management of tension." (1972, p. 40)

If we extend this management of tension to the non-human actor, it is clear to see how it too may provoke rekeying, or break the Game Event entirely. Examples abound: glitches within a digital game may undertake the labor of keying, as the user negotiates a new definition of the situation; haptic feedback upkeys my hands (or other parts of my body) as metonym for my avatar's physical or emotional experiencing of the Character World, my hands becoming *hands-as-body*, or *hands-as-temperament*; the football punctures and the frame is broken, downkeying all connected objects back to the Social World.

In summary, we hold that all objects, human included, may maintain a certain *disposition*: an orientation towards the Game Event. Sometimes this disposition is mandated by human intentionality in the moment of play, other times we argue it is clear this disposition is intended by the designer; due to the nature of interpretation we can only ever establish this position through *doxa*. For example, it is popular opinion that Hideo Kojima, creator of the *Metal Gear Solid* (Konami Computer Entertainment Japan 1998-present) series,

reorients the disposition of much console apparatus so that it appears *within* the Game World, or as we will discuss in section 4, upkeys objects from Social to Character World.

Principles

Our model is grounded in three principles: practicality, robustness, and minimalism. Johan Huizinga famously coined the phrase *Homo Ludens* to describe what he viewed as one of the fundamental properties of our species, play. Since Huizinga we have seen the possibilities for play expand rapidly, due in no small measure to technological advances. As play is intertwined more and more within everyday life, culture and technology, we have designed this model to serve as an descriptive schema that can accommodate the rapidly increasing variety of forms play assumes, driven by a knowledge economy that thrives on innovation and novelty, a culture that prizes spectacle and a neomaniacal consumer base.

Practicality

Our model is intended as a tool for both analysis and production. Whilst one can place the model over an existing game situation to articulate keys and relations between objects, one may also begin with a *tabula rasa* and plan a design through an ideational mapping of objects and relations. Indeed for instances of game production, we believe design and analysis should proceed simultaneously in a reciprocal dynamic, not dissimilar to the *Agile* mode of software development.

Robustness

Whilst more than a few models, noted earlier, have been proposed for the comprehension of games and play, all falter when confronted with certain mediums, modes of play, or arrangement of objects within the Game Event. Our model was conceived to provide explanatory power to any type of Game Event, from pervasive games to football matches to massively multiplayer online games (MMOGs); also to any type of object within the event, from human players to DualShock 4 controllers to *Pac-Man* power pellets, White-browed Scrub-wrens and Indiana Jones. All are counted as real if they perturb other objects within the Game Event: the more affect, the more real.

Minimalism

Though we leverage much academic theory, we are primarily concerned with offering a user-centred design; that is to say, an accessible, comprehensible tool. Therefore we have taken liberties in adapting, reconfiguring or disregarding aspects of theory as we see fit to make the model internally sensible. We wish for our model to convey itself as straightforwardly as possible, bolstered by its theoretical foundations without simultaneously groaning underneath their weight. To this end, we have made a conscious choice to avoid dogmatic adherence to our theoretical inspirations; our model requires an epistemological nimbleness in its construction resonant with its intended breadth of application.

OUR MODEL

Following the above our model, as a general heuristic concept for play, is not tailored towards any specific medium, genre, or game system; it is an ideal structure meant to assist and guide empirical inquiry, not replace it. We also understand the analytical deployment of our model as correlating with the approach inspired by Alfred Schutz's work often referred to as ethnophenomenology. This idiographic approach acknowledges, and indeed emphasises, the filtering of experience through a subjective lens, seeking to find intersubjective commonalities that can be used to define generic features of the phenomenon, i.e. inductive reasoning; similarities with Goffman's frame analysis are clear.
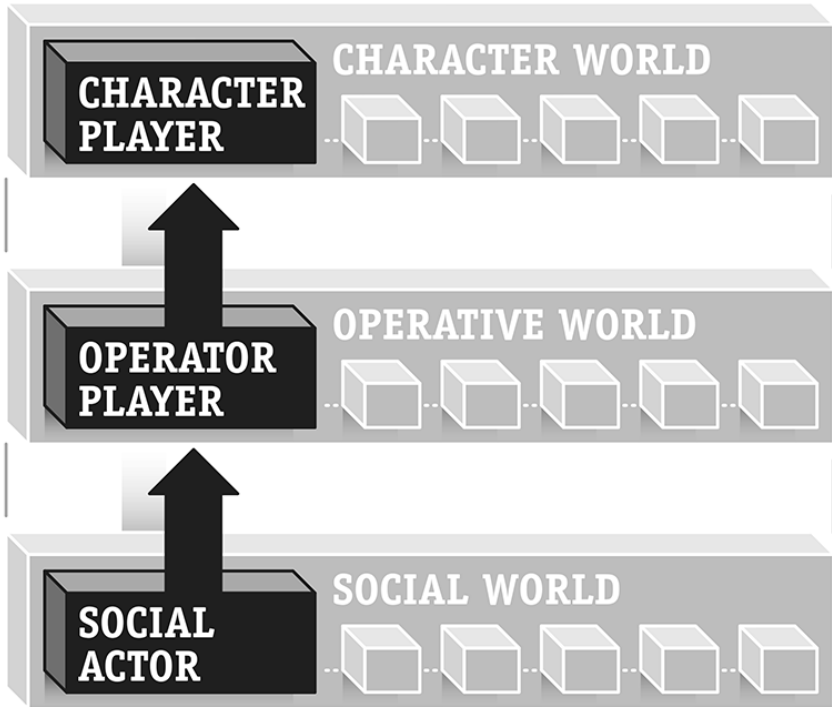
Figure 2: *Mapping a human user's upkeying.*

Therefore to provide consistency within our case studies (see section 4), we focus on the Game Event from the perspective of a single species of object: specifically we consider the human user's relationship to the Game Event, as Social Actor, Operator Player, and Character Player (see figure 2).

3a. Three Levels: Social World/Operative World/Character World

We follow Lakoff and Johnson's (2004) discussion of structural and orientational metaphor in offering a model whereby more effort is required to move upwards than downwards. For example, my 'everyday' experience of being Steven is much easier to maintain

than a belief that I am Lara Croft. To borrow from Goffman, the 'Social Actor/Social World' is a primary frame, an untransformed scenario: in this world Steven exists but Steven-as-Lara does not; assault exists but boxing does not. Conversely, within the 'Character Player/Character World' lamination,[1] Steven-as-Lara exists whilst Steven waits patiently in the zuhanden Social World; boxing is possible within the Operative and Character Worlds, but assault impossible: once assault occurs, the Game Event breaks and participants are downkeyed back to the Social World.

Goffman notes that games are *focused encounters*:

> "[a] single visual and cognitive focus of attention; a mutual and preferential openness to verbal communication; a heightened mutual relevance of acts; an eye-to-eye ecological huddle that maximizes each participant's opportunity to perceive the other participants' monitoring of him. Given these communication arrangements, their presence tends to be acknowledged or ratified through expressive signs, and a "we rationale" is likely to emerge, that is, a sense of the single thing that we are doing together at the time. Ceremonies of entrance and departure are also likely to be employed, as are signs acknowledging the initiation and termination of the encounter or focused gathering as a unit." (1972, pp.17-18)

Thus the Social Actor key is the most fundamental, and easiest to maintain within the frame of the Game Event. Whilst one must always exist within the lowest key, one may not always exist in the highest, 'Character Player/Character World'. To achieve entry into this key requires a particular collusion (Giddings 2009), a tremendous unified effort between the objects in the network, player included; as Ruggill and McAllister note, players must "work intensely hard to inhabit the different subjectivities required by each individual game" (2011, p.33).

This 'work' is the ongoing process of much negotiation: only when

the majority of objects collude to move upwards together is there a chance of success. For example, it is very hard to upkey to Character Player within the board game of *Chess* as the minimalist board design and player pieces (traditionally black or white, mostly abstract shapes) make little effort to upkey the player; I exist on the level of Operator Player, as the game demands, and speaking as Character Player ("I am general of the white pieces!") could perhaps only be credible in jest. Goffman concludes:

> "The world made up of the objects of our spontaneous involvement and the world carved out by the encounter's transformation rules can be congruent, one coinciding perfectly with the other… Where this kind of agreement exists… the participants will feel at ease or natural, in short, that the interaction will be euphoric for them." (1972, p.38)

Thus it is much easier to upkey in a game where the entire network of objects colludes, indeed insists that the player move upwards in his or her relation to the Game Event. In this way digital games are perhaps the most articulate medium for upkeying to Character Player, considering the suite of tools available to hail the user-as-character, to quote Ruggill and McAllister once more, "computer games insist that players let loose their present subjectivity (e.g., mother, student, soldier, teacher) and mold themselves into one proffered by the game at hand" (2011, p.34). These *insistences* are evident in all kinds of feedback within digital games: from audio-visual design ("my avatar looks heroic") to narrative ("thanks Hero!") to mechanics ("1000 points, winner!") to haptic (strong vibrations indicating you are taking harm) and beyond.
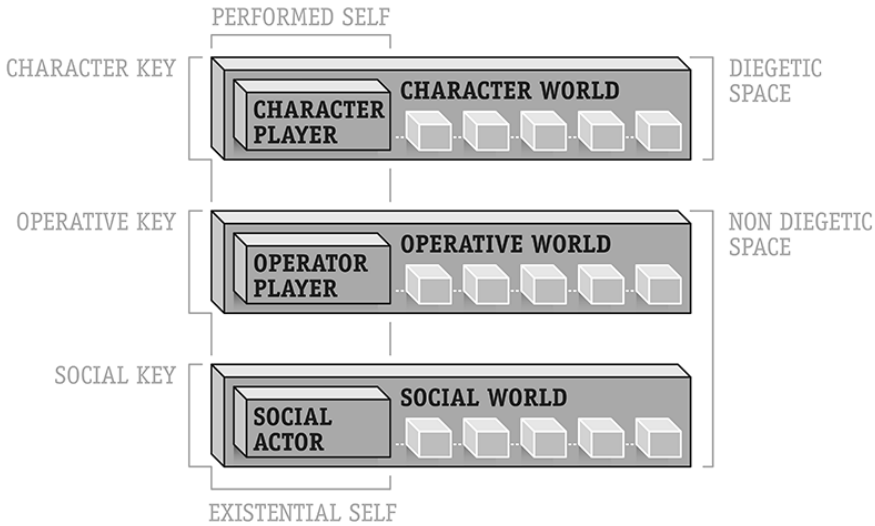
Figure 3: Our model articulated in relation to other theoretical constructs.

CASE STUDIES

In this section we offer a selection of demonstrative case studies focused upon the human user's relation to the Game Event and the various objects within. These are not to be understood as typical object relations for the medium or genre within which they sit. Instead they have been selected as particularly popular, novel or illuminating moments of object relations aimed to offer analytical light, on the one hand, and an example of the breadth of objects accessible to the designer, so often invisible, on the other.

Football

Referee Horacio Elizondo stands statuesque, a red card held accusingly in his right hand. The recipient, France's Zinedine Zidane, appears nonplussed as Elizondo points him towards the touchline. The tribal timbre of Berlin's Olympiastadion drops to a confused mesh of questioning voices.

It is the final of the 2006 football World Cup, and the world's best

player, in his final professional match no less, has been sent off; downkeyed by Elizondo from Operator Player to Social Actor. Yet no one appears to know why. For viewers at home it becomes clear a matter of seconds later, as slow motion replays fill screens: Zidane had forcefully headbutted Italy's Marco Materazzi in the chest.
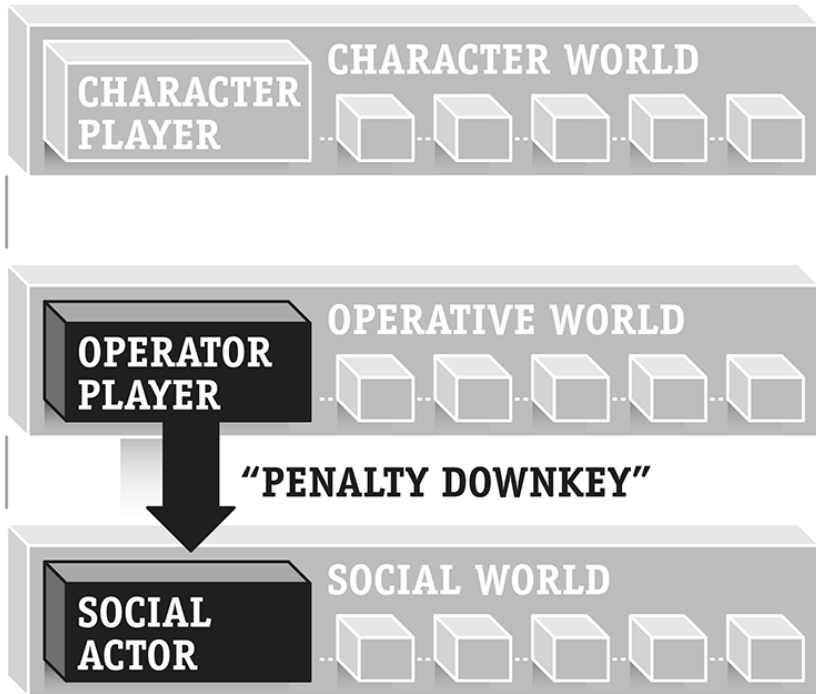

Figure 4: The most severe sanction in many Game Events is to downkey a user to Social Actor.

An excellent example of what Whannel terms 'vortextuality' (2010), the incident achieves a vortex effect, dominating the mediascape and drawing towards it an eclectic suite of high-profile commentators; at one point even the then-president of France, Jacque Chirac, is compelled to offer his public support to Zidane.

The headbutt itself stands as a fascinating example of illegal object relations within a game: though it may relate to the ball, one's head must never intentionally engage with an opponent's chest in football, yet it is allowed in certain other contact sports (e.g. until *UFC 15: Collision Course*, headbutting was allowed within the Ultimate Fighting Championship).

It is interesting to note Zidane's reason for the headbutt: Materazzi had offered a very offensive description of his sister. Materazzi had upkeyed resources from the Social World, knowledge of Zidane's family, into the Operative World. Instead of speaking to Zidane as an Operator Player (footballer), he spoke to him as a Social Actor (a man with a sister), aware that one can never leave the social fully behind when playing a game. He is, in Huizinga's terms, a spoilsport; in modern videogame parlance, a griefer. For this method of griefing (there are many), one simply needs to upkey a knowledge of the target group's socio-cultural values, their *habitus*, to borrow from Bourdieu. Indeed, within the French-Algerian press Zidane's headbutt was articulated as a typically Algerian reaction to such an insult, in opposition to his French upbringing (Winterstein 2008).
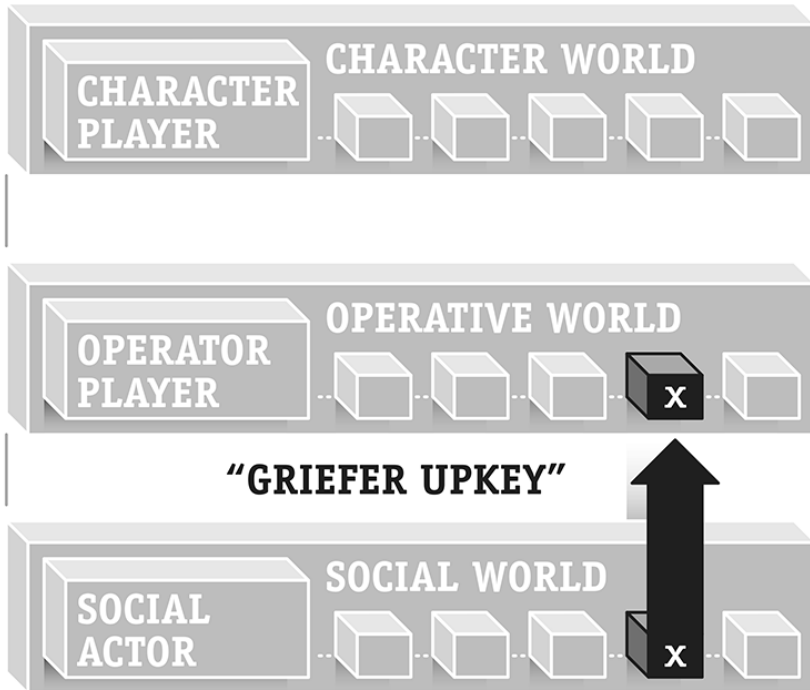
Figure 5: Griefing is an inappropriate upkey of Social World resources.

The practice of upkeying from the social to the Operative World (see figure 5) is, then, very common: in Massively Multiplayer Online Games (MMOGs), players upkey all kinds of external software programs into the Operative World to facilitate play; new player dynamics are invented simply through the upkeying of alcohol as a penalty object within many games, from *Mario Kart* (Nintendo 1992-present) to Darts. This leads us to note that upkeying is also at times a rather dangerous, sometimes disruptive movement. Asides from alcohol and knowledge of another player's Social World, as a broad example, one simply needs to upkey money into any game to witness a change in various object relations.

Hideo Kojima

"Blackout!" announces psychic villain Psycho Mantis; the user's television screen turns black with green text, 'HIDEO', glowing in the upper-right. This is a boss-battle taking place within *Metal Gear Solid*. Under the pretext of Psycho Mantis' psychic powers, all sorts of objects (the PlayStation 1 memory card, the DualShock controller's vibration motors, and the television) are upkeyed into the Game World. The encounter is an opaque acknowledgment of the often transparent network of objects that come together in generating the video game Black Box.

In this moment the television becomes an alien object, suddenly obtrusive, filling my intentionality. Similarly *Metal Gear Solid*'s creator, Hideo Kojima, demands deference as the network's ultimate owner; this vorhanden strategy is indeed often labeled as 'breaking the fourth wall'. Yet this does not result in the sense of alienation, between myself and the Game World, that Bertolt Brecht would advocate: my immersion in the fiction remains.

In fact, the opposite occurs: through conspicuous manipulation of the network of objects within the Game Event, the world of *Metal Gear Solid* becomes more encompassing, more persuasive. It is a hallmark of Kojima's work that he plays with this keying between worlds: in the above example the television, previously existing on the level of the Operative World, is upkeyed by Psycho Mantis into the Game World. During this famous boss-battle Psycho Mantis will also upkey the DualShock controller, the memory card, and even the controller ports (the user will have to switch from controller port 1 to port 2 so that Psycho Mantis cannot 'read the mind' of the user and dodge all attacks). As shorthand, we call this movement of objects into the Game World the 'Kojima Upkey' (see figure 6).
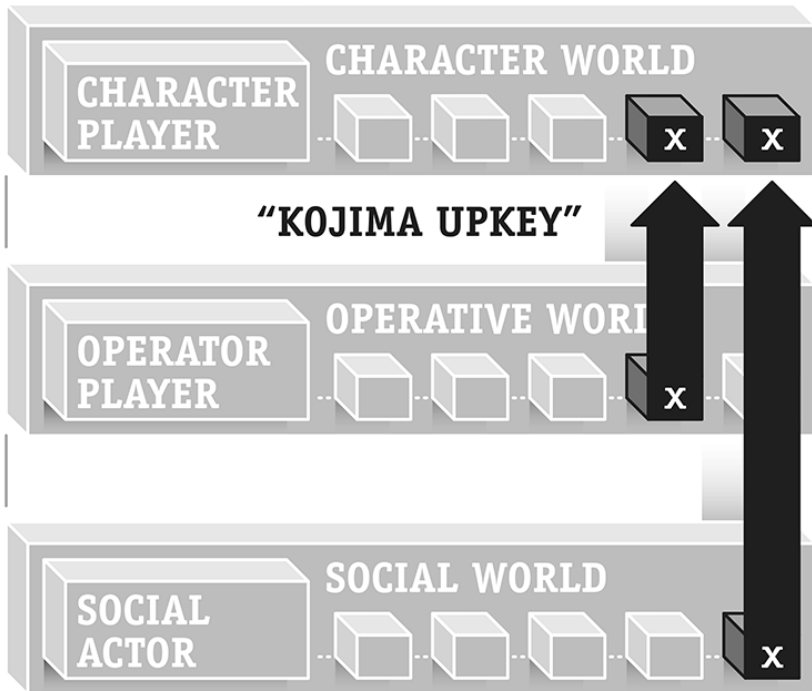
Figure 6: *A typical movement of objects within Game Events designed by Hideo Kojima.*

This signature rekeying is evident across Kojima's oeuvre: one of Kojima's earliest games, 1988's *Snatcher* (Konami), heavily relies on upkeying science-fiction films of the time, most obviously Ridley Scott's *Blade Runner* (1982), whilst Kojima also planned to distribute the game on heat sensitive floppy disks that generated the smell of blood and revealed messages under certain temperatures (Gilbert 2012). In *Boktai: The Sun Is In Your Hand* [2] (Konami Computer Entertainment Japan 2003), the sun is upkeyed from Social to Character World via a photometric light sensor embedded within the Game Boy Advance's cartridge, as UV rays charge the weapon of the protagonist (a vampire hunter).

Sometimes You Die

> "What makes you accept this as a game?
> The category in the App Store?
> That you want to be entertained?
> How low must the level of fun be…
> not to call it a game?
> Is it the fact that it follows rules?
> That you go from left to right?
> What is it that you call 'game'?" (Stollenmayer 2014)

I have just launched the 2014 iOS game *Sometimes You Die* (Stollenmayer 2014) on my iPhone5S, when developer Philipp Stollenmayer begins my interrogation. His questions appear as a collection of disconnected words amid a seemingly random pastiche of dimmed text, glowing on the back wall of this room-by-room platforming puzzle game. The words are read aloud by a digitally altered voice. A ransom note and a telephone call from a Hollywood kidnapper fused into the passage of play.

Stollenmayer's agenda is clear here: he will not allow my experience of his game to go unchallenged. My engrossment will be subject to his relentless critical examination, and on reflection, my own. Here then, the voice of Game Designer is present, tangible within the Game World, willfully engaging the Operator Player in an interlocution that dissects the experience itself, the medium upon which it is delivered and the device upon which it is played. Stollenmayer's dissonant form of address forces a pattern of rapid oscillation as my intentionality is, moment to moment, redirected between all three levels of the game event.

As I progress, his interventions become ever more surreal. 'You rely on a promise that I do not change the rules … You expect obedience … I never gave a promise. I could make you pay for every level.' An in-app purchase pop-up appears on screen, recognisably dressed in

the livery of Apple's *iOS7*. 'Do you want to pay \$9,999 to unlock this level?' My input options are 'Yes' and '**Yes**'. With great trepidation and knowing full well that my banker will block the payment, I tap the lesser of the two affirmative options and the text changes. 'No you don't. Use this pop-up to reach the exit'. So prompted, I realise that the pop-up has been made concrete within the diegesis, transformed into a platform I can use to reach a previously inaccessible exit. This again, is what we term the 'Kojima Upkey'. An object from the Social World upkeyed into the Operative World, its previous utility discarded as it assumes a new role in the Game Event.
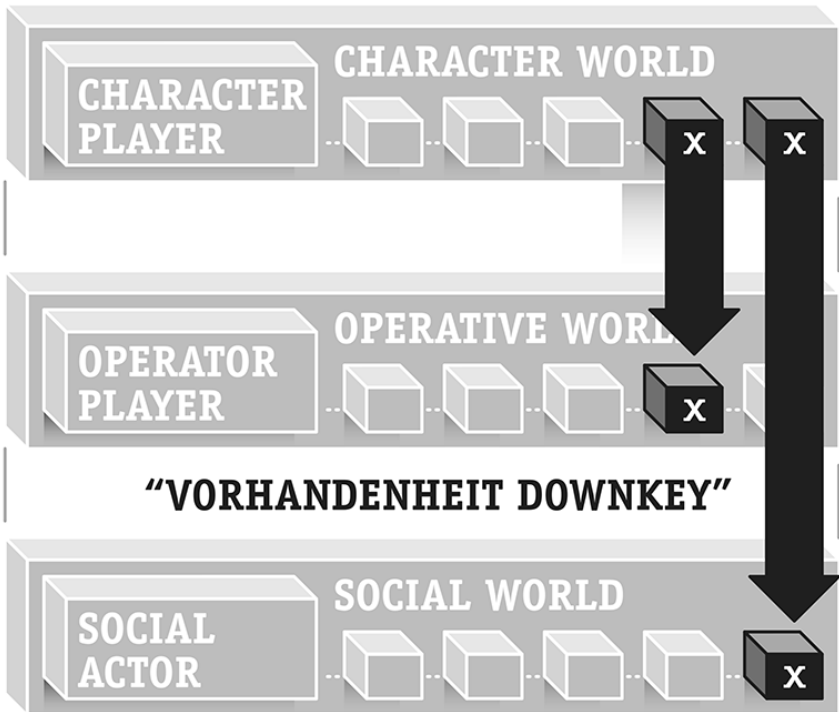

Figure 7: *The Vorhandenheit Downkey*

'I could change the rules'. As this ominous statement is made, my

operative control of the black square beyond the flawless lens of the screen has been suddenly and appallingly rewired. Pushing left now causes my avatar to jump, right = left and jump = right. With this latest assault the iPhone5S, zuhanden until moments ago, fills my consciousness. Like my keyboard earlier in the article, it has become vorhanden and I stare at it witlessly, my hard earned mastery of the virtual controls entirely lost, my proprioceptive, muscle memory rendered useless and my engrossment severed. We term this kind of moment the 'Vorhandeneit Downkey' (see figure 7). The iPhone5S has become present-at-hand and I must renegotiate my relationship with it and in turn Stollenmayer's infernal creation. 'How much more of this will you take', he seems to be asking. 'No more' I decide, and close the app, blinking at the commuters in the train carriage I have been riding all the while. I have downkeyed intentionally to the Social World and resume my role as Social Actor, pocketing my phone and shifting my weight carefully lest I disturb the passenger next to me, engrossed as she is in *Candy Crush Saga* (King 2012).

I'm with stupid…

> "Peter! It's Deadpool. What the hell is High Moon doing to my game?!? Look, use the money I transferred to your account and patch this shit! Now!" (High Moon Studios 2013)

My avatar, Deadpool is quite literally speaking on the phone with Peter Della Penna, President of High Moon, the game development studio responsible for *Deadpool* (High Moon Studios 2013). We have arrived at a door, beyond which the game level is clearly incomplete. Placeholder textures are wallpapered across primitive geometry in corridors patrolled by T-posed, as yet unanimated enemies. Clearly, the eponymous character I'm attempting to pilot is not impressed. Della Penna complies, the door closes and after Deadpool taps his foot for a few seconds a loading bar fills, signaling the arrival of new content. The door opens once more on a now completed scene. As

with *Sometimes You Die*, the voice and role of the Game Developer has been upkeyed from the Social World to the Operative and Character Worlds.

It is not the first time the two have spoken in my play through. In fact the game begins with the premise that it is being made at the protagonist's insistence (blackmail, death threats), that Deadpool has script approval, can negotiate budget and even prematurely determine when the game ends should he so choose: 'Ok, that's it, roll credits, we're done here'. This will be no great surprise to fans of the Marvel character, known for his 'fourth-wall awareness'. In *his* comics, Deadpool knows he is a comic-book superhero and in *his* game, he knows he's the star of a game. This awareness affords him unmediated access to all of the objects in the Black Box and he resignifies them with delirious frequency. An avatar with an agenda, gleefully transgressing every convention of genre and creative constraint of console hardware, in what is otherwise a by-the-numbers, third-person action adventure.

Here too is an entity that refuses to allow the Operator Player to upkey to Character Player for long, by continuously renegotiating the terms of the focused encounter to suit his own motivations. Deadpool wants to satisfy his *own* adolescent power fantasies, and the hapless player (like the game's developer) is simply another object deployed to that end. In this sense, Deadpool is diametrically opposed to the compliant, often silent, empty vessels players of digital games so often pilot in pursuit the very same gratifications.

The character is also explicitly aware of the player's role in all this and takes pleasure in pointing out his dissatisfaction with the relationship: 'Hopefully, when we wake up, you'll be gone'. It is at these moments, when our avatar speaks to us at the level of the Operative and sometimes Social World, that we can identify a fourth wall break consistent with the theatrical origins of the term; he heckles the audience (see figure 8).
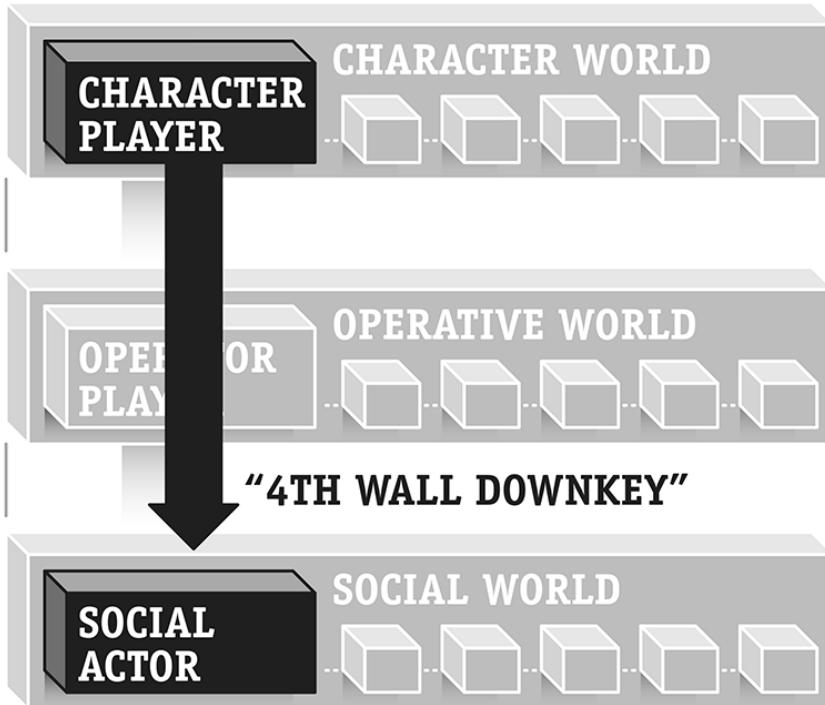
Figure 8: *Deadpool frequently kicks the user out of the Game Event.*

Later in our adventure, Deadpool takes off alone, exhorting the player to try and keep up. The umbilici that tether character to camera and DualShock input to character action have been suddenly severed. The real-time camera in the game is now all I'm able to pilot. It has been upkeyed from somewhere deep in the Black Box and I push forward, attempting to catch up to my wayward charge, like an embedded camera operator in a war-zone. Downkeyed once more, this time to Operator Spectator, I realise there's no colluding with Deadpool. I'm merely a passenger on his quixotic ride.

CONCLUSION: OBJECT LUDENS

To summarise, we must recognise that Huizinga's Homo Ludens is,

in its very conception, a misnomer: man of play cannot exist without a whole host of allied objects colluding. Sometimes these objects are predisposed to afford play, generally through designer intention, other times they are momentarily leashed, keyed into the Game Event accidentally, unwillingly or illegally, as when head meets chest in football, rain meets grass in tennis, or angry bird meets promiscuous sensor device. Games are Black Boxes: the accumulation of a vast number of objects that comes together, oftentimes *incognito*, to produce a Game Event.

The aim of our model, then, is to provide illumination. The box is broad, deep and frequently unpredictable, therefore our model is robust and minimal: we must not offer an a priori prescription of objects, or relationships within any Game Event. Much like Latour's Actor-Network Theory, our model only comes into being through practical application, as illustrated in section 4. This is a distinction we maintain for analysis, however for design we advocate the model as both an exercise for pure ideation, in the planning phase, and tool for diagnosis, in the development phase.

That said, a few key factors underlying our model should be reiterated. Firstly, in borrowing terms from other fields and disciplines to describe the Game Event, we should be careful we do not dull the analyst's scalpel for the sake of convenience. Metalepsis, paratext, non-diegetic, and fourth walls, to name a few, may all have their place in specific discussions, but we recommend one deploy such terms in a critical, reflective manner.

Secondly, the agency of the non-human must be acknowledged: as Apperley & Jayemanne (2012), Deterding (2013), Giddings (2009) and Keogh (2014) have lately concluded, amongst others, the Game Event cannot emerge solely through human toil. Chairs, broadband infrastructures, carbon fibre, Skype, Indiana Jones, steroids and contrast ratio may all have their moment to perturb the Game Event, and therefore all must be mappable. Though our model is still in its early stages, and will no doubt undergo further iteration, we hope that

the Social, Operative and Character World offer enough robustness and flexibility to accommodate most applications.

Lastly, binary distinctions, for example between the real and the virtual, the game and the everyday, are perhaps more damaging than beneficial in coming to an aetiology of the Game Event. Whilst we must be attentive to differences between the material and the ideal, we must not accord deference to the material *over* the ideal prior to analysis: the object plane begins flattened, compressed, and only takes shape through observation, once the Black Box is opened. Similarly, one should recognise the different object relations, and therefore meanings, that come into being in varying contexts, and crucially, at *various instants*. Though the diagrams provided within this article illustrate particular object relations, they are merely still photographs capturing fleeting moments: synchronic rather than diachronic. Our model must sometimes run at 60 frames-per-second to capture the complexity and fluidity of the event as it unfolds across time.

ACKNOWLEDGMENTS

ENDNOTES

[1] For the sake of minimalism, we here do away with the term 'lamination', opting to persevere with key.

[2] Our thanks to Darshanna Jayemanne, who pointed us towards this game.

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Tokimeki Memorial Girl's Side: Enacting femininity to avoid dying alone

Tina Richards

ABSTRACT

This paper examines the Japanese dating simulator video game, *Tokimeki Memorial Girl's Side*, the first female protagonist version in the *Tokimeki Memorial* series. Analysis of the game mechanics, characterisations, player options and their results demonstrate that the game assumes and reinforces a range of cultural norms and social expectations in relation to gender performativity, courting and dating, relationships and intimacy. I discuss how the gameplay actively produces particular heteronormative perspectives on how girls and young women should enact femininity if they are to avoid being alone at the end of the game, and, for that matter, in life.

Keywords

Dating Sim, Tokimeki Memorial, Otome, Gender, Techno-intimacy, video games

INTRODUCTION

In the ever-growing globalised market for video games, those produced for particular cultures and language groups are increasingly finding international audiences as internet sales and greater opportunities to travel provide access to games initially conceived and promoted as regionally exclusive. Games can become popular regardless of apparent limitations of language and culture. For example, with roughly 19% of the Australian population considered bilingual (Griffith 2014) and over 1.4 million students undertaking second language learning (Lo Bianco 2009), a considerable

proportion of Australians can readily consume cultural product from non-Anglo sources. In any case, widespread familiarity with genre conventions among gamers means that even players who do not share a game's language can nevertheless engage in an enjoyable level of play. Further, in the context of globalised fandom, an appetite for Japanese popular culture means that video games popular in Japan are attractive to Australian players, even when untranslated. It seems important for Australian game studies to pay attention to the impacts and implications of games not available in English yet increasingly popular among Australian players, and equally important to take an interest in such games in relation to their own cultural contexts.

This paper examines the Japanese dating simulator video game, *Tokimeki Memorial Girl's Side* (Konami 2002), the first female protagonist version in the popular *Tokimeki Memorial* series. Like many dating simulators, the game remains officially unavailable in languages other than Japanese (although fan translations exist). Widely consumed by Japanese men and women, and especially popular among young people, dating simulators are a single- player game requiring the player to be the protagonist, either a male or female character chosen from those offered by the game, whose aim is to court one of a considerable number of possible suitors, also provided. In *Tokimeki Memorial Girl's Side* the suitor options include seven fellow high school students including students from the player/protagonist's own grade as well as upper or lower classmen or *kōhai* and *senpai*. Most interesting though is the inclusion of two further courting options, both her homeroom teacher and the principal. Heteronormative ideologies are most visible in the fact that all suitors are male. In order to court a suitor, the player must make both conversational choices and decisive actions, each of which are allocated points. Choices, depending on their positive or negative connotations within the situation can have points awarded or subtracted from the score.

Dating simulators usually have a set time frame at the end of which the points received will determine the outcome of the game. The *Tokimeki Memorial Girl's Side* game time spans three years of senior

high school and both the passage of time and activities are depicted through the use of a calendar. The calendar is a main feature allowing the player to consider future events and plan her activities for the week. Once she determines an activity it is completed from Monday until Saturday, or on Sundays alone. Each day or sequence of days is shown as a short animated clip of the activity, followed by the game awarding/deducting points on the basis of what the player achieves. The calendar encourages the player to engage in mainstream social expectations as if she is living the everyday life of a Japanese girl of secondary school age through choices that reflect the real world such as studying, doing art, club activities, fitness, fashion, personal grooming and friends. These activities, while replicating the "real world," at the same time build stats that determine the player's chances of attracting the suitor she prefers.

Analysis of the game mechanics, characterisations, player options and their results demonstrate that the game assumes and reinforces a range of cultural norms and social expectations in relation to gender performativity, courting and dating, relationships and intimacy. I will argue that the gameplay actively produces particular heteronormative perspectives on how girls and young women should enact femininity if they are to avoid being alone at the end of the game. Since the game is from a female protagonist point of view and aimed at a female audience, I will use the female pronoun when referring to the player, this being said, both men and women may enjoy/play this game and it is in no way restricted only to women.

Japan, Women and Intimacy

The sole purpose of *Tokimeki Memorial Girl's Side,* as far as the mechanics of winning and losing are concerned, is to successfully woo a suitor and live happily ever after. The player must create a relationship and maintain it till the game ends. The game's content and mechanics replicate intimacy in the "real" world of Japanese society. If the player is not agreeable and submissive to male characters, they will be considered undesirable and will "end up" alone. The game will end with the player achieving no success in

dating. She is depicted as alone and lonely, with only her younger brother Tsukushi to console her. In these ways, the game actually does replicate the (harsh) realities of still strong traditional attitudes to establishing heterosexual relationships, and the centrality of men in Japanese cultural life.

Traditionally, in Japan, women have been regarded as inferior to men and kept in subordinate positions by patriarchal family patterns (Masako 1995). According to Iwao (2007), recent trends indicate that young Japanese women are currently living at home longer with their parents rather than getting married straight away. Living at home means that they have the freedom to work/play until late and have their cleaning done and their meals prepared by their mothers (Iwao 2007). Once a woman wants to marry, or is expected to become a wife, she loses freedom and gains responsibility and expectations. This game introduces these (apparently inevitable) sacrifices at a young age as if to prepare female players for their unavoidable destinies as women. The game's content encouraging female players to conform to male ideals of desirable as well as submissive behaviour in order to be liked and loved is not at all surprising in the context of conventional and, indeed, contemporary Japanese cultural values and social experience. Most young women do expect to *have* to become somebody's wife, and in doing so, to lose much of the autonomy they might have experienced in their previous life in their family or in their own apartments and their professional careers.

In Japan, unmarried women are often referred to as Christmas Cakes (Japanese123 website 2005). Christmas cakes, as the name suggests, are special cakes that Japanese people eat traditionally at Christmas. They are not the fruit loaded, heavy textured, long lasting cakes of Western Christmases. These are short-lived cakes – good for 25 December only. The analogy goes that women are like Christmas cakes, perfect at 25 and spoiled the next day: that is, women older than 25 are past their "use-by" dates. It's as if the time limit within the game (3 years) along with 9 suitors and no more, is a reflection of a society in which women are on a ticking clock with limited potential

partners – they either pick one and settle or are "waste" after they reach their expiry date.

The Intricacies of Dating

Most of the game mechanics revolve around the date event, which is, after all, the rationale for the play – all the routines of day to day life in one way or another converge in the narrative momentum and emotional engagement provided by the date. The experience of a *Tokimeki Memorial Girl's Side* date from the player's point of view consists of five major game mechanics in the following sequence: the selection of an outfit and accessories; her date's reaction to her clothing choices; the completion of the main date component, such as a meal or a movie; a question regarding her impression of the date; and her date's response to her answer to that question.

When a player chooses to advance to a date, she must first choose her outfit. Her choices of available clothing and accessories are based on her previous player shopping patterns – an activity available on the weekends in the game calendar. An experienced player will learn to shop early and often so that she accumulates a wider choice of outfits in readiness for a date. A player's/protagonist's capacity to advance in the game depends on choosing an outfit to wear on the date, and in order to have a sufficient choice of outfits, she is expected to have been shopping on weekends. There is an obvious question here about why the player must go shopping rather than simply having all the options available on the selection screen. After all, in terms of game play, it's the choice that matters. Nevertheless, the game assumes that the player will delight in shopping up a virtual storm, and clothing their avatar. It is, of course, the case that many women do enjoy shopping, and vast amounts of marketing are directed towards inviting them to continue to enjoy it as frequently as possible. Research indicates that when it comes to online shopping women surpassed men well over a decade ago (Girard et al. 2003). Publication of such data adds a factual air to the stereotype that women enjoy shopping – except that the stereotype relies also on an unspoken essentialist position that women enjoy shopping *because*

they are women. Thus, shopping is assumed to occupy a cultural role as a trivial, feminised pastime. Walkerdine (1989, p. 1) stated in her opening to *Femininity as Performance*, "Femininity is seen as a series of roles often imposed by agents of socialization." The gameplay indicates that shopping is a central activity in a woman's life. The player is required to shop in order to have sufficient outfit choices for dates, and although this can be seen as a virtual replication of the "real" world, it panders to the stereotype that women enjoy shopping and are interested in clothes and fashion. In fact, the game consistently provides the female player with a representation of what is *expected* of her gender in the "real" world. In this instance, the expectation is that women enjoy shopping and therefore on each weekend in the calendar the game offers a platform for shopping to be learned as a normalised and normative aspect of women's behaviour. The game mechanics reinforce this: the player/protagonist who wants to "succeed" in the game will perform her gender through shopping with careful thought about how her shopping behaviours will later impact on her dating points.

In a clear example of how gender performance, in Judith Butler's (2006) sense, becomes part of the embodied, affective experience of women. The stereotype that women enjoy shopping is built into the game mechanics along with the equally gendered assumption that women dress to please men. For the young female player this enactment of shopping behaviours as an aspect of gender performativity is likely to reinforce a range of pre-existing social and cultural assumptions about women and shopping that she has already learned or is currently learning. Indeed, she may well be using the game to help her learn "the rules" of women's heteronormative gender performance in the context of dating – that is, in the context of relationships with men. The latter is more likely to be the case among young Japanese women than among young Australians due to the constant affirmation of the Japanese cultural setting through school hierarchies, cultural activities, language use, etc., which to a Japanese audience would reflect the norm, but to an Australian audience be considered foreign. Although this may be less likely to

affect Australians, some young Australian players may be encouraged to form particular attitudes.

In selecting what to wear, the player has the opportunity to obtain bonus points based on demonstrating an awareness of styles. For example, a particular blouse and skirt may attract points because it is considered to be elegant, but the same skirt with a t-shirt may be regarded as nothing special. There are a number of pre-determined styles categorised as: Sexy, Elegant, Pure and Sport. Each style involves an array of accessories. While these styles aren't exclusive to Japan, style categories are quite common in the Japanese fashion industry with websites such as *Japanesestreets.com* using such tags to identify style types. Many Japanese fashion magazines are constructed with the sole purpose of reaching one specific audience – for example: according to a Japanese fashion magazine guide on *livejournal* (ryuukou style 2009) magazines *Pichi Lemon* and *Love Berry* are aimed at those interested in "cute" clothing elements, whereas *Elle Girl* or *Seventeen* have "sexy" elements in the Japanese market. While a choice of styles might be seen as suggesting that it's fun to experiment with fashion, the names of the styles clearly coincide with particular constructions of femininity in the context of Japanese popular culture. The exercise of choice based on the player's attempts to predict what the date character is likely to "prefer" encourages her to think in terms of male preferences in certain dress categories. She is rewarded for being willing to change her personal choices in order to attempt to please a man. The choices and behaviours that are rewarded or likely to be rewarded are never those that might involve resistance to conventional gender performance or rejection of accepted social and cultural values.

Having chosen her clothing and accessories, the player advances to the date meeting spot. After an exchange of polite pleasantries when first meeting with her date, if she has chosen to align with a particular style, her date will comment on liking or disliking it, clearly indicating his approval or disapproval. This is followed by an inner monologue in which the protagonist expresses her own happiness or how upset she is with the outcome of her choice. If the protagonist

wears a certain outfit on the first date and receives great praise for her choices and therefore decides to wear the same outfit on the second date, she will not be praised, rather her date will comment negatively. In this way she also learns that men like you to change your outfits from date to date, but always with a view to pleasing them. As Monden (2014) observed in *Japanese Fashion Cultures: Dress and Gender in Contemporary Japan,* because of its ability to immediately identify a gendered body as either masculine of feminine, clothing is a fundamental component of gender performance. Constrained by the style types to certain ideas of what constitutes "feminine", the player chooses her outfits and then completes her performance by wearing it. Her date's reactions will indicate whether she has gained or lost points.

The player and her date advance to the main date component. If the date involves going to see a movie, for example, the player will then watch a cutscene of the movie theatre and a small part of the movie. It is interesting to note that this main component of the date allows no option for game play even though most players probably consider it the most significant part of the date. Although the date invitation was to see a movie together, the seeing of the movie contributes nothing to the outcome of the date in terms of points allocated. Other choices for types of dates feature the same kind of player passivity – that is, the scene is only there to contribute to the "realness" of the representation of a date. The removal of player control during the main date event thus puts further emphasis on the events either side of it – the choice of clothing, and, as outlined below, the choice of response to the movie (or other date type). Both of these player choices rely heavily on pleasing the male.

With the main date component complete, the date asks the player to respond to a question about the component: that is, if the player and her date watched a movie, the date will ask about the movie. The player's choices of answers are equivalent to "like," "not fussed/ indifferent," or "didn't like." Significantly for this analysis, she is commenting on what she thought about the movie, not what she thought of her date. The question and response are designed to enable

her date to make another judgement about her. If she chooses the answer that aligns with how her date felt about the movie, he will express happiness. Having pleased her date, the protagonist will also be pleased. However, if the player chooses differently to her date, he will seem unhappy and the protagonist's inner monologue will follow suit. Here we can see that the female protagonist needs to express views that accord with the character she is dating or he will make his displeasure clear.

This feature is so central, and also so frustrating, that it is common practice for players to save their games just before dates, in order to reload their previous saves if a date is not pleased with the answers given. This allows a player to re-load their game in a further attempt to answer in a fashion more acceptable to the character's date. Re-loading a save is so common in the dating simulator/visual novel community that not only is it recommended as a tip on most available walkthroughs for new players, such as Melissa Tan's *Tokimeki Memorial Girl's Side* walkthrough on Gamefaqs.com (2007), it also makes an appearance in quite a few anime series such as ???????? ("I don't have many friends"), when the character Sena, who plays a lot of dating simulators, comments when she upsets Kobato that it is unfair that in real life she can't reload her last save. While in a game such tactics are deployed in order to accumulate more points, in achieving those points female players are reminded that they are rewarded for pleasing a man, and that they will please a man by responding to experiences in ways that accord with his views, rather than according to their own taste or feelings.

Laura Mulvey (1975) was among those who, early in the history of feminist media studies, explained how the operation of the male gaze means that women may never escape the patriarchal culture in which they exist and so their identity and worth remain determined by how they are viewed by men. Although the *Tokimeki Memorial Girl's Side* is created with a female protagonist, the creators of the game are predominantly male. It is clear that while the game envisages a female audience, it reflects male ideals of what that female audience would "like," or perhaps should "like." Such processes ensure that

the female protagonist on the screen is still constructed by the male gaze. *Tokimeki Memorial Girl's Side* depends on game mechanics that involve male suitors critiquing female protagonists through visual and verbal representations of displeasure or pleasure, approval or disapproval, which simultaneously indicate how the points are being allocated for or against players. The importance placed on meeting a suitor's expectations of desired traits, and the constant feature of the feminine protagonist relying on men for information about herself, both unquestioningly assume the centrality of the male gaze in shaping feminine subjectivity. The player who might, for example, enjoy wearing jeans and going to horror movies now, in the game, chooses to wear summer dresses and watch action movies in order to please her date. Both appearance and preferences are moulded by what is considered desirable by her date. Once again, the extent to which this might or might not reinforce heteronormative gender performance among Japanese or Western girls might vary between cultures and in different age groups, but at the very least the male gaze has to be taken to be the normative gaze if the game's narrative arc is to make any sense to the player and if the player is to "succeed" in the game.

Dating simulator games are prime sites for consideration of issues of techno-intimacy (Allison 2006), or the ways in which actual people form relationships with electronic objects and beings. Allison highlights a particularly striking degree of techno-intimacy in Japanese culture, including in the attitudes of Japanese culture towards machinery, and the habit of referring to it as if it were alive. She illustrates this with reference to products designed for physical as well as virtual techno-intimacy:

…intimate play goods are machines used for play and instruction and also for communication and companionship. Significantly, these devices are also said to be 'healing' in rhetoric that assumes players are already wounded: physically on edge, overworked, stressed out. Being touched by another, albeit a machine, is soothing: the s(t)imulation of social intercourse. (2006, p. 190)

The principal aim of these single-player dating games is to encourage the player to become so infatuated with a character within the game that she will compete with herself in order to win the attentions of the character. Kennedy (2002, p. 8) observes that "people have always invested emotionally in literary, film and television characters." This is no different with video game characters. If the player, feeling attracted to a particular character, wants to achieve the "good ending" with that character, she will need to put aside her own personal preferences, likes and dislikes in order to accommodate the preferences of her date. In this sense, the player's relationship with herself is compromised by the choices she makes in order to succeed in the virtual relationship/s she pursues in the game.

In dating simulators the player can form an intense emotional engagement despite the fact that the relationship is with a digital date and potential partner. These virtual relationships between a player and a virtual body can evoke any number of the player's emotions, including those expected during a "real" relationship. The formation of techno-intimacy is an expected outcome when the player engages with this game, however while the game can evoke positive and affectionate feelings between a player and character, it can just as readily cause feelings that are potentially harmful. This is particularly clear in *Tokimeki Memorial Girl's Side* given the extent to which a player's self-esteem, self-image and feelings of self-worth can be strongly affected by the actions of her date in response to her decisions.

If a character disapproves of her choices during a date, she is also likely to respond with a sense of discomfort or displeasure by opposing the date's thoughts. Negative and harmful gender norms are reinforced through game mechanics that either reward or punish the player's choices. If the player conforms to the date's opinion, he smiles and she advances, but if she disagrees or rebels, he frowns and her play/virtual relationship remains static or even regresses in some instances. Even players who are not heavily invested in the game may come to start associating their own self-worth with in-game stats: she might come to think about herself in terms of "real life

stats" related to body image and successful performance of normative gender expectations. Many women across differing ethnicities, cultures and countries already believe that their perceived physical appearance is an indicator of their self-worth (Horn et al. 2011). The game is reinforcing pre-existing and culturally instilled gender-oriented anxieties for a new generation of Japanese girls – as well as others who might play it. It invites them to attach their self-worth to the perceived opinions of others, and particularly, to the perceived opinions of men. The game acts as a platform of play to rehearse gender roles confined by the coded space of the creators, like Wohlwend's (2012, p. 7) take on the Disney Princess brand, the "always beautiful, self-sacrificing ingénue who never loses sight of her goal: to attract the hero." Players of *Tokimeki Memorial Girl's Side,* especially the young audience to whom it's directed and in whose day to day life-worlds of school and adolescent interactions it is set, not only bring their existing cultural assumptions to the game, and modify them in response to the game, but can also model expected behaviour and norms from this game in "real" life situations. By keying in to "real world" dilemmas that many young women experience intensely, the game generates suggested responses that become readily available in the real world. The extent to which the game evokes emotions within the player may see that same player bring constructed emotional perceptions shaped in the game into her actual life. This, in turn, means that many players could come to understand their self-worth and participation in intimate situations even more strongly than ever in terms of whether or not they measure up to ideals dictated by the male gaze.

Regardless of girls and women being the players with "control" in *Tokimeki Memorial Girl's Side,* the game necessarily positions them as submissive and subordinate through game mechanics that determine expectations and penalise choices that don't align with normative Japanese social expectations, many of which are still based strongly in patriarchal values. For an experienced non-Japanese-speaking gamer, it is quite possible to work out the basic gameplay without any Japanese language, and thus, anyone with basic Japanese language skills can readily navigate the gameplay's particular

combination of written text, visual representations and icons. Some Western players who engage with the game in Japanese might have their still-forming gender performance influenced while others might find aspects of the game play difficult to negotiate because they are unfamiliar with the social and cultural norms on which it so strongly relies. At the same time, it is clear that if this game is translated and distributed for Western audiences, its gendered assumptions and aspects of its broader social context are likely to present major difficulties for cross-cultural interpretation. For the time being, it is important for us to consider the game as a consumable text in its original form, to think carefully about its popularity among young women in its culture of origin and to come to terms with the range of potential effects among non-Japanese-speaking gamers many of whom are dedicated fans of Japanese popular culture.

The Other Girls in Your Social Circle

In the game, there are four feminine friend characters in addition to the nine possible masculine suitors. These in-game girl friends are a welcome inclusion into the mix of characters and in the game's narrative trajectory: these girls offer you friendship while you are on the road to love. Each of the girls has distinctly different personalities, likes, and abilities. Sometimes, in the game, just spending time with friends can be fulfilling. After school you and your friends can walk home together and maybe even go to a café where you talk and learn more about each other. The game mechanics of friendship: time spent together, getting to know one another through dialogue choices, cheering you up if you are failing exams and so forth, help facilitate the formation of techno-intimacies between the player and NPCs (non-playable characters). This relationship formed is later called upon if the friend becomes a rival. The game would be more inclusive if the girls were not all confined to being your friends. It would have been nice if one of the female characters was a dateable option. Instead, the friends get to be rivals when it comes to their love interests in the potential suitors. Some fans of the series have even commented on community sites that they are more interested in their friends. For instance, on Tumblr there are remarks such as:

"Karen is the best waifu" (technazzy-draws-crap) or "*asks otome game a question. Why can't I go out with her?" (tiffke). However, such discussion has had no apparent influence on successive versions of the game. Mia Consolvo (2003) discusses the extent to which traditional fairytale romance is heterosexual – how this is considered "natural", expected and desired. She also found that by controlling characters, people not only go on to perform that character's gender but also its sexual orientation. Given the extent to which Japanese cultural norms in relation to heteronormativity have been embedded in the rest of the game design, the lack of female dating options in *Tokimeki Memorial Girl's Side* is not at all surprising.

The girl friends are:
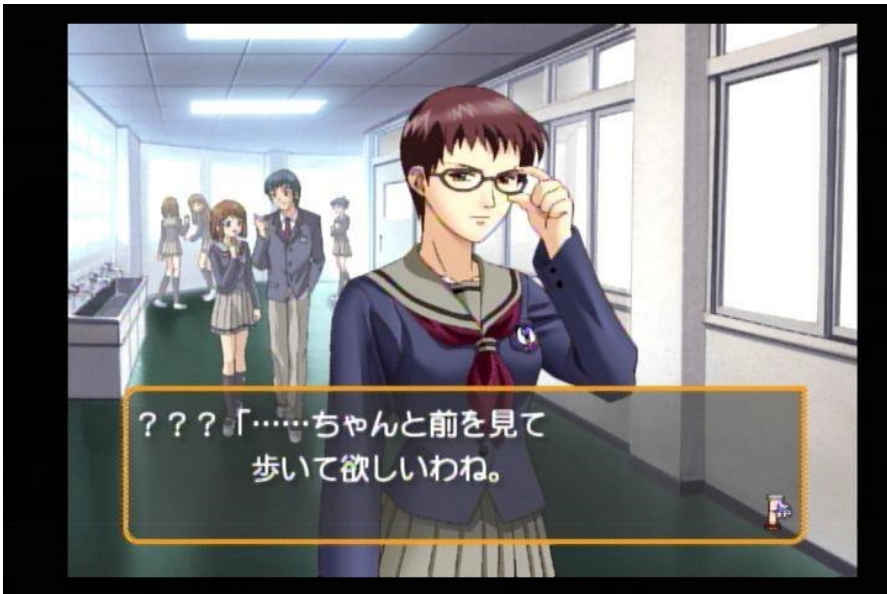

Figure 1: Name: Arisawa Shiho. Birthday: 20 January; Height: 168cm; Horoscope: Capricorn; Weight: Secret; Blood type: A; Part-time Job: Annery flower shop; Club: None; Rival in Love: Morimura Sakuya.

Figure 2: Name: Sudou Mizuki. Birthday: 16 July; Height: 157cm; Horoscope: Cancer; Weight: Secret; Blood type: B; Part-time Job: None; Club: Tennis Club; Rival in love: Mihara Shiki.

Figure 3: Name: Fujii Natsumi. Birthday: 18 December; Height: 159cm; Horoscope: Sagittarius; Weight: Secret; Blood type: AB; Part-time Job: Winning burger; Club: Cheerleading club; Rival in love: Kijou Madoko.

Figure 4: Name: Konno Tamami. Birthday: 5 June; Height: 151cm; Horoscope: Gemini; Weight: Secret; Blood type: O; Part time Job: None; Club: Basketball manager; Rival in love: Suzuka Kazama.

These characters are called "friends" and, as mentioned above, the play offers a range of opportunities to enjoy activities associated with friend relationships. However, if the player decides to date the same male character that her friend is interested in, then the friendship quickly deteriorates. These four friend/love rival girls are the only representations of women in the game (other than the protagonist), and yet they are frequently represented as petty, jealous and nasty. Even if you have reached "best friend" status with one of the girls after spending much of your time with her, if you start to date the male character she desires, she is quick to turn on you. It's entirely possible that years of in-game friendship created between you as player/protagonist and a particular friend are simply disregarded as soon as a man comes into the picture. Thus, the only relationships between women made possible by the game scenarios very quickly

and easily deteriorate into conflict. In such situations, not one of the friends reacts in a way that is mature and beneficial for the player's happiness and well-being by behaving as a supportive friend. The game mechanics and narrative pathways invite female players to share the view that female friends are only friends while convenient, and that jealousy over men can easily destroy a relationship between women

When playing through the game for the first time, I dated Morimura Sayaka. My best friend of over a year (who was also interested in him) had a few nasty words for me before ignoring me. I was no longer able to select the option to spend time with her and activities that we would usually do together (e.g. studying) now depicted me alone. I was heartbroken. I felt as though I should never have expressed feelings towards the suitor I was interested in. In this sense, the impacts of techno-intimacy can feel "real" for a player – or rather, can be really felt. Jeni Lada similarly reports a loss of a best friend over a suitor in her description and review of her first play of *Tokimeki Memorial Girl's Side* Season 2:

> Third Year: I must have screwed up. It all started around Valentine's Day. I made my super special chocolate for Hariya, even though I am awful at that game and needed all four tries to make perfect chocolate. (My low intelligence stat at work perhaps.) When I went to give it to him, Haruhi [her best friend] got all up in my face about it. I ignored her and gave it to him anyway. Then I went to save my game around the end of February, and my save file no longer showed my character with Hariya! I know! The horror! Instead of the two of us singing happily, it showed Hisoka and I sewing. I hadn't hung out with her since the end of first year! (Lada in *Technology Tell* on-line magazine, 2008)

That women are more jealous than men is a wide-spread assumption held by both genders regardless of there being no evidence to date to support this belief (Gordon 1996). Some research, however, has demonstrated that women are more likely to admit to being jealous

than men and the researcher suggests that this explains why women are more associated with that emotion (Gordon 1996). Hostility towards other women due to jealousy is doubtless a learned behaviour that women adopt in order to conform to the socially constructed ideals of how a woman "should" behave. The development of an idea/fantasy of the jealous woman is likely to have arisen from the ways in which many men are flattered by women's attention and even more flattered by the idea that two women will become rivals over them (Gordon 1996). When a woman turns on her friend due to jealousy, she seems to affirm that the man in question is more important to her relationally than any female friend, thus acknowledging the centrality of the male subject in patriarchal social and cultural settings. The game mechanics and narrative pathways in *Tokimeki Memorial Girl's Side* subscribe to these values: all of the game's girl friend characters will react in similarly negative ways towards a rival in love. Thus jealousy and its associated behaviours are normalised as expected emotional reactions from women.

I mentioned earlier that players often save the game before a date, and I certainly did. Saving game files is important for any video game, but I did it specifically so that if I received negative reactions to clothing and gave "wrong" responses to my date's questions, I could quit the game and re-load my save game in an attempt to receive a better outcome. That internet forums and websites that focus on dating simulators encourage the habit of saving and re-loading in order to get better outcomes (Konami 2012) suggests that players are not willing to be at the mercy of the game mechanics, instead adopting what could be thought of technologically resistant behaviours. Even once a player understands that in *Tokimeki Memorial Girl's Side* negative reactions from dates are not at all uncommon, those reactions can nevertheless take the player by surprise. For example, asked by my date how the movie was, and thinking I would flatter him for his choice (i.e. gain points), I responded with "it was good," only for him to become upset because he didn't like it and I was not agreeing with him (i.e. I lost points). Here, women are clearly coached to recognise that to advance in relationships with men, one must agree with men, even learn to second-guess their reactions in order to

avoid disagreement. But women are also reminded that acts of actual or apparent individualism will be met with consequences. That is, the game not only suggests that the exercise of agency by women is unacceptable in heterosexual relationships, but also that resistant female subjects are likely to lose the game even when they think they've learnt how to play it.

The Docile Woman and Male Marital Preferences

Studies have shown that men find women who are less dominant to be more appealing for both casual and ongoing sexual relationships, and as marriage prospects (Berscheid and Regan 2008). Consideration of some heterosexual relationships involving cultural difference can provide further support for the fact that more men prefer docile partners. For instance, interracial marriages that involve an Asian husband and a Caucasian wife have a 59% chance of ending in divorce, while of marriages between an Asian wife and a Caucasian husband only 4% tend to end in divorce. While the percentages differ somewhat between cultures, this trend pertains whether the host culture is Asian or Caucasian (Bratter and King 2008). There can be little doubt that such a stark difference in interracial marriage outcomes is largely due to the effects of differing values in relation to gender roles and the expectations of women, and of men, in different cultures. That interracial marriages containing a Caucasian wife have the highest divorce rate of interracial couples may be ascribed to the fact that most Western societies have a comparatively longer history of engagement with aspects of feminism and women's rights in contrast to most Asian countries – therefore Caucasian women are less likely to accept constraints on their liberty, and less likely to perform their gender in ways that present as docile, passive and emotionally dependent. Of course, class, levels of education, religious beliefs, degrees of social liberalism or conservatism, age difference, the presence or absence of children and many other factors cannot be overlooked in such an analysis, which is far too complex to undertake here. Some Western women still place men as "the head of the household" and view themselves as secondary. However, questions of difference also run the other way: the more educated and financially

independent a woman is, regardless of culture, the more likely she is to be able to exercise agency in her relationships with men. Western women, though, have certainly been exposed to educational and social advantages, and legislative support for their freedoms, in greater proportions and for considerably longer than many non-Western women. Another important caution in a discussion like this arises in relation to the apparent binary "Caucasian"/"Asian." That mode of referring to race is problematic in itself given the rapidly escalating proportion of global citizens who are the products of multiracial partnerships, and given that the matter of cultural difference needs to be thought of in relation to "African," "Arabic," "Australian Indigenous" and all the other possible binaries. Further, race – itself a historically constructed category with no basis in biological fact – cannot be neatly assumed to be the same as ethnicity, and nor can ethnicity be neatly assumed to be a question of nationality.

We must also consider men's values in contributing to marital happiness and stability, or marital breakdown. Western men have been expected to come to terms with the changes in how the rights of women are positioned and enacted. Those unwilling to accept such changes now constitute a genuinely small minority in many countries – and some are probably the same men who seek out women for long-term partnership who they believe will have the "Asian" qualities of docility, passivity, unwillingness to contradict a man's views etc. And, of course, Asian men growing up with access to global popular culture, and those growing up in high immigration countries like Australia, often adopt values towards women that have become the mainstream cultural values of the West.

All of these things invite us to realise that questions of power relations between genders and how they play through in all kinds of settings are more complex, subtle, interconnected and messy than any stereotyped representation can ever account for. However, as this game suggests, Japan does not have the same kind "melting pot" of racial, ethnic, cultural and social backgrounds and expectations that exist in many other parts of the world. Despite globalising influences of many

kinds, in terms of the social and cultural mix and the values carried in that mix, Japan remains to a considerable extent a majority culture – no longer a "monoculture" as people used to prefer to call it – but certainly a culture in which there is a very high degree of shared cultural information at the fundamental levels of values, ideologies, gender relations and language. This makes it in some respects all the more surprising, and in other respects completely unsurprising, that a significant amount of decidedly "out there" art, fashions, popular cultural movements, fan cultures and pioneering work in techno-cultural fields emerge from Japan. Dating sim games are part of such manifestations, yet embedded in them are values and practices that would be at home in Japan 100 years ago.

Increasing proportions of young, educated, hip and confident Japanese women do not actually share so-called "Japanese" "feminine" qualities. In the light of that observation about educated young women, it is interesting to recall that at one stage in a game, I approached a character for a date and was denied. I wasn't sure at first why I was rejected, so I continued with the game only to realise that I was rejected because a specific stat fell below the level that he considered as "minimal" for him to be interested in dating me. I required a study level of 50, but I had fallen to 45. After I reached level 50 again, he was happy to date me again, and even at times pursued me for dates. So, despite the fact that in reality it is the case that educated women are considerably more likely to resist being defined and constrained by a man, for at least one male character in the game, my insufficient interest in study became a reason to reject me, and my demonstration of a slightly higher level of interest in studying increased my desirability, even though the overall dynamic of the game discourages independence, intellectual evaluation, or holding one's own views. This sequence of events in the game play helped me to recognise that if I was to "succeed" in performing a desirable woman in the game, in future I had to ensure that I worked out what each male character I wanted to date preferred in my profile. I did this by extrapolating on the basis of my encounters with other aspects of his profile, characteristics and judgements. More effectively, though, I learned through multiple game playing what

qualities and levels of achievement each male character required of me as a "minimum" for dates, and I would strive to accomplish that.

Reviewing the gameplay, a number of ironies and paradoxes emerge. The game mechanics, characterisations, representations and narrative strategies at times suggest that some of the boys and men like a girl who shows an interest in learning, but in the game play around the main component of the date, all of the boys and men reject a girl who has opinions of her own that don't agree with the boy's/man's opinions. After all, as Kennedy (2002, p. 3) observes, "'active' or 'strong' female characters signify a potential threat to the masculine order." A male character's desire for a girl with some education and an interest in study is, though, probably still all about the man. Such a girl is likely to graduate high school with good marks, maybe go to university, get a well-paid job while the couple is saving for house and children, and once she is at home with the children, she will be an interesting hostess and an appropriate accessory at important events. She will not embarrass him in conversation with his business associates, and neither will she be seen to contradict her husband or any of the men in her husband's circle. Once again, the woman's construction under the gaze is entirely a matter of the man's needs, desires, life choices, advancement in the world, and so on. There is an almost humorous irony present in performing one's gender in a video game designed for female players, given that gaming is still stereotypically considered a masculine activity. As Jenson and de Castell (2010, p. 54) state, "The powerful association of masculine subjects as gamers and game designers as well as the presumption of competence and ability have positioned women and girls unerringly as 'less able', 'less competent' and as 'casual' game players."

There are many ways in which, in order to advance in the relationship, the female player/protagonist in *Tokimeki Memorial Girl's Side* is both constructed and expected to read herself through her date's eyes in order to conform willingly to his ideals regarding what is desirable in a girl or woman. So she subjects herself to the male gaze, just as I did in working out how to make my preferred dates find my protagonist more desirable. Returning to Mulvey, while this game is

intended only for female players, thus having a female protagonist who has female friend characters, it is nevertheless only intelligible as a narrative sequence and its scenarios only make sense if it is read through male eyes – like Hollywood "chick flicks," various other kinds of romantic comedy as well as thrillers and even sci fi movies that make a female character the "main" character. We need only recall the famous scene in the first *Alien* film in which the courageous, tough as nails commanding officer of a merchant starship, in the form of Sigourney Weaver, removes her khaki overalls/space suit as the camera lingers over the various parts of her body left only in bikini knickers. Or we remember how Thelma and Louise – those now iconic women breaking free of the constraints of men, domesticity, suburbia, crappy jobs and the daily grind – can only, in the end, achieve real freedom by driving (triumphantly) over a cliff to their inevitable deaths. Girls – resistance is, finally, futile…

Since the player/protagonist of *Tokimeki Memorial Girl's Side* is not male, she must adopt a male viewpoint in order to work out how the male characters are expecting her to behave, just as I did. The female gaze (in this case, the player's perception of herself) is mediated by, filtered through, and in extreme circumstances, is inseparable from the male gaze. The player has been conditioned by all kinds of media product to see herself as men see her, and act accordingly. For most women, this unconscious double shuffle between male and female perspectives becomes "second nature." The game is based in a set of choices and scenarios that mean that the player must constantly try to "better" herself in the aspects of her daily life, character, dress, etc. that she learns are important to her suitors through the consequences of her actions as a player. The player's growing ability to read herself through her suitors' eyes (i.e. through the male gaze) makes up a large portion of game mechanics.

Tokimeki Memorial Girl's Side unabashedly relies on dominant, mainstream, male- centred, heteronormative Japanese values in its narrative structures – indeed, a player would not be able to engage effectively with the action if she resisted those values. In its use of such values, the game's scenario for a dating experience reinforces

the construction of young Japanese women as docile, lacking in autonomous subjectivity and wanting to please a man. Exploring sexuality in "Hot dates and Fairy-Tale Romances", Mia Consolvo (2003, p. 172) notes that "representations of women and girls in games reapply many stereotypes of femininity and vulnerability found in more traditional medias." The exercise by the female protagonist of individual agency – by, for example, making choices based on her own desires and interests in the dating situation – will not enable the female player to succeed in the game by accumulating high points. The female player must concentrate on trying to read the desires, preferences and likely responses of the character who is her date, thus performing her gender in her persona as a protagonist as it is determined by her understanding of this fictional boy or man, which she can only do effectively by learning to be aware of what is expected of Japanese women and men in general.

The social and cultural reality that underpins the courting behaviours modelled in the game is, quite simply, that if you want to date someone, it is easiest to find out what he likes and then use that information to manipulate the situation in your favour. This can appear to put power into the hands of the player. Of course, in fact it reflects a reality in which there is a very considerable way to go before there is acceptance of the rights of girls and women to have actual power. In the meantime, the game teaches girls how to navigate the complexities of Japanese gender relations in effective ways for the context in which they live. If they do not achieve that navigation – that is, if they do not learn to manipulate men by pandering to their tastes, opinions, decisions and sense of their own centrality – they will in all probability "lose the game," ending up alone in a virtual and real world that regards this as the worst fate that can befall a woman.

This paper has discussed how the gameplay of *Tokimemi Memorial Girl's Side* actively produces particular heteronormative perspectives on how girls and young women should enact femininity if they are to avoid being alone at the end of the game, and, for that matter, in life.

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Affect, Responsibility, and How Modes of Engagement Shape the Experience of Videogames

Kevin Veale

ABSTRACT

The experience of videogames is distinct from other forms of mediated storytelling because the person playing the game can come to feel responsible for events and characters within a fictional world due to dynamics within what Brendan Keogh calls the 'messy, hybrid assemblage' of videogame play:

Games function through modes of engagement where people need to make decisions and take actions in order to proceed through a hybrid text, in a context that the player is affectively invested in, and which is personally relevant to both the player and their situation. A perception of responsibility grows out of that agency, since the player's decisions have a meaningful impact on a world and characters that they already invested in treating as if they were real.

Keywords

Affect, cathexis, ergodic literature, modes of engagement, responsibility, structural incoherence, world-of-concern

INTRODUCTION

Turning the pages of a book isn't neutral to our experience of the story it tells – something that the novel *House of Leaves* (Danielewski 2000) uses to manipulate us by reducing the words on each page to single figures during tense sequences so that we physically turn the

pages faster and faster as we read. Simply knowing how far through a book we are changes how we anticipate what will happen next in the story. For cinema, our structural inability to engage with the text in the context of a movie theatre is one of the defining features of the form: we can be on the edge of our seats with anticipation, but cannot do anything to intervene but look away.

What makes the experience of videogames[1] distinctive from other forms of storytelling media is that we as players can come to feel responsible for what happens within the narrative world of the game – yet without being delusional and losing our grip on the fictional nature of what we're dealing with (Veale 2012a, p. 36–37, p. 69–70). Our affective responses are shaped by the modes of engagement required of us as we negotiate game texts: players become invested in the outcomes of the decisions required to engage with the game, and thus feel responsible for the consequences of their actions within that context.

The very concept of treating games as fictional texts, and comparing their experiences of storytelling to other mediated forms of fiction, is not neutral and grows out of a particular critical context. The core of the historical debate was whether videogames should best be understood along formalist lines as *games* in a category by themselves, or whether they could safely be considered alongside other forms of media more traditionally associated with narrative storytelling. James Wilson presents a comprehensive exploration of the discussion's critical history in *Gameplay and the Aesthetics of Intimacy* (Wilson 2007, p. 185–265). I join other recent critics in suggesting that videogames are best understood as experientially distinct hybrids between people, software and technology (Hayles 1999; Veale 2005; Giddings 2007; Keogh 2010; Veale 2012a; Keogh 2014). The process of negotiation within the hybrid underlies what makes games a distinctive form of mediated storytelling (Murray 1998; Jenkins 2004), because the hybrid has a decentralized agency and capacity to act within the space of the game. My own work seeks to understand the dynamics that make playing videogames distinctive from engaging with other media forms, and uses affect as a critical

lens to study for what sets the experience apart (Veale 2010; Veale 2012a; Veale 2012b).

The role affect plays in relation to videogames and other storytelling media is something other scholars are also engaging with: Ian Shaw and Barney Warf explore the "connections between game spaces as representations and game spaces as constellations of affects," (Shaw and Warf 2009, 1333), and suggest that one of the goals of game design has always been to manipulate the affective impact on players. James Ash develops the line of enquiry by using a Deleuzian perspective on affect, initially to explore how game designers shape the experience of play in order to create desirable experiences for the people playing the game (Ash 2010), then by exploring 'retentional economies' of human and technological memory that can be used to modulate affect (Ash 2012), before investigating how videogames create 'intense spaces' designed to captivate their subjects (Ash 2013).

In this article, I argue that a perception of responsibility on the part of the person playing a game is a natural consequence of dynamics within the 'messy, hybrid assemblage' that Brendan Keogh uses to describe the experience of game play. Such a perception of responsibility is one of the elements that shapes and distinguishes the experience of playing a game from engaging with other forms of mediated storytelling.

To unpack the dynamics which make a perception of responsibility in playing games possible, I will explore the critical background to analysing affect. Next, I link affect to an attributional theory of motivation put forward by Bernard Weiner that relates thoughts and emotions to behaviour and social conduct, and which explicitly links responsibility to choice and agency. I then examine why and how the textual substrate common to videogames produces a mode of engagement that contributes to players feeling responsible for events and characters within the world of the game, and relate that responsibility back to Weiner's theories. Lastly, I consider a series of case studies in order to illustrate why the modes of engagement

that lead to a perception of affective responsibility are central to what makes the experience of playing videogames distinctive from other forms of storytelling media.

The core theoretical contribution of this article is to provide a framework for close analysis that is open to both the 'slipperiness' of affect (Kavka 2008, 30–31) and the 'messiness' of the videogame hybrid (Keogh 2014). The analytical framework I present here explores the modes of engagement common to the hybrid of videogame play, and how these modes of engagement result in affectively distinct experiences.

FRAMING AFFECTIVE RESPONSIBILITY

In order to establish how we can apply affect analytically to the experience of fiction, we first need to explore the difficulties of doing so, and how that difficulty relates to its function and context. One of the central issues faced when dealing with affect is that it hides2 behind our emotions, which are easier to consciously identify and name: when someone recognises that they3 'feel sad,' they are finding a cognitive label for an underlying affective tone (Massumi 2002, 31-32; Veale 2012a, 41). Another distinction is that emotions are discrete, whereas affect is best understood as a continuous process flowing in the background (Massumi 2002, 217) that can contain seemingly contradictory elements blurring together. As a result, Misha Kavka frames affect as "…potential emotions – emotions that have not yet been perceived as such and thus constitute a 'primordial soup' of feeling" (Kavka 2008, *x*).

Affect functions within an "economy of cathexis" (Grossberg 1997, 158) – *cathexis* meaning the investment of mental or emotional energy in a person, object, or idea. Any given person has multiple planes of affective investment operating at the same time, all of which are heavily contextual. If we take music as an example, a person could be engaging with and investing themselves in the music itself at the same time as that music informs their personal identity; that person is also simultaneously aware of the external perception of that identity,

viewed through the lens of the musical subculture it is framed through (Veale 2012a, 43).

A useful toolset for understanding how and why affective investment is so tied to context comes from Paddy Scannell and Lars Nyre, originally from the context of studying how people watch television. In *What Happens When I Turn On The TV Set?* Lars Nyre discusses an unpublished lecture given by Paddy Scannell, in which Scannell analysed the act of turning on a television set. Scannell argues that part of what makes television ubiquitous – regardless of whether or not a physical television set is 'on' in the vicinity – is the distinction between 'objective space' and the 'space humans are engaged in' that he defines as a Heideggerian *world-of-concern* (Nyre 2007, 26). The difference between an 'objective' space and a 'world-of-concern' is that an objective space is everything present within an environment, such as all of the furniture and fittings within a lecture theatre. In comparison, since a world-of-concern is grounded in the contextual relevance of the people involved and their situation, in the context of a lecture it would include the lecturer, the students and the subject at hand – but the majority of the room fittings are not included because they are irrelevant. When you4 have been watching a horror movie at night, your house and furniture aren't innately relevant to your world-of-concern – but can become so afterward, when every creak and shadow pick up the context and affective tenor of the film.

Affect is also slippery. Kavka argues that affect can shift between people, objects and situations when it "properly belongs elsewhere," and has a "loose and ever-transformable relation to both object and cause" (Kavka 2008, 30-31). An example can be taken from a Twitter update from Jeph Jacques,5 the author of the webcomic *Questionable Content* (Jacques 2003). A reader told him they had been so upset at work over events within the comic that a concerned boss had asked if they were okay, and the only response they could think of to describe why they were crying was "two friends of mine broke up" (Jacques 2010). We can become downcast because of something fictional, and have that colour the rest of our day despite also feeling ridiculous

about it: affect can have a powerful impact on our experiences even when we are aware of its influence *and feel it to be irrational.*

One of the reasons that affect is capable of escaping from a very contextual investment and travelling with us into other parts of our lives is because we are provided no affective insulation by the fact that we know we are engaging in fictional contexts. R.T. Allen and Grant Tavinor have asked how we can feel so strongly for characters we know to be fictional (Allen 1986, 66; Tavinor 2003, 2), and part of the answer is that we choose to be: we are invested in treating fictional characters as real, and so they *feel* real – and the affects and emotions we feel are real – even when we know intellectually the characters we feel them for are not. There is no compartmentalisation between our fictional relationships and our real ones, meaning that they can inform our day-to-day experience as much as any other relationship we have,6 and the experience does not cease to be affectively powerful when we stop reading the text, watching the movie, or playing the game.

In order for this dimension of affect to be analytically relevant to our experiences of fiction and the way those experiences are shaped, we need to understand how and why we might sensibly 'feel responsible' for someone we know to be fictional – and the answer is, 'the same way we would feel responsible for anyone real.' Bernard Weiner engages with affective responsibility in the context of putting forward an attributional theory of motivation that relates thoughts and emotions to behaviour and social conduct. Weiner argues that assigning responsibility requires the perception of human or personal agency: a falling rock might damage a car but is not responsible for it, where a cat might be considered responsible for wrecking a couch – though comparatively less responsible than a child would be for causing the same damage (Weiner 1995, 6). If failure is caused by a lack of aptitude, then the cause is located within the person but *cannot be controlled*:

> "In these instances, it is asserted that the person will not be judged as responsible for a negative event or a personal

plight because accountability requires that the causes of
these conditions can be wilfully changed. *Responsibility,
therefore, is intimately linked with freedom and choice.*"
[Emphasis mine] (Weiner 1995, 7)

According to Weiner, anger communicates that someone 'should
have' either done something or avoided it, thus failing in their
responsibility, and that guilt and shame follow from perceiving
yourself to be responsible (Weiner 1995, 18). In comparison,
sympathy is generated when others are seen as not responsible for a
condition they are suffering from. In all cases, the more important or
personally relevant the context, the greater its affective intensity.

So, all that is required to 'feel responsible' for a fictional character is
to be invested in them as if they were real, believe that their situation
is not of their own making, and feel that you were capable of stopping
it from happening. That last component is key: in books and films
we can sympathise with characters and understand that key narrative
misfortunes are not their fault, but there is no way for us to intervene
– and we know that as we engage with the story.

The next section will explore the textual structure of videogames, and
how the modes of engagement which set the experience of playing
videogames apart from other forms of mediated storytelling are
grounded in the exact traits that promote feelings of responsibility.

EVERYTHING IS YOUR FAULT (OR SHOULD BE)

When playing videogames, the hybrid of the player, hardware and
game is part of the player's contextual world-of-concern, and the
experience mediated by the hybrid functions because the player is
invested in it. Following Latour's logic regarding how people operate
within in hybrid networks (Latour 1999, 176–177, 179–180) means
that *agency* – defined by Janet Murray as "…the satisfying power
to take meaningful action and see the results of our decisions and
choices" (Murray 1998, 126) – becomes distributed across the
network. The players of games are able to take meaningful action

within games because the rest of the network works with them, enabling them to do so while simultaneously framing and restricting the forms of agency that are possible – a restriction that Gordon Calleja argues is central to ludic play (Calleja 2011, 148). It is important to note that the network can frame and restrict the decisions that are possible not just via the underlying 'rules' of the game, but via the fictional context that the player is invested in:

> "Claims, such as Newman's and Aarseth's above, that Lara Croft's depiction in *Tomb Raider* as a human female matters less than what her body allows the player to do ignores the very fact that the player only considers 'walk', or 'run', or 'jump' as viable options *because* Lara Croft is represented as a human being capable of such actions. Further, Lara Croft's representation as a human being suggests that the player *should* jump over the bottomless pit rather than fall into or float over it." (Keogh 2014)

However, being part of a hybrid network does not simply afford the person engaging with it a negotiated agency when engaging with the fictional world-of-concern, it also has an immediate affective impact. The feeling of running into another car in *Grand Theft Auto 4* (Rockstar North and Rockstar Toronto 2008) is different from actually being involved in a car accident, and different again from reading about or watching one in fiction (Veale 2010; Veale 2012a, 70).

The experience of videogames is *personal* as a result of hybrid engagement, in that it is all about *you:* the players of videogames are the ones who make progress through the hybrid text, and come to feel responsible for the outcomes of their decisions and actions in the process. Players7 are invested in the distinctive tenor of experience created by making meaningful decisions with sensible consequences within the space of the game. The structural elements that make such a dynamic possible are *agency* and *coherence,* which combine to make the player aware of a timeline of their own decisions in playing the game, and frame the experience as happening *now*.

This section will explore the structural elements of videogames that create distinctive modes of engagement, and then argue that the experience of playing videogames is set apart from other forms of mediated storytelling by making the player consider their own future actions and decisions with affective weight, because they know they will feel responsible for whatever the outcome turns out to be.

The process of negotiating the underlying textual structure of videogames – its *substrate*, the structure which defines what a text *is* (Hayles 2002, 39) – requires choices on behalf of the player, framed by the hybrid the player is negotiating with. As a result of this basic *mode of engagement* for videogame hybrids, you have a negotiated agency – and any dynamic that understands your decisions have consequences strongly implies you are responsible for those results. In a simple example, incorrectly timing your jumps in *Donkey Kong* (Miyamoto 1981), results in Mario getting flattened by a rolling barrel. The dynamic that emphasizes consequences to choices made in negotiating game texts is why players often use the phrase 'I died,' to describe failure in games: their decision was key to the outcome, so they are responsible for the results. Perceptions of agency and responsibility are inherently linked.

However, agency in games is itself a source of critical tension,8 and it requires specific contexts in order to work. The example of jumping over the barrel in *Donkey Kong* functions because the consequences are sensible and predictable: get hit with a barrel and die, jump over it and survive. A consistent framework of decision and consequence allows the player to make meaningful decisions: if any elements become unpredictable then it is no longer entirely in the player's hands. Steven Poole uses the term *structural incoherence* to describe situations where consequences in games have weird results that are at odds with what the expected result of a situation would be (Poole 2000, 95). Something as simple as knocking a piece of stone into a river as you move past within a game space poses a good example; if the stone sinks with a splash, then that's a consequence that fits our expectations and reinforces our investment. In comparison, if the stone sits on the surface of the water like it would on a tiled floor,

this underlines that we are engaging in an unreal, mediated space. As a result, it is harder to become invested in the space of the game as a real space, and to feel responsible for the results of your actions in that context.

Interestingly, designers have learned what a negative impact structural incoherence has on the player's experience of the game, and have worked to avoid it. Paying attention to the contextual details of the game's environment helps eliminate most of the problem: don't confront players with a chain-link fence if you want it to be an impassable barrier because anyone sufficiently motivated and able-bodied can scale one given time. If you want an impassable barrier, using a tall and featureless wooden fence that provides no handholds will work better because the player is less likely to think 'I should be able to climb that'.9 Essentially, since players are active components of the affective hybrid that makes up play, and since they seek to invest in an experience as if it were real, they are likely to accept contextually sensible reasons for their agency to be framed or restricted.

Half-Life 2 (Valve 2004) is full of physics puzzles that mostly avoid structural incoherence, including an item called a 'gravity gun' that allows you to levitate objects and throw them. The gravity-gun itself is obviously impossible, but is not perceived as 'incoherent' because the science-fiction context of *Half-Life 2* provides justification for its function, and it is internally consistent. Players are shown how it works, and can then apply lateral-thinking to solve problems: the gravity-gun can be used as an impromptu weapon precisely because hurling a high-speed radiator, brick or saw-blade at an enemy gets the results you would expect.

When texts provide both agency and structural *coherence* (i.e. the outcomes of choices and actions are internally consistent and fit within the player's expectations when they made that decision), it reinforces a sense of responsibility that will underline the importance of future choices. Such a dynamic is a result of the modes of engagement common to engaging with game hybrids, and has

affective consequences for play: when you know decisions you've
made in the past mattered in the context of exploring the game, you
assume that the outcomes of future choices you might make will be
equally weighty. It's a feedback loop, but one that can be disrupted: if
at any point you do not feel responsible for something that happens in
the game, the experience is intensely frustrating. If we apply Weiner's
ideas about attributed responsibility to videogames, people get angry
when the parts of the hybrid outside of the player (i.e. the physical
interface, software and hardware platform) are seen to be failing in
their responsibility to be coherent systems and implement the framed
decisions made by the player, usually due to a glitch or fault in
the game itself, or poor game design. As soon as responsibility for
problems is directed anywhere outside the player, the system falls
apart by forcibly bringing the mediation presented by the hybrid to
the player's attention.10

 Mass Effect (BioWare and Demiurge Studios 2007) is a good
example where the different parts of the hybrid are not running in
affective synch: the summaries of what you are choosing to say in
conversation leave gaps between what you choose and what happens,
meaning you are not making fully informed decisions. This often
is not too serious a problem, but can result in situations where you
choose to be rebellious and have problems with authority, only to
find the game adding racist opinions that are now considered to be
part of your protagonist's outlook on the world. Given that players
are invested in the outcomes of the decisions they make in the game,
being presented with outcomes you didn't choose and don't want
to be responsible for limits the extent to which you're going to
take future decisions seriously. In comparison, *Dragon Age: Origins*
(BioWare and Edge of Reality 2009) does not share the problem:
there can be situations where the hybrid limits the player's agency
to choices that do not reflect their character's preferences, but every
decision has the expected outcome rather than a concealed twist.
As such, papering over the cracks with the player's investment in
the contextual world-of-concern is easier than it is when the game
concludes you really wanted to be racist.

In comparison, if a player feels that they *are* responsible for their own failures within a 'fair' system, they will accept vast amounts of punishment. Iconic arcade games like *Space Invaders* (Taito 1978), *Pac Man* (Namco 1980) and *Defender* (Jarvis et al. 1980) were known for their difficulty, but were also known to be polished and fair in that the mistakes made by the player were theirs to own.11 In recent years there has been a resurgence of ruthless games that still present systems players can learn and improve at, such as *Super Hexagon* (Cavanagh 2012), *Flappy Bird* (Nguyen 2013) and examples that used the format for storytelling like *Hotline Miami* (Söderström and Wedin 2012) or *Dark Souls* (Miyazaki and From Software 2011). All these games share a common feature, in that failure is a common but brief setback: at the touch of a button (or inserted coin), the player is back in action still invested and intent on not repeating their mistake. It's possible for players to become angry at themselves, knowing precisely what they 'should have' done differently even as the mistake cost them their game. No matter how hard games are to successfully negotiate, if players believe that the barriers to their progress are their own mistakes, they keep coming back.

The modes of engagement associated with playing games also imply a direct relationship between the player's decisions and the timeframe of the experience: the game and its consequences are unfolding *now* – "Not just in the sense that the viewer witnesses events now, but in the sense that the events are *happening* now, and that what comes next is not yet determined," (Juul 2001).12,13 Barry Atkins picks up on this idea when he argues that the distinction between the audience who watch a game being played and the person playing is that the audience watches the screen now, when the player is "…invested in the screen as a nexus of possible decisions and possible outcomes, meaning that they are oriented towards the future" (Atkins 2006, 134-135, 137). Gordon Calleja uses the concept of 'future orientation' to explore *ergodic literature*, as introduced by Espen J. Aarseth (Aarseth 1997). For Aarseth, ergodic engagement is when a text is negotiated through "processes of choice, discernment and decision-making," (Veale 2012a, 23), but Calleja extends the idea further by including moments

where the player is ready to make a decision in response to events in
the game:

> "In *Red Orchestra* (Tripwire Interactive, 2006), a first-
> person shooter game, for example, a player is lying on the
> floor of a three-story ruined building, covering a street with
> a sniper rifle. There are no enemies in sight, but the sniper
> expects them to emerge in the near future as the street
> leads to one of the main game objectives on the map. Long
> minutes of inactivity result from such a wait, yet the sniper's
> job is often defined by this sort of patient waiting. Although
> there is no direct input on behalf of the player, the readiness
> to act requires her to stay alert. At any second someone
> might emerge around that street corner, and the sniper must
> be ready to deal with him, or the fruits of her labour will go
> to waste." (Calleja 2011, 42)

The mode of engagement that distinguishes playing videogames
means the player is aware of a timeline of choices and consequences
stretching behind them into the past, the immediate choices
confronting them now, and the options on their horizon.14 Players
can find themselves considering potential choices and their outcomes
with weight and gravitas, all because they will feel responsible for the
consequences of whatever they choose.

When someone is affectively invested in the experience of playing
a game, being and feeling responsible for other characters is a
significant part of forming affective relationships with them that
matter to you, and the fact that it matters is self-reinforcing. A
feedback-loop forms because the associations we have built up with
these characters – and our affective investment in them as if they
were real people – underlines the sense of responsibility we bear in
mind when making decisions. A sense of agency leads to players
treating the world of the game as a legitimate, living space, and
that affective investment in a living space is folded into treating the
relationships there as legitimate relationships. The cycle completes
when these relationships then reinforce the impression of the game-

world as a legitimate environment with internally consistent cause-and-effect consequences to actions, and then starts again.

As an example of how people can invest in fictional characters, Alec Meer recounts waking up thinking of the name 'Anatoly Kolotov,' but being unable to recall where it was from (Meer 2009). He eventually remembered that it was a randomly-generated name for a character in *X-COM: Enemy Unknown* (Mythos Games and MicroProse 1994), a game he had played years previously:

> "He'd been with me since the very start of the game…. One day, Anatoly Kolotov died. I don't remember how, but I remember the shock. I remember feeling absolutely hopeless – how could I possibly save the world without Anatoly's help? (…) I do know I reloaded a savegame. It was not yet Anatoly Kolotov's time to die, I reasoned. Nonetheless, the trauma of losing a character that felt so thoroughly mine, one I'd nurtured and developed rather than simply witnessed trot through a game's scripts, was formative…. This was someone I'd personally invested in, ripped brutally away from me." (Meer 2009)

Since players are affectively invested in both their capacity to act upon the world of the game and the other characters sharing that context, they are also invested in how their actions affect those characters. Weiner's argument is that humans frame perceptions of responsibility around the degree to which the person committing an action or making a decision has agency, and that the more important and personally relevant the context, the greater the affective intensity is. Videogame players are actively invested in seeing themselves as agents within the games they play, and their decisions have meaningful impact on other characters around them – and all of this happens within a contextual world-of-concern that they find personally relevant.

As a result, players are cued to be critical of the outcomes of their own actions: they feel guilty and responsible when something negative

happens as a result of something they could have avoided; anger
for occasions where the blame can be directed outwards, such as
where the failure was beyond the player's control due to a glitch; and
sympathy for characters who suffer negative consequences and are
not responsible for causing them, since by definition it's the player
who has agency (as framed by the hybrid of play). As part of the
same dynamic, players can feel entirely legitimate pride at positive
outcomes they achieve for themselves and other characters within
the game, all of which also reinforces their investment. There is
very little ability to defer responsibility for the consequences of your
decisions, regardless of whether they are positive or negative: even
if the consequences are unintentional, there can be no argument that
they are not your decisions because your decisions and actions15 are
the only ones reflected in the space of the game.16 The modes of
engagement that distinguish the experience of videogame play are
open to the experience of what Christy Dena refers to as 'eureka
discourse' in the context of Alternate Reality Games – a 'language of
discovery' where the person negotiating the text experiences 'aporias
and epiphanies' directly, since they are responsible for overcoming
obstacles 'themselves' (Aarseth 1997, p. 91-92 ; Dena 2008, p. 53).17

The person playing a game text has a negotiated agency within the
hybrid established between them and the technological platform
running the game. The modes of engagement involved in negotiating
that hybrid text present the player with negotiated agency due to
the choices provided to them within a contextual world-of-concern
they are affectively invested in. The player's perception of their own
agency suggests that they are responsible for the outcome of decisions
made within the world-of-concern, particularly since the player is
affectively invested in the idea of being an active agent within that
context.

The next section explores a series of case-studies exploring specific
ways that the modes of engagement common to engaging with
videogame hybrids lead to perceptions of responsibility, and how
these make the affective experiences of the games in question
distinctive.

WHAT MAKES THE EXPERIENCE OF GAMES DISTINCTIVE

The modes of engagement common to videogame play mean that there is less 'affective mediation' than what is experienced through other forms of storytelling because *you* are the one who responds affectively to events, not the protagonist of a novel or film who the audience hopefully sympathises with (Veale 2011, p. 44).18 When players of *Bioshock* (2K Boston 2007) reach the 'Would You Kindly' revelation, they are not engaging with a fictional character who feels betrayed, they feel betrayed themselves – all the decisions they've felt responsible for cast in a terrible new light.19 Likewise, games like *Bastion* (Supergiant Games 2011) and *Shadow of the Colossus* (Ueda and Team Ico 2005) create situations where the player might simultaneously feel pride in their accomplishment and growing doubt that they are doing the right thing, which can lead to an unfocused dread of what their progress might result in.

John Walker has written about an occasion where he set out with the specific task of selecting every 'evil' choice within *Star Wars: Knights of the Old Republic* (BioWare 2003) to see what happened, only to become so guilty and uncomfortable at the outcomes of his decisions that he had difficulty finishing the game (Walker 2009a ; Walker 2009b ; Walker 2009c ; Veale 2011, p. 46).

> "Dia had attacked her boss with a spear, leaving him with a scar, and the boss wanted her dead. The Hutt hinted that perhaps Dia wasn't quite so guilty as the story made out, and the extent of this became abundantly clear when I found her boss in a strip club. He confessed that while drunk he had attempted to force himself upon her, and she had struck out to prevent him. It was an attempted rape. The conversation options were there – I could take him out right now. I could destroy this horrendous man, who was having a woman he'd tried to sexually assault murdered, because she had beaten him.

The feeling when selecting the option saying I agreed with
him, and she was getting what she deserved, was just
revulsion. Sure, this is a game. Sure, no one was really
getting hurt. But bloody hell, there are some things it's just
never okay to do." (Walker 2009a, p. 3)

The same lack of affective mediation that can make players genuinely
uncomfortable with themselves can make the experience of
storytelling situations affectively powerful. *Gone Home* (The
Fullbright Company 2013) places the player in the same context
as the protagonist both narratively and affectively: you are in an
unfamiliar environment during a storm, trying to piece together
exactly what happened and find out where everyone's gone.

Figure 1: The first problem of Gone Home

Gone Home frames you as a young woman who has returned from a
year overseas on an earlier flight than planned, and who has reached
her family's new home at 1:00 AM in a torrential storm. Except,
nobody is here to greet you, and there's a note on the locked front
door from your sister saying that she's gone and not to look for her.
The mystery is immediate. Plus, there's nowhere else you can go, and
you have no tools at your disposal – so the only option is to explore
the porch and try to figure out what to do next. As you explore a
cupboard (potentially out of idle curiosity), you discover a collection

of Christmas ornaments – including a festively-attired plaster duck. When the player picks it up to examine it further, you find a spare key underneath. The discovery is a great example of both Dena's eureka discourse (Dena 2008, p. 53) and the mode of engagement that the game privileges: you're poking around without clear direction and then in response to your exploring there's a surprise key, opening up access to the darkened foyer of an unfamiliar house as rain batters on the windows. At that point, you have no idea what's going on, so the natural impulse is to explore an environment as unfamiliar to the protagonist as it is to the player themselves, trying to piece together the mystery of whatever happened over the last few days – and then as you start connecting disparate threads, the mystery of the last year of your family's lives that you missed.

The game very carefully manages the agency provided to the player and eliminates structural incoherence so that your capacity to act equally matches the protagonist's context: if you want to dig through rubbish bins looking for notes, you can. You can do the same things as you would be able to do in an actual house in the same situation, like opening drawers and cupboards, even if doing so has no impact on advancing the story.20 The exceptions to this rule are intelligently managed: you're in your family's new home and you're not sure what's going on, so kicking down doors seems like a bad idea. Likewise, sure you can't open the garage door, but what with the storm outside why would you want to? Returning to the chain-link fence example discussed from *Half-Life 2*, *Gone Home* is grounded in internally consistent reasoning for barriers to progress and boundaries in the game, making it a very structurally coherent experience. Essentially, the player's agency is framed and restricted within the hybrid in contextual ways that they are affectively invested in accepting as 'real,' so a restricted agency can still reinforce their engagement in the space as a legitimate, lived space.

The game reflects what you do: the experience can be one of cautiously building a picture of a threatening mystery, or of running around in a panic turning on all the lights before trying to figure out what's going on. It's possible to have the awkward and startling

experience of stumbling onto more than one family member's hidden porn in the course of your amateur sleuthing. In what I consider to be a brave design decision, there is no attempt to artificially force the protagonist through the story: I know someone who accidentally stumbled onto the secret area under the stairs in the first room almost immediately and then followed directions to the attic, finishing the game in minutes. She, like the protagonist, had missed out on most of the substance of the background story, but came away feeling that although she did not have most of the answers, everything was going to be okay. Even in what could have been a narrative-breaking scenario, *Gone Home* was a satisfying and internally consistent experience that reflected the player's choices and discoveries in exploring the space of the game and its story, and which framed the player and the protagonist in the same affective position.

When games feature branching narrative developments that reflect decisions made by the player, games have the capacity to make them so organic that they can be invisible. An example can be taken from a conversation between Kieron Gillen and John Walker where neither of them realised that events in *Deus Ex* (Ion Storm 2000) could play out differently than they had individually experienced, until they compared notes:

> "Kieron and I… were chatting about various moments, sharing thoughts, and then I said, 'Wasn't it awful when your brother died?'

> Kieron replied, 'My brother didn't die?'" (Walker 2009d)

Noticing that a game is presenting a forking path is something that may not damage a player's engagement or investment in the space, but it is a noticeable part of the experience. If you don't notice such a fork, then you are instead focusing on your investment in what seems to be an entirely reasonable, organic extension of the choices you have made, and where you are paying more attention to the decisions you are responsible for than the alternatives. Gillen

and Walker elaborate on their own experiences, and the power those experiences held, in some depth:

> "Of course it turns out whether you save [the brother] or not, you still travel next to Hong Kong. I went there to recover a chip from his body. Kieron went there to meet his brother. I broke the news of [the brother's] death to his girlfriend. Kieron went to see his girlfriend for other reasons. We both played exactly the same game, playing through exactly the same levels, but our motivations were dramatically different. Neither of us could perceive a game in which we would go to those places for any reason other than those we had at the time, creating the sense of something unique to our decisions and experiences." (Walker 2009d)

In comparison, some games emphasise an awareness of the experiences you are choosing not to have. Every option that you are presented with in *Kentucky Route Zero* (Cardboard Computer 2013) exists to be an evocative hook that might illuminate more of what you understand about the world and its characters, but the game uses the fact you have to choose to shape the affective experience of playing.

 Kentucky Route Zero is a game grounded in magical-realism that begins with a truck driver named Conroy trying to make a delivery with his dog, and a seemingly mundane context gradually branches into a quest for a mysterious underground highway. It is an experience rich with textured meaning and layers of imagery, and is very open to being explored for new depths. It's possible to just drive around the back roads of Kentucky and explore the brief text descriptions associated with evocative locations, or events that unfold as you explore.

Figure 2: Poetry on the road

Throughout the game, you make decisions as to what characters say in conversation, and the game carefully arranges all of the options to be enticing hooks that will illuminate new parts of the world – and you can only ever choose one option from each list. *Kentucky Route Zero* even sometimes presents mutually exclusive things for characters to remember and recount, meaning that when you choose something you are constructing the histories of the characters as you go. For every option you take there are several you do not, and the pangs of affective loss for things we can never explore or learn about are one of the striking elements of the experience that have stayed with me, and which contribute to the wry tones of the game.

Figure 3: *A choice you can't return to in Kentucky Route Zero*

Figure 4: Do you want to be defensive, or learn more about radiation or ghosts?

Given that failure in games frequently involves 'death,' it's unsurprising that some extremely evocative affective experiences are associated with dying. One of my own experiences of death in games was memorable precisely because of how horribly guilty and responsible I felt for it, despite the fact that what I felt guilty for lay outside the boundaries of the text itself: my affective response existed in a world-of-concern that extended outside the hybrid of playing the game. In *Portal 2* (Valve 2011), the viewpoint-character

and protagonist is a young woman named Chell who has to escape from an underground facility called Aperture Science that was built for the express purpose of unregulated experimentation, and which has since gone rogue. For part of the game, you hear regular recorded conversations from Cave Johnson, the man who built Aperture Science, such as where he describes the first of a series of gels that alter physics in fascinating ways – and which are all horrifyingly dangerous. As Cave Johnson says:

> "Oh, in case you get covered in that Repulsion Gel, here's some advice the lab boys gave me: [sound of rustling pages] 'Do not get covered in the Repulsion Gel.' We haven't entirely nailed down what element it is yet, but I'll tell you this: It's a lively one, and it does not like the human skeleton." (Valve 2011)

I still remember the absolute chill that went down my spine when I was careless and became coated in blue goo. My instinctive assumption was that I'd 'died' and the game would automatically reload the level so I could try again… but instead nothing happened. There was no in-game acknowledgement that I'd just ruined poor Chell's skeleton. I restored the game anyway, specifically because I was unwilling to accept the idea that Chell's seemingly inevitable demise would be my fault – only for it to happen again. I remember how sorry I felt. Sorry because I could not spare Chell the fate that I'd doomed her to, and sorry because I didn't have the skill to prevent it from happening. Later in the game, players are presented with a different gel that has notably already killed Cave Johnson. I felt utterly mortified when I became coated in murderous fluid again because I had made the situation *worse*: Chell had already been doomed because of me, but now her death was going to be more painful. I went back and tried again, but could not do it. To this day I am unsure whether finishing the game without getting exposed is even possible, but I *experienced* it as a personal failure that cast a (thematically appropriate) shadow across the rest of the game.

Such an experience of ongoing remorse would not be possible

without the modes of engagement that function within the hybrid and the world-of-concern that surrounds it. Being the person responsible for the outcome of thousands of small decisions allowed for within the hybrid I formed with *Portal 2* meant it was natural to understand myself as responsible for events that 'will happen' outside of the scope of the text itself.

CONCLUSION

In this paper I have argued that the underlying substrate of a text is not neutral, and seemingly trivial shifts can have dramatic consequences for our experiences of storytelling. The substrate makes up the text, and can be understood as the structure which defines what a text *is*. That first layer is what we engage with when we negotiate a text. Different shapes of substrate require different processes of the person negotiating the text, and these modes of engagement in turn shape the experience. We can analyse both how the underlying textual substrate shapes our modes of engagement, and how those modes of engagement have an impact on our experience of the story being mediated.

The experience of videogames is set apart from other forms of storytelling media because the person playing the game feels responsible for events within the fictional world. This happens as a natural outgrowth of a mode of engagement where people have agency and need to make decisions and take actions in order to proceed through the text, in a context that the player is affectively invested in, and which is personally relevant to both the player and their situation. A perception of responsibility grows out of that agency, since their decisions have a meaningful impact on a world and characters that the player is already invested in treating as if they were real.

Although agency is common to all videogame texts, we can analyse how the game frames that agency, the consequences that grow out of it, and the perception of responsibility felt by the player. We can examine what effect the game's structure has on the modes of

engagement available to the player, and how those modes of engagement shape the player's experience. We can explore how the responsibility felt by the player is folded back into the game and used to reinforce their investment in the experience, such as considering how the game refers back to earlier decisions the player has made. This approach allows for a toolset we can apply to understanding how videogames shape storytelling experiences that are distinct from other forms of mediated storytelling.

However, feeling responsibility in a fictional context is not only relevant to videogame experiences. Such a perception of responsibility is an outgrowth of affective investment within a particular mode of engagement, and it is possible to duplicate elements of that mode of engagement using more traditional media forms. I argue that textual modes of engagement are as important to our definition and understanding of different forms of mediated storytelling as the underlying textual substrate is. Exploring modes of engagement is a line of enquiry that can lead to unexpected places. For example, a pragmatic element of reading a book is that we know how far through the book we are as we read, because of an awareness – no matter how subconscious – of how many pages there are to go. If a climactic battle is still going on with only a handful of pages remaining, I have wondered how the author can finish the story in the space left. Moving the same novel from a printed context to a digital one can eliminate that information21 and changes our mode of engagement.

Even though the territory covered in this article has been focused solely on exploring what sets apart the experience of videogame texts, I suggest that understanding how different modes of engagement shape our experiences of fiction will be helpful not just for the analysis of storytelling in the context of videogames and other new media, but for understanding how we have already been telling stories for a very long time.

ACKNOWLEDGMENTS

ENDNOTES

1 Although the scope of this article is focused on how the textual structures of videogames and the processes we as players go through to engage with them shape their storytelling experiences, such an analytical approach has broader relevance and is not limited to exploring storytelling in a digital context.

2 Brian Massumi frames affect as an unqualified intensity that is "resistant to critique" (Massumi 2002, 27-28), which has raised concerns that affect is not a useful term for analysis. This concern can be seen in dialogues between Massumi and Lawrence Grossberg, where Massumi argues that Grossberg moves away from positioning affect as unstructured and unformed precisely to avoid accusations that doing so means affect cannot be analysed (Massumi 2002, 260). Massumi instead argues that because form and structure are not the only analytical frameworks that can be applied to affect, being unformed and unstructured are not barriers to its study – and that Grossberg is falling into terminological slippage that equates 'affect' directly with 'emotion' in an attempt to avoid a situation that is not a relevant concern (260).

3 I use 'they' as a singular gender-neutral pronoun, and use 'their' as a less disruptive use of a possessive than 'his/hers.'

4 I use 'you' throughout this article as a way of framing an experience in general terms, on the grounds that it is simple and direct. It also is a mode of address that Brendan Keogh argues is "common to videogames and the discourses surrounding them," and which "draws

attention to the player-and-game hybrid" by collapsing together the
player and the character of the game" (Keogh 2014).

5   http://twitter.com/jephjacques/status/5397351535480832
November 19th 2010, 12:10 PM (Jacques 2010)

6 Yet we are never unaware of their status as fiction.

7 This article will refer to the people who play games as 'players,'
although doing so places emphasis on the human element of the
hybrid, because I cannot think of elegant language to use as a
replacement. Whenever I use the term, I am referring to the person
experiencing a hybrid network.

8 Steven Poole has gone so far as to argue that any perception of
agency is illusory, and players are merely rats running the maze
set up by the game's designers (Poole 2000, 106-107). My counter-
argument is that players experience playing the game as if the
decisions are theirs because they are invested in being agents within
the hybrid context, so whether or not agency is illusory is irrelevant
to its impact on the experience of play.

9 Context matters, however, even in cases like this: there is a strong
tradition in point-and-click adventure games that one stays on posted
paths, so rope fences are likely to be read as impassable by players.
Cases where the solution to a puzzle is to break with tradition and cut
the rope are frustrating as a result.

10 Affective responsibility is also relevant to multiplayer game
experiences, and is a fundamental element of how and why players
respond so strongly (and frequently, badly) to losing (Tassi 2014).
When a player knows that they played as well as they possibly
could but still lost decisively, their affective frustration is grounded
in helplessness. The frustration is made worse if the loss is seen to
be caused by mistakes made by team-mates, or glitches in the game,
but players are still likely to lash out or carry their tension from the
game out into the rest of their lives even if it was simply that they
were outplayed by more-practiced opposition. The same dynamic

can be seen in scenarios where players feel actively bad for their opposition who are losing because several players have disconnected, gone offline, or some combination of factors beyond their control.

11 This also emphasises that affective engagement and a perception of responsibility in games does not require detailed graphics, it just requires that they offer players the agency and coherent design that will create fertile ground to invest themselves in.

12 One side effect is that games are much less likely than films to use ellipses to stop the player being exposed to 'dead time' where little is happening or the action is repetitive – even if it might be preferable (King and Krzywinska 2002, 144; Juul 2004, 138). Conversely, videogames also introduce a new form of 'dead time' with loading screens, which create a dynamic where the player is engaged in the world of the game but cannot take action until the game is ready for them – essentially putting the player themselves 'on pause.' The more frequently such pauses happen and the more disruptive they are to the context of play, the more loading screens are a barrier to player engagement. Videogame designers have become adept at concealing loading screens during other action (such as using elevators or other forms of automated travel), rather than having them strike whenever the player opened a door – or sometimes randomly in the middle of rooms.

13 Jason Wilson presents a persuasive critique of Juul's argument in *Gameplay and the Aesthetics of Intimacy* (Wilson 2007). I include reference to Juul's argument here because it provides a starting point for the consideration of how players relate to choices in games, rather than an endorsement of Juul's argument regarding the formal characteristics of games.

14 And, as described by Calleja, this is true of games that don't specifically include branching decisions at the levels of narrative or character, even ones as simple as *Pong* (Alcorn 1972), *Space Invaders* or *Tetris* (Pajitnov and Pokhilko 1984)

      1. Within the context of hybrid engagement.

16 At least, for single player games.

17 The simplest example to explain the experience of "eureka discourse" in practice is the freely available browser game *Frog Fractions* (Crawford and Twinbeard Studios 2012), which is available at: http://twinbeardstudios.com/frog-fractions. The game is an exemplar of the kind of experience that makes videogames distinctive, and is grounded in moments of personal discovery. Unfortunately, any attempt to explain why will ruin the effect – something true of all eureka discourse – so playing the game yourselves is the best option for learning more.

18 It is important to note that this is not an argument that videogames and other computerised forms of storytelling are 'better,' 'more immersive' or 'more immediate' than traditional modes of storytelling, like cinema, prose, or comics. The experience of playing videogames is a fundamentally *different* mode of experiencing fiction, and figuring out how and why that is will be helpful in understanding how our engagement shapes storytelling experiences – regardless of what form of media a given piece of fiction is to be found in.

19 If you are unfamiliar with the reference, the summary is that throughout *Bioshock*, a friendly presence in the hostile undersea city of Rapture discusses with you the problems you're both facing, and how you can help set things right. Being Irish, the man commonly uses the phrase "Would you kindly…?" as a way of setting up his requests. Later in the game, you discover your character has false memories, and has been conditioned to unthinkingly obey any instruction delivered after the statement "Would you kindly." Thus, all the player's own decisions and actions are called into question, and things you have taken responsibility for turn out to have been manipulated by a puppet-master all along.

20 Some productive links can be made here between this article,

Jenkins' ideas regarding narrative architecture (Jenkins 2004), Wilson's 'gamic mise-en-scene' (Wilson 2007), and Ash's explorations of how game design creates environments designed to manipulate affect (Ash 2010; Ash 2012), since we appear to be approaching the same territory from different directions.

21 Depending on whether the e-reader software contextualises where in the book you are as you read.

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