Digital Games Research Association (DiGRA) Australia Queensland Symposium

"Wayfinding"

April 2, 2016

This Must Be The Place
Shop 8, Bakery Lane 694 Ann Street, Brisbane
http://digraa.org/digraa-brisbane-2016/

Conference Chairs:
Dr Christy Dena
Dr Brendan Keogh
Jane ("truna") Turner

Academic work on games and play in Queensland is being conducted within a wide variety of disciplines and from an even broader number of conceptual and analytical approaches. DiGRAA Brisbane is thus delighted to announce the inaugural event of this local chapter, a one-day symposium aimed at bringing together those interested in the study of digital (and non-digital) games and play in Queensland (and Australia more broadly) to discuss current and future work.

We organise such an event acknowledging that 'game studies' should not be an exclusively academic endeavour – exciting and ground-breaking work is occurring in a wide variety of commercial, professional and amateur contexts. Consequently, we encourage non-academic game researchers, critics, designers, developers and artists to attend and contribute to the event. Submitted abstracts will not be evaluated harshly for not engaging with academic literature, as we see this as an opportunity for these disparate communities to engage and share knowledge.

The theme, 'Wayfinding', speaks broadly to how we as a community of games research practices orientate ourselves—how we determine the routes we are travelling and where we hope our research is going. It invites submissions that describe projects completed or still under way, that prompt discussion, or report findings or arguments conducted by those studying games or play in the broadest sense. We welcome perspectives from game studies, UX, interaction design, narratology, media studies, and beyond. By attending and presenting works like these, your presence contributes to the theme, helping us all map what the study of games and play 'is' in Queensland and Australia in 2016.

Proceedings of DiGRA Australia Queensland Symposium 2016: Wayfinding

Social Media Policy

Social media backchannels have become an important and crucial aspect of academic conferences in recent years. However, DiGRA conferences of recent years have found their hashtags and tweeters come under increased harassment by people associated with online abuse groups such as Gamergate. In order to protect the safety of all our attendees and presenters, we request you observe the following guidelines when using Twitter today:

1. We ask all presenters to express at the start of their presentation whether or not:
    a. They are happy for their presentation to be tweeted about
    b. They are happy for photos of their slides to be tweeted

If the presenter does not give active consent for their presentation to be tweeted about or for photos of their slides to be tweeted, we ask all present to respect this.

3. We recommend you consider signing up to the ggautoblocker. This tool blocks thousands of accounts affiliated with the Gamergate movement. While this will sadly not prevent abusive tweets appearing in a saved search for the conference hashtag, it will prevent those tweets appearing in your mentions if Gamergate decides to pile on a tweet you are tagged in. Please note the ggautoblocker sometimes takes over a day to come into effect. More information can be found at https://blog.randi.io/good-game-auto-blocker/

3. Please use the hashtag #digraq for tweets about the conference.

We do not wish for abusive people on the internet to hinder such an important and valuable aspect of contemporary academic conferences, but even more so we do not wish for any of our presenters to feel unsafe, and we thank you for your cooperation in this.

10:00am Opening remarks

10:15am **Finding Spaces & Play**

The Growing Pervasiveness of Games and Play - Hugh Davies

Finding Ways of Being: Psychogeography in Urban Codemaking - Troy Innocent and Steven Conway

Travelling with Giuliana Bruno to the Videogame - Daniel Golding

11.15am Morning Tea

11.30am **Ways of Design**

Punctuate a Moving Picture: David Sudnow's Pilgrim in the Microworld *and an Alternative History of the Study of Videogames* - Brendan Keogh

Finding a Way: Reducing Design Schema Friction in Narrative Design - Christy Dena

Positive Psychology in Game Design: A Framework for Collaboration - Matthew Lee

12.30pm Lunch

1.30pm *Huizinga's Lost Marbles: A Design Wayfinding Rant* - Jane "truna" Turner

1.45pm **Alternative Paths**

Wing Commander and the Enduring Impact of Live-Action Video - Jakub Majewski and Scott Knight

No Heroes: The Erasure of Chronic Health Conditions from Videogames - Dakoda Barker

'Adam Smith Hates Your Guts': *Horror, Survival, and the In-Game Economy in* Pathologic - Julian Novitz

2.45pm **Finding Communities**

Broadcasting Play: Articulating Roles of Materialities and Bodies - Ben Egliston

Tapping into the Gaming Community for Roguelikes - Xavier Ho

Adolescents as Game Designers: What can be Learned from Young People? - Pilar Lacasa, Sara Cortés, María Ruth Garcia-Pernía, Laura Méndez

3.45pm Afternoon Tea

4.00pm **Australasia & Games**

We Still Make Games Here: A Sustainable Australian Videogames Industry? - John Banks and Stuart Cunningham

Indigenous Depictions in Strategy Games: An Argument for Flavour - Rhett Loban

New Wave Australiana and Making a Game about Australia - Terry Burdak

5.00pm Roundtable discussion and closing remarks.

5.30pm Refreshments.

The Growing Pervasiveness of Games and Play

Hugh Davies
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ABSTRACT

Today, Australia boasts a broad and growing vocabulary of games and play. The ascendancy of cultures of games and play alongside the rise of various maker movements has, this paper argues, brought an increase in playful tendencies and aesthetics into built objects and experiences not traditionally associated with games. In fields as diverse as architecture, theatre, product design, craft and commerce, the tropes, textures and affinities of games and play are appearing more and more as expressive design features, elements of simplicity, functionality and beauty.

What accounts for this increase in ludic aesthetics in Australia? This paper argues that, away from the corporate explosion of 'gamification' and 'funification' that took stranglehold in recent years, the contemporary aesthetics of interaction and play introduced and discussed in this document, evidence a much broader and more encouraging literacy of games and play developing within Australian culture and society. Moreover, the entire discourse surrounding games has evolved. The distinct lingo of academic and gamer contexts remains, but increasingly a style of writing about games is emerging, one that appears crafted to embrace newcomers to the conversation about games, but not to games themselves.

For some, the widening of interest of games and play represents a threat to the field of games as a precious consumer niche: it signals the gentrification of an established culture and identity. Conversely, this paper argues that the shift reflects the local maturation of the fields of games and play.

Additionally, many of the causes motivating this growth in literacy are mapped. They include the explosion in popularity of digital games and the cultures that surround them, the reported struggles of local AAA studios and the rise of independent game houses, the mainstream media focus on the GamerGate controversy, the academic exploration of Australia's games past, and the attention to the future of locally produced games and the conditions in which they are produced.

Keywords

Games, Play, Literacy, Australia

BIO

Hugh Davies is an arts worker and researcher exploring the intersection of interactive media and fine art. With creative output spanning sculpture, moving image and games, his works have been presented in Europe the Americas, Asia and Australia. Hugh received his PhD from Monash University in 2014 for research into transmedia games and mixed reality experiences. He has previously taught at La Trobe University, University of South Australia, RMIT, Monash University, Royal Danish Art Academy and the Adelaide Centre for the Arts.

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Finding Ways of Being: Psychogeography in Urban Codemaking

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ABSTRACT
The practice of 'urban codemaking' as central to a series of pervasive games is articulated in this paper. Its role as a kind of freeform wayfinding is explored, informed by psychogeography and other urban mapping strategies. In the analysis and reflection of this pervasive game design practice three main concepts are explored: urban codemaking as wayfinding strategy, phenomenology of the player experience, and articulation of the design methodologies used. In this sense, urban codemaking is seen as 'readymade' urban game level design, as combination of treasure hunt and urban adventure, and to re-engage players with the city.

Keywords
play, pervasive games, urban codemaking, public space, phenomenology

INTRODUCTION
This paper articulates a form of hybrid wayfinding described as 'urban codemaking' to explore a multilayered approach to pervasive game design. An urban code is a marker typically placed in a city that has multiple meanings: signifier of an alternate world, collectable game token, wayfinding marker, and others. The design of urban codes draw upon the pictographic language of travelling hobos, the psychogeography of the situationists, the play community of the new games movement, the world building politics of micronations, and the technology of mixed and augmented realities. Three main areas are covered: an exploration of urban codemaking as a wayfinding strategy in contemporary cities, a phenomenological analysis of the player, and an articulation of the design methodologies used in five iterations of the urban codemaking game.

Over the past four years, urban codemaking games have been played in Melbourne, Ogaki, Istanbul, Sydney, and Adelaide. In each case, the character of the game has been shaped equally by the rules of engagement and the urban planning of the host city, particularly the neighbourhoods that provide the game level. The relationship between wayfinding and placemaking is explored, and the ways in which being 'in-game' has a significant impact upon the players' sense of being-in-the-world. Typically, wayfinding assumes a specific destination – what happens when play allows for freeform wayfinding? This approach encourages players to develop their own psychogeography within the design of the game where 'destination' is left open, taking on a phenomenological accent: the player reaches a destination that *feels* right rather than achieving any goal set by the designer.

In fact, the games invite reflection on the nature of each city, how it came to be, and what it is becoming. Wayfinding is used not to get from one place to the next, but to engage in a particular way of being. The urban codes key players into another mode of being in which the narrative of the game takes place. Given their nature, and the emphasis on movement and cooperation, pervasive games can be used to encourage social interaction and increase physical activity. In comparison with the use of mobile devices to track or encourage physical activity, pervasive game play suggests a higher and more sustained level of activity through increased engagement. The most recent iteration of the urban codemaking game tests this hypothesis and assesses whether kinaesthetic play and aesthetic experience have an impact on wellbeing and physical health. It evaluates players via a musical game of tag through the collection of biometric, mood, and well-being data to measure the impact of play on their physical health and sense of wellbeing. In this game, the urban codes play the additional role of musical motifs in a spatially arranged sound design, exploring a sonic layer that builds on the freeform wayfinding of earlier designs. This mode of engagement again explores alternate ways of being in urban space enabled by play.

These ways of being are articulated and explored via a phenomenological approach that draws upon early games studies and recent texts that explore opportunities of play that engage with reality, and also the expanded nature of that reality. The main methodology used is interpretative phenomenological analysis in determining the ways players find meaning in the game. Each player experiences a different sense of being-in-the-world within the framework for exploration designed by the urban codemakers.

In this particular paper, the ongoing nature of this practice is explored comparing competitive versus collaborative modes of play, designs that highlight the paidiac to the ludic, and those that utilise augmented reality as a form of mapmaking for the player. The aims of this approach are threefold: firstly, to activate urban spaces in a form of 'readymade' level design transforming them into an alternate reality; secondly, to explore strategies for pervasive game design that combine aspects of treasure hunt and urban adventure; and thirdly, to humanise urban spaces and engender a sense of community and connection in opposition to feelings of alienation commonly associated with big urban spaces.

BIO

Troy Innocent explores connections and multiplicity in his works of design, sculpture, animation, sound and installation. His methods of multiplatform storytelling and relationships between objects and their surroundings create their own world, a game that viewers can play. His works explore the connections between language and reality, interacting within the contemporary media-scape utilising his own unique

aesthetic language. His most recent works are urban art environments: an interactive sculpture garden in the Docklands and Urban Codemakers, a game that reinvents the history of Melbourne. Innocent is currently Course Director of Games and Interactivity at Swinburne University; and is represented by Anna Pappas Gallery.

Steven Conway is a convenor and lecturer in the Games & Interactivity program at Swinburne University of Technology. He has presented on many aspects of□play, philosophy, aesthetics and culture, and has had a variety of articles published on these subjects in journals such as Convergence, Eludamos, Game Studies, the Journal of Gaming & Virtual Worlds and Westminster Papers in Communication & Culture. Steven is also co-editor of the first collection in academia on Video Game Policy - http://www.amazon.com/Video-Game-Policy-Distribution-Consumption-ebook/dp/B016MUE2FA/ref=mt_kindle?_encoding=UTF8&me=

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Travelling with Giuliana Bruno to the Videogame

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ABSTRACT
In this paper, I explore art, film and architectural theorist Giuliana Bruno's body of work and offer some suggestions for its application to game studies. In particular, I wish to focus on two key concepts: the spatial imaginary and the surface. Both of these ideas allow the game scholar to better locate the videogame within the broader history of representational media.

Keywords
Representational media, spatiality, surfaces, Giuliana Bruno

INTRODUCTION
In works such as *Streetwalking on a Ruined Map* (1993), *Atlas of Emotion: Journeys in Art, Architecture and Film* (2002), and *Surface: Matters of Aesthetics, Materiality, and Media* (2014), Giuliana Bruno traces a complicated pathway through space, media, history, and art. Her highly-reflexive writing has constructed a framework of sorts for understanding media as, apart from her many other contributions, fundamentally *placed*. Media are objects that exist, reflect on, and are reflected by their environments. Even the spaces that we exist in on a daily basis are to some extent actually constituted by their representational forms: for Bruno, the very idea of the city, is inscribed in the 'spatial imaginary', as 'a canvas to be imaged and imagined' by media (2009, 38). We see the city with our eyes, but we also see it with our media and our collective imaginations as a result. Places are not simply made out of bricks and mortar: New York exists in the opening credits to *Manhattan* (Woody Allen, 1979) or as in *True Crime: New York City* (Luxoflux, 2005), just as it does in material form on Manhattan island in 2016.

It seems fitting, then, to offer Bruno and her work as an example *par excellence* for thinking about videogames and wayfinding. Though Bruno rarely follows any research thread all the way to videogames in her own writing, her meandering approach through visual media offers a complex model for locating videogames within broader approaches to media and representation. If it is clear by this point that videogames are a spatial medium (Aarseth 2001), then it must also follow that there is something to be learnt from how theorists of other spatial media have navigated their own forms. Exploring Bruno's body of work may be useful in this context.

Equally significant is Bruno's concept of the 'surface' across media. Though traditionally, culture has imagined surfaces to be shallow, and regarded them as interchangeable with superficiality (such as with special effects or *trompe l'oeil* illusions), Bruno sees in the surface a thickness and depth of meaning. 'In our virtual age,' writes Bruno, '[materiality] manifests itself on the surface tension of media' (2, 2014). To combine this concept with that of the videogame as a medium of Bruno's spatial imaginary is to offer another conceptual pathway beyond what is commonly critiqued by scholars as 'screen essentialism' (Kirschenbaum 2008, Sample 2013). Where some scholars and players alike see critical depth in the videogame as only achievable through the investigation of gameplay, mechanics, hardware, code, and material, borrowing Bruno's conceptual reworking of the surface illustrates the productive limitations of engaging with the representational power of the videogame as a primary site of analysis.

Accordingly, in this paper, I wish to explore Bruno's work and suggest some possibilities for its uses in game studies. In the process I hope to point to several avenues to help find videogames within broader studies of visual and representational culture and its associated theory; to wayfind, in a sense, both through game studies, broader academic theory, and within the videogame's own intimate spaces.

BIO

Dan Golding is a Lecturer in Media and Communications at Swinburne University of Technology, and director of the Freeplay Independent Games Festival. He is also a writer, has published on videogames for *ABC Arts*, *The Guardian*, and *Crikey*, and is currently a contributing editor for *Metro Magazine*.

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Punctuate a Moving Picture: David Sudnow's *Pilgrim in the Microworld* and an Alternative History of the Study of Videogames

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Keywords
game studies, game history, phenomenology, Atari, David Sudnow, embodied play, game criticism

INTRODUCTION
The serious study of videogames is typically considered to have commenced in the late- 1990s with the rise of the narratology/ludology debate. When earlier literature references videogames, it is typically an offhand mention through secondary fields such as sociological or anthropological accounts of play, or literary accounts of narrative. However, published in 1983 and predating both Espen Aarseth's *Cybertext* (1997) and Janet Murray's *Hamlet on the Holodeck* (1997) by fourteen years is phenomenologist David Sudnow's *Pilgrim in the Microworld* (1983). Sudnow's book provides a committed and considered phenomenological account of early console videogames as both a new cultural form and a new form of embodied experience. Whereas much early game studies found itself unhelpfully forced into one of two camps that studied videogames either primarily 'as games' or 'as narrative', Sudnow's earlier but largely forgotten work is concerned with neither, instead tracing an alternative path where videogames are understood as a particular audio-visual-haptic way of interfacing with a television set that we just happen to call 'games'. That is, Sudnow's early work strives to understand videogames uniquely *as videogames*. Through his extensive engagements with *Missile Command* (Atari 1980) and *Breakout!* (Atari 1976), Sudnow enticingly points to a descriptive mode of analysis that privileges neither the haptic nor the audiovisual nor the mechanical but sees each as irreducible and inseparable in the embodied and cultural experience of playing a videogame.

As videogames today continue to dramatically morph into a great plurality of forms and creative intents, looking back at Sudnow's work provides game studies with both new and long-forgotten avenues of understanding. Writing at a time when the critical language used around videogames was not yet set in stone, Sudnow proposes terms and descriptions of the videogame play phenomenon that remain enticing and fresh today. For instance, when Sudnow first sits down with a console port of *Missile Command*, he notes that "I could watch a mysterious transformation of my movements taking place on the other side of the room, my own participation in the animated interface unfolding in an extraordinary spectacle of lights, colors, and sounds" (1983, 20). Whereas early game studies would focus, on the one hand, on *Missile Command*'s mechanical rule systems or, on the other hand, the dystopic tale it tells of nuclear obliteration, in 1983 Sudnow found a language for the fundamentally phenomenological and audiovisual-haptic

pleasures of videogame play—a pleasure that game studies is only in the past decade is discovering the true importance of—that is at once both inquisitive and critical.

This paper highlights the significance of Sudnow's phenomenological approach and his commitment to media specificity to trace an alternative history of the analytical study of videogames that circumvents both the mechanistic and textual essentialisms of the ludology/narratology stalemate of the early 2000s and its lingering legacy. Tracing this alternative history proposes new avenues of potential research and comprehension that could add a greater robustness to current modes and frameworks of videogame analysis. In particular, this paper focuses on three core interventions that Sudnow's research provides contemporary game studies: 1) an alternative critical vocabulary (and thus epistemology) that pre-dates the consumerist terms that game studies adopted from the enthusiast press during the 1990s; 2) an alternative formalism of videogames as a haptic augmentation of audiovisual media rather than as simply digitalisied non-digital games; and, most significantly, 3) a way to account for the embodied knowledges of the player's hands that contemporary game studies is only recently developing an interest in. These three interventions will together allow this paper to imbue an appreciation for one of the earliest but oft-forgotten serious studies of videogame experience, and to highlight the ways its can be of benefit to contemporary researchers.

BIO

Brendan Keogh is an academic and critic based in Brisbane, Australia. His research focuses on the textual, phenomenological, and cultural aspects of videogame play. He is a lecturer of Game Design at SAE Media Institute, and an Adjunct Research Fellow at RMIT University's School of Media and Communication. He has written for a variety of publications including *Polygon*, *Edge*, *Overland*, *Ars Technica*, and *The New Statesman*. He is the author of *Killing is Harmless: A Critical Reading of Spec Ops The Line*.

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Finding a Way: Reducing Design Schema Friction in Narrative Design

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ABSTRACT
The Narratology and Ludology debate from the late 90s and early 2000s has in many respects abated. This is due to in part the agreement many theorists have come to regarding the need for recognising and studying game phenomena as cultural form in itself. The debate successfully championed games being treated as a unique phenomena. The two fields continue with their distinct inquiries, along with some interdisciplinary and transdisciplinary efforts which ensure their congruences are not lost. The same, however, has not happened in practice. Game designers and game writers do not have shared understandings, processes, or approaches. Indeed, the process of narrative and game mode integration during the development process is still awkward and difficult. This is *not* due to the two modes being incompatible however, as has been claimed now and in those early debates. Instead, this paper argues that incompatibilities are due more to the schemas of creation. The mental models we are taught and creative with are what thwart more integrated practices. To illuminate this problem and possible solutions, this research looks at how game writing is taught, the notion of design schemas, and offers existing models that reduce schema friction in narrative design.

Keywords
narrative design, game design, screenwriting, design schemas, serious games, narratology, ludology, learning design.

INTRODUCTION
How do game designers and game writers learn to do narrative design? If we consider the high number of games students enrolled in courses worldwide, what is taught in education is a key point of reference to help answer this question. There are (arguably) key texts that show up on curriculums worldwide: *Game Design Workshop* (Fullerton 2008); *The Art of Game Design* (Schell 2010)*, On Game Design* (Rollings and Adams 2003), and *Rules of Play* (Salen and Zimmerman 2003); and while each of them have differences in their discourse and framing, there are patterns in the citations. They do what most game-, screen- and novel-writing books do: reference three act structures through Aristotle's *Poetics* (Aristotle 1997 [330BC]), Joseph Campbell's *The Hero with a Thousand Faces* (Campbell 2012 [1949]), and Christopher Vogler's development on Campbell's monomyth with *The Writer's Journey* (Vogler 2007).

A game writing approach is then explained as being different through pathing structures. These are the nodal diagrams that explain how a player can access different parts of a story in different ways. A linear, strand-of-pearl-like structure or a branching structure for instance. Then to bring in the concept of the hero's journey, there is a repositioning of the hero's journey as the player's journey, a "first-person

character arc" (Freeman 2004). Famously, we've also seen how developer Jenova Chen applied this thinking to *Journey* (Chen 2013), along with many other practitioners. Indeed, students and professional developers alike utilise these touchstone narrative structures during development.

Developer and educator Jesse Schell goes further, explaining that "[b]ecause so many videogames revolve around the theme of heroism, it is only logical that the hero's journey is a relevant structure for a powerful videogame story" (Schell 2010). But as we have seen with the development of different types of games (Hamari and Tuunanen 2014; Hartmann and Klimmt 2006; Kallio, Mäyrä, Kaipainen 2011; Lazzaro 2004), heroism is not a universal desire for play, and further to that neither is playing a hero that refuses the call to help others. But neither of these issues are the crux of the problem.

What is the problem then? The problem is, in practice, these narrative structure approaches have conflicting goals with game design approaches. Indeed, their differences can be see as being distinct design schemas. Story and game design schemas are our ways of understanding stories and games. We learn them through experiencing stories and games, and as practitioners we are also taught them through articles, books, workshops and consultations. Schemas are not a recent concept (Lakoff & Johnson, 1980), and have been applied to game design before. Game researchers Craig Lindley and Charlotte Sennersten, for instance, discuss *story* and *game play schemas* from a player perspective, where the former is about patterns that make stories comprehensible, and the latter is about the orchestration of cognitive resources to generate motor outputs (Lindley and Sennersten 2006).

Both myself and early narratology and ludology theorists have explored an alternate approach to narrative and game mode resolution: a transmodal approach to games where analysis of narrative and game transformations reveals the congruences and differences (such as Dena 2009; Eskelinen 2005; Frasca 1999; Frasca 2003; Juul 2001; Ryan 2006). But transmodal approaches focus on setting, props, objects, and characters, and so do not think about the players, or audience. We're thinking about what players will see and ultimately (hopefully) will be affected by, but we're not actually thinking about their experience. We're thinking about the elements. We're thinking about the end product as an isolated act in itself. While alternately, (ideal) game design is about thinking of the player's actions: the various verbs that represent their activity, and playtesting to check the relationship between design proposition and effect.

What I highlight in this research are two approaches to narrative design that work for games and film (and TV) development processes. They are both from already-proven models and they are two approaches that intrinsically have a shared goal that aligns with best practices in both artforms. Both of them make the player or audience the focus.

BIO

Dr Christy Dena is Chair and Department Coordinator of Games at SAE Creative Media Institute, and owner of Universe Creation 101 where she is a designer-writer-director of apps, card and live games. She achieved her PhD in Transmedia Practice at Sydney University, Postgraduate Diploma in Creative Writing at Melbourne University, and Bachelor of Arts in Visual & Performing Arts at Monash University. Christy has lectured around the world, been published in numerous books, and runs an international professional lab for creatives working in the fringes: *Forward Slash Story*. Christy's projects

have won and been nominated for multiple awards, including the winning the WA Premier's Book Award for Digital Narrative and the AWG Award for Interactive Media.

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Positive Psychology in Game Design: A Framework for Collaboration

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ABSTRACT
With more than 1.5 billion gamers around the world as of the end of 2015, with further growth projected as mobile devices achieve greater market penetration, there has been a great deal of interest in using games for purposes beyond entertainment. However, gamification and serious games often fail to engage prospective users, generate commercial interest, or meet long-term objectives, due to mismatched expectations, failures in communication, and lack of understanding of design. Future success requires the development of a common framework to facilitate inter-professional collaboration, with this paper proposing the use of Seligman's Well-Being Theory as the basis for such a framework.

Keywords
Well-Being Theory, Game Design, Inter-Professional Collaboration, Psychology

INTRODUCTION
Due to the rapid proliferation of smartphones in the global mobile market, the global game-playing population has grown to over 1.5 billion people worldwide (EEDAR, 2015). As the number of smartphone users continues to grow, with conservative estimates projecting a rise from 2 billion at the end of 2015 to 6.1 billion in 2020 (Ericsson, 2015), the mobile games market is likely to keep pace. By 2020, 4.5 billion people – nearly half the world's population – will be gamers. As such, there have been a number of efforts to leverage game-related techniques and technologies for positive impact, mostly through gamification and serious games, though most have met with limited success.

Gamification, traditionally defined as the addition of game mechanics to everyday processes (Huotari & Hamari, 2012) in an attempt to increase motivation for otherwise unpleasant tasks, is currently one of the leading buzzwords of the healthcare sector. Like big data, it was positioned as a magic bullet that would combat lack of adherence to medications, encourage healthy eating and exercise habits, and otherwise help people manage their conditions – but the reality falls far short of the hype, with 80% of all gamification initiatives failing to meet their objectives (Gartner, 2012), especially as they pertain to long-term change.

Serious games, a somewhat oxymoronic term deriving from the Renaissance "serio ludere," referring to entertainment that dealt with serious matters (Djaouti, Alvarez, Jessel, & Rampnoux, 2011), are games which have something other than "entertainment, enjoyment or fun as their primary purpose" (Michael & Chen, 2005). They long predate the concept of gamification, and indeed, account for some of the earliest games, predating even Pong (Djaouti et al, 2011). However, despite their long and storied history, with some even winning numerous awards for innovation and proving more clinically efficacious than traditional methods of teaching or performing therapy, the vast majority of these games have not been commercially successful.

The obvious question of why these game-based interventions, while initially promising, fail to achieve wider success has an equally obvious answer: bad design (Gartner, 2012).

In the industry at large, there are very few designers who work on gamification, with most believing that it is a marketing gimmick built upon a superficial understanding of design (Huotari & Hamari, 2012). Most approaches to gamification use points, levels, and leaderboards as if these alone are enough to drive motivation, without considering that real life is already built upon points, levels, and leaderboards (in the form of wages, ranks, and workplace recognition). Likewise, there is an industry-wide perception that serious games are not truly games, and that who make them allow the core tenets of game design – and meaningful play – to be compromised by other concerns.

There is some truth to this, unfortunately, as among academics and health professionals, there is often the perception that game design is secondary to clinical and classroom efficacy, resulting in games that are unengaging, unsightly, and utterly unappealing.

SPARX, a game which sought to treat mild to moderate depression in adolescents through cognitive-behavioral therapy, is an excellent example. Though clinically effective, with a study finding that 44 percent of those who played the game achieved remission from depression, as opposed to the 26 percent in conventional care (Merry, Stasiak, Shepherd, Frampton, Fleming, & Lucassen, 2012), it was a commercial failure, with its distributor closing down in 2015. Among the reasons why were a nearly unusable user interface, the lack of a save function, lack of meaningful choice in gameplay, and its problematic branding as a "game for depression."

To better leverage the potential of games and game-based techniques, a framework for inter-professional collaboration is necessary, with a common language explaining how the principles of design are not secondary to clinical efficacy, but a vital part of crafting engaging, immersive experiences with the power to heal.

It has long been assumed that there was a "magic circle" that isolated games and other sorts of play from the outside world (Huizinga, 1938), but recent research has found that this membrane is porous (Castronova, 2008), with behavioral assumptions, attitudes, and other elements from one side of the membrane crossing over to the other. This implies that the impact of game design and clinical/educational considerations on one another – and the user – can be fully understood – and modeled – in terms of psychology.

Thus, this paper examines the psychological principles behind effective game design, such as Self-Determination Theory (Deci & Ryan, 2000), Salutogenesis (Antonovsky, 1987), and Flow (Csikszentmihalyi, 1990), all of which fall under the larger construct of Well-Being Theory (Seligman, 2011). It is this last, drawn from Positive Psychology, that this paper proposes as the basis of a framework for collaboration, so that designers, developers, clinicians, educators, and academics, can all work together to more effectively leverage the power of games to change the world.

BIO

As a game designer, health professional, and chair of International Game Developers Association (IGDA) Serious Games, Matthew Lee, M.S., R.N., has worked with the MacArthur Foundation on how virtual worlds can be used for education and as an extension of conventional therapies, created a digital toolkit for dealing with PTSD for the American Nurses Foundation, and more. As a Fulbright Scholar, Matthew's research examines how an understanding of psychology can be used to drive the creation of fun therapeutic experiences meant for use outside the clinical environment.

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Wing Commander and the Enduring Impact of Live-Action Video

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ABSTRACT

This research project is an investigation of the historical poetics of live-action video (FMV) via a case study of the *Wing Commander* franchise. In popular memory, FMV- based games such as *Wing Commander* are regarded as a technological dead end, the result of 'film envy'. However, close examination of the *Wing Commander* series shows such a characterization of live-action games is fundamentally inaccurate. FMV was a necessary phase in the development of game storytelling. Furthermore, with the advent of motion and facial performance capture, live-action storytelling is today far more dominant than it had been at the time of *Wing Commander*'s peak.

Keywords

FMV, cut-scenes, live-action, storytelling techniques, motion capture, *Wing Commander*.

INTRODUCTION

This research project is an investigation of the historical poetics of live-action video via a case study of the *Wing Commander* (*WC*) (1990 – 1998) franchise. It proposes a reconceptualization of the accepted understanding of the association of full motion video with this particular franchise and its influence on game history.

Wing Commander is a sci-fi space combat series created by Chris Roberts at Origin Systems, a pioneering company also responsible for the *Ultima* series (1981-2013). The *WC* series can be likened to a video game version of *Battlestar Galactica* (1978-1979), with space fighter pilots defending humanity from a feline alien race known as the Kilrathi, while dealing with personal dramas aboard their own carrier. The series is best remembered today for its expensive spectacle and especially for the live-action full motion video (FMV) cut-scenes (Howells, 2002; Klevjer, 2008), in *Wing Commander III: Heart of the Tiger* (1994) and *Wing Commander IV: The Price of Freedom* (1996), where the player was represented on-screen by Mark Hamill and squared off against opponents played by the likes of John Rhys-Davies and Malcolm McDowell. Yet, perhaps it would be more appropriate to say that because of these games, so focussed on FMV storytelling, *Wing Commander* is now forgotten. While at the time of original

release in the 1990s FMV lent a veneer of respectability to video games (Russell, 2012), subsequent decades have hardened attitudes towards this intrusion of the film medium into video games, often regarded as being brought about by 'film envy' (Brookey, 2010).

While *WC* did not invent FMV, the series' history was inextricably tied to this technique, mirroring its rise and fall – embracing FMV early on, and then virtually disappearing together along with live-action FMV. A closer examination of the series, however, shows that it is inaccurate to characterize live-action games as an irrelevant evolutionary dead end of games development. Live-action was a necessary phase in the development of game storytelling techniques at a time when telling the same story using only computer graphics was essentially impossible (Perron, 2008). The history of *Wing Commander* shows not only how crucial FMV was at its peak, but also how it continues to shape game storytelling long after its supposed disappearance.

The first *WC* game, released in 1990, told its story through dynamically rendered cut- scenes using hand-drawn, hand-animated 2D characters. However, advances in graphics technology made this approach obsolete, while simultaneously, 3D animation was still too expensive to be practical. Recording live-action video was cheaper, and the advent of the CD-ROM eliminated data storage as a practical concern in development. Beyond *WC*, in the mid-1990s FMV found employ in the *Command & Conquer* (1995-2013) and *Phantasmagoria* (1995-1996) series, as well as numerous other games.

By the time of *Wing Commander: Prophecy* (1997), however, the quality of dynamically rendered 3D graphics had improved significantly, and FMV was rapidly disappearing from the scene (Russell, 2012). A year later, the first-person shooter *Half-Life* (1998) was released, with neither live-action nor pre-rendered 3D video. Scenes could now be depicted in the game engine and rendered in real-time – still a drop in visual quality, certainly, but no longer so significant as to make the game unpalatable.

The story of live-action storytelling in video games has an ironic postscript. In recent years, the visual quality of games has continued to increase and photorealism reigned as a visual style. As character models approached photorealism, animation also needed to become more natural to avoid falling into what Japanese robotics theoretician Masahiro Mori has termed the 'uncanny valley' (Mori, 2012) – when a character is so realistic in appearance, that every unnatural movement becomes off-putting. To avoid the 'uncanny valley', game developers have essentially returned to FMV in disguise: motion capture and facial performance capture transpose real actors into games in an interpolated form.

Unsurprisingly, one game developer who has employed these techniques for storytelling (Klevjer, 2002) is the creator of *Wing Commander*, now working on a new space opera, *Star Citizen* (2016). In his quest to continue to create 'cinematic' games, Chris Roberts had first adopted FMV, then abandoned it in favour of digital animation, and now combines the two techniques by animating digital models with captured performances.

A continuity in techniques exists from *Wing Commander* in 1990 to *Star Citizen* today. These techniques, furthermore, are commonly used in other high-profile productions such as David Cage's *Heavy Rain*

(2010) and Naughty Dog's *The Last of Us* (2013)1. Far from being forgotten, *Wing Commander*'s FMV techniques have laid the foundation for the animated motion capture mimicry of today.

BIOS

Jakub Majewski is currently pursuing PhD research at Bond University, focusing on the intersection between RPGs and cultural heritage. As an adjunct Teaching Fellow at Bond, he has taught interactive experience design, game culture, and the game industry. Jakub also has a decade of experience in games development in various capacities from level designer to producer and creative director. His professional portfolio includes forty games in multiple genres, and for multiple platforms.

Scott Knight is Assistant Professor of film, television and videogames at Bond University where he teaches courses in film and videogame aesthetics, history, and culture. He has held the role of programmer of the Brisbane International Film Festival from 1993 to 2012. Scott has authored papers on fan cultures, censorship issues, and videogame history. He is currently engaged in research on the formal characteristics of film-to-game adaptation.

ENDNOTES

1. For more on motion capture in *The Last of Us*, see the feature-length behind-the-scenes documentary *Grounded: The Making of The Last of Us* (2014) https://www.youtube.com/watch?v=R0l7LzC_h8I

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No Heroes: The Erasure of Chronic Health Conditions from Videogames

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Keywords
videogames, chronic health conditions, mental health, representation, *Fallout 4*, character creation

ABSTRACT
Exposure to diverse representations in media is an important part of identity formation and the dismantling of stereotypes and stigma (Athanases 1998: 292). Videogames, as popular entertainment media, play an important part in this process (Morris & Forrest 2013). Rich, complex pre-constructed characters can present the player with a variety of unfamiliar (and familiar) crafted viewpoints, but other forms of media—literature, film, TV—also allow this possibility. Games with customisable, player-created protagonists are uniquely able to provide an experience where the player—their visage, their values, and their decisions—can be the central agent of change.

With regards to representation, the largest benefit of character creation tools in videogames is that the player is presented with a simple, seemingly 'blank-slate' character onto which they can more easily project their own identity (Papale 2014). This should offer the player the opportunity to experiment with facets of their identity, allowing them to process, understand, and accept these facets, thereby strengthening their sense of self. However, the ability to customise any character elements beyond the cosmetic or superficial—like the presence of chronic mental or physical illnesses and disabilities—remains absent from even the most robust and current of games. The ability to create a likeness of almost any face—including the faces of celebrities or other videogame characters—in Bethesda's *Fallout 4* (2015) does not offer all players equal opportunity to recreate substantial aspects of their identities, which enforces exclusionary notions of 'normal' and 'heroic' that exclude sufferers of chronic health conditions.

'Chronic health conditions' includes a vast range of illnesses, injuries, and diseases. Anderson and Horvath (2004) define chronic conditions as 'conditions that last a year or more and require ongoing medical attention and/or limit activities of daily living.' These conditions can manifest differently, to varying degrees of severity, and do not always have obvious physical symptoms—or are deliberately concealed by the sufferer (Joachim & Acorn 2000); these factors contribute to a lack of understanding and awareness about chronic health conditions that gives rise to stereotyping and stigmatisation.

Stereotyping and stigmatising is where the issue arises: character creation tools, in not providing an avenue for chronic health conditions to be represented, contribute to a culture of misunderstanding.

Fallout 4 offers players the opportunity to recreate and then insert themselves into a digital wasteland but demands that the player-character be able-bodied. Players with chronic health conditions— encouraged to take on the role of whomever they wish and do whatever they desire—are met with a firm realisation: they can be anybody except themselves. While a facial likeness can be achieved, and while *Fallout 4* does offer opportunities to express some degree of gender and sexuality identity, the player-character is unable to express or experience symptoms of a mental or physical chronic health condition. This lack of freedom is exacerbated by the broader lack of representation of chronic health conditions in videogames; when coupled with the fact that disability is often used as an 'easy' way to characterise villainous characters—such as *Fallout 4*'s proto-villain, Conrad Kellogg—this can leave chronic health sufferers with only negative representations or no representation at all.

Correcting this lack of representation and beginning to dismantle the normative values that *Fallout 4*'s approach to character creation perpetuates requires more than a quick fix. There are a number of technical obstacles for developers to overcome, and an effective solution requires chronic health conditions to be implemented in a meaningful way. This paper will discuss these challenges as they relate to *Fallout 4* and the ways in which they inadvertently contribute to normative values that erase sections of the player base.

BIO

Dakoda Barker is a DCA candidate at the University of the Sunshine Coast researching the representation of chronic health conditions in videogames. He currently tutors in serious games at the University of the Sunshine Coast. His writing has been published online at *Kill Screen*, *PC & Tech Authority*, and *Impulse Gamer*, and in print with *Hyper* and *PC Powerplay*. He really loves pork buns.

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‘Adam Smith Hates Your Guts’: Horror, Survival and the In-Game Economy in *Pathologic*

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ABSTRACT

This paper examines the narrative and ludic functions of trade between players and merchant bots in single-player adventure/rpg games, which usually offer a player-centric or ‘narrativised’ representation of an economy which is calibrated to the player’s progress within the game. Games within the ‘survival horror’ category, by contrast, usually lack this kind of reassuring in-game economy, as a scarcity of in-game resources is often a key element of survival horror gameplay. Ice Pick Lodge’s *Pathologic* (2005) offers a rare example of a survival horror game that utilizes its in-game economy to create an atmosphere of terror and uncertainty for the player.

Keywords

Survival horror, role-playing games, in-game economies

INTRODUCTION

The study of in-game economies in video games has generally been focused on the dynamic, player-driven economies found in various kinds of massively multiplayer games, following Edward Castronova’s initial working paper on player trading in *Everquest* (2001) and the publication of his influential book-length study *Synthetic Worlds: the Business and Culture of Online Games* in 2005. Castronova does not consider single-player games in his study as while he argues that all games can be understood as an economy, in that they require players to make choices under conditions of scarcity, he understands real economic activity within them as being only the trades that are made between players. Trades between players and merchant bots are understood by Castronova as being essentially a mechanic for converting one in-game resource into another and therefore add nothing to the game’s economy. Vili Lehdonvirta (2005) briefly considers the ways in which the mechanics of single-player games can be understood as a ‘virtual economy’, in that players expend their labour to produce or acquire various types of in-game resources, but concludes that this analysis ‘does not bring any added value on top of what is already known about the game mechanics’.

While single-player games may lack meaningful economic activity of the type that is of interest to Castronova and Lehdonvirta as economic theorists, it is worth considering the ways in which the types of conversion mechanics identified by Castronova are used in single-player games to represent the presence

or operation of an economy within the game's fiction, particularly within those that fall within the adventure/rpg genre. While many strategy games often simulate the presence of a more dynamic economy, which the player must normally expend some time and effort to understand and master, the representations of economies in adventure/rpg games are often static, or tend to develop in ways that reflect the player's progress in the game rather than the logic of the game's fiction (e.g. the merchant NPC in a rural village visited by the player in the game's later stages having a more expensive and diverse set of merchandise than that offered by shops in the cosmopolitan capital city where the game begins). The ways in which these player-centric, or as defined by Laurie N. Taylor (2004), 'narrativised' representations of economies either remain reliably consistent or adapt to the player's progress, mean that they operate as a safe and reassuring element of gameplay, a diversion from the more demanding activities of combat, exploration or puzzle-solving. Furthermore, as they are usually presented as one of a multitude of transactional systems and reward mechanisms within adventure/rpg games, engagement with them is more often optional than it is essential for the success of players. As a result, players who regularly engage with these systems (collecting and trading in game resources with merchant bots) usually find themselves in a position of abundance by the middle or later stages of the game.

In this regard, the way in which these conversion mechanics are used to represent economies within adventure/rpg games can be seen as supporting McKenzie Wark's (2007) contention that gameplay systems often work to present an idealised version of capitalist arrangements. The rewards of in-game 'work' and success are effortlessly and reliably converted into wealth and/or additional resources that can be 'reinvested' by the player, providing a 'procedural rhetoric' (Bogost 2007) for this component of gameplay that reinforces both the capitalist arrangements that often mirrored in common gameplay structures (Taylor 2004) and the meritocratic norms that are conveyed through them (Schulzke 2012).

Taylor (2004) suggests that the usual absence of these representations of economies in games within games that fit within the survival horror genre and the emphasis they place on scarce resources can be read as subversion of this trend, but the fact that fear and uncertainty is constructed out of the removal of the abundance of resources that players can normally expect to find within adventure/rpgs outside of this genre can just as easily be read as an acceptance of capitalist arrangements as an undisputed norm of both gameplay and life ('horror' in these games results, in a large part, from their removal).

Ice Pick Lodge's *Pathologic* (2005) offers a rare example of a survival horror game where tension and unease is not created through the absence of these systems but through the ways in which the in-game economy is closely integrated into the game's plot, gameplay and environment, making engagement with it essential to the player's success. *Pathologic* succeeds in creating an atmosphere of terror at least in part through the unpredictable fluctuations in the in-game economy and the surprising ways in which it can impact upon the other transactional systems within the game.

BIO

Julian Novitz is a lecturer in writing at the Swinburne University of Technology. He is the author of *Little Sister* (Vintage, 2012), *Holocaust Tours* (Vintage, 2006) and *My Life and Other Stories* (Vintage, 2004) and his work has been published in *The Penguin Book of Contemporary New Zealand Stories, Best New Zealand Fiction*, *The Sydney Review of Books*, *Wet Ink*, *Landfall*, *The NZ Listener* and *Sport*. He has won the Hubert Church Award for Best First Book of Fiction, the Katherine Mansfield Award for Short Fiction, was a recipient of the Buddle Findlay Frank Sargeson Residential Writing Fellowship and was shortlisted for the 2014 Commonwealth Short Story Prize.

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Broadcasting Play: Articulating Roles of Materialities and Bodies

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Keywords
Broadcast, Livestream, Materiality, Actor Network Theory, Algorithm

INTRODUCTION
In the study of videogames, the location of play as an experience influenced by a broader field of material and bodily relations has been a popular and generative perspective. Through the appropriation of a range of theoretical rubrics, ranging from cybernetics, to Actor Network Theory (Latour 2005), scholars have situated materialities and players as central stakeholders in the experience of play.

In this paper, I argue that the practice of broadcasting play, through platforms such as YouTube and Twitch, have come to represent an important, public framing of play as a thoroughly networked experience. From 'Let's plays' to livestreams, broadcast play often features relatively candid footage of the body in motion, and its interactions with hardware and software alike. I note, however, that some streams take steps in marginalising representations of their bodily interaction or surrounding materialities; arguably shifting focus, instead, to the content of the game being broadcast and displays of (generally) facial affect by broadcaster. This paper explores how different formats of broadcast communicate varying ontologies of videogame play; situating networks of material (and immaterial) relations. In what ways do particular methods of framing play, via broadcast, orient, or disorient, viewers from the idea of play as an experience thoroughly mediated by materialities and bodies?

LOW FIDELITY, HIGH IMPORTANCE
One such site of importance, in articulating play as an experience mediated by *physical* networks is that of the 'low fidelity' broadcast. These broadcasts could involve the use of webcams, camcorders, or camera phones, in order to document videogame play (essentially, pointing the camera at the screen to record play). In doing so, these broadcasts would generally frame important material constituents of play, such as the television set and console. While the method was crude, and the audiovisual quality poor, these broadcasts, I contend, function as signifiers of videogames' materiality.

HIGH FIDELITY BROADCAST: AFFORDANCES AND LIMITATIONS
The proliferation of more advanced broadcast technologies and methods have generally made obsolete approaches, such as those documented above. This has given rise to new approaches to broadcast, as well as generated tensions in representations of materialities and bodies.

One popular approach in contemporary broadcast is the use of a camera inlay. This has been utilised to great effect, by a number of streaming communities, in order to document both material and bodily interface with games. For instance, the streaming community in rhythm game osu! (2007) will often document hand movement via a webcam, oriented toward the player's hand. High level players not only showcase their virtuosity of the game via the accumulation of points onscreen, but through the ways in which their body has been trained to respond to the game. Popular eSports, have also implemented such features. These examples have been depicted in Figure I; two screenshots from these respective representations of interaction. Both screenshots also highlight the devices through which the game is controlled; tablets, monitors and keyboards. In both examples, hardware is particular and given focus due to a perceived importance (osu! user is showing viewers a custom hardware layout, while the eSport example is grounded in a desire to sell hardware through professional player endorsement). Regardless of rationale, this kind of broadcast forces into consideration interactions between humans, software and machines in play.

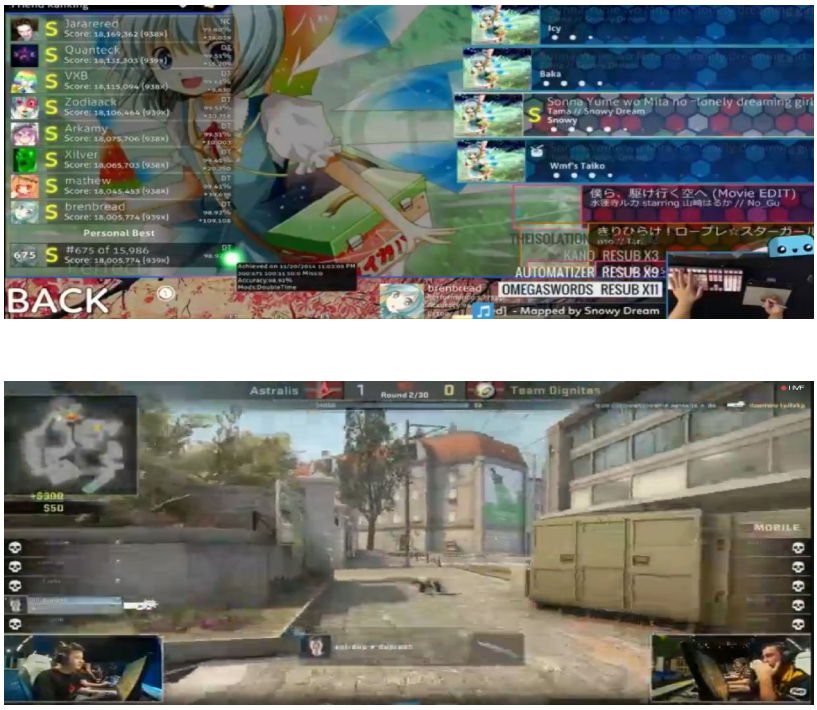

Figure I. Screenshot from osu! stream (Top) and Counter Strike: GO stream (Bottom)

While the augmentation of footage, showing both the game and the player's bodily engagement, has proven useful in highlighting the networks of materialities and bodies that comprise play, applications have not always been this fruitful. Particular instances of framing the body and the material (or lack thereof) just as readily highlight tensions between thinking about play as networked and play as an abstracted phenomenon.

Using the camera inlay, many popular Twitch streamers locate their upper body (head, chest) in the frame. As such, viewers are unable to view any haptic interactions with the controller. While the body is in frame it isn't depicted as functionally engaged the direction of play. Onscreen action is, essentially, abstracted from any from any kind of enabling agent(s). Instead, we bear generally bear witness to ways in which the body is acted *upon* and triggered by the game, through largely facial, vocal or gestural responses to prompts(certainly, mapping out facial affect in the realm of 'Let's Play' broadcasters could be interesting). Figure II highlights an example of a Twitch streamer deploying this broadcast method.

Figure II. Screenshot of popular body framing; head and torso in frame.

IMMATERIAL MATERIALITIES

Until this point, I have focused principally on ways in which broadcast play orients viewers toward the field of *physical* relations facilitating play. However, as emerging disciplines of software studies would tell us, algorithmic anatomies of software also function as important materialities; meaningful and enabling user practice (Berry 2011). Streams detailing algorithmically situated activities, such as modding and tinkering with games, articulate code's importance as an enabling materiality, while simultaneously moving away from ideas of the software as an incomprehensible 'black box' (reminiscent of ideas put forward by Friedrich Kittler, particularly those regarding the "systems of secrecy" [1997, 151] and notions of the unknowable apparatus).

CONCLUSION

The idea that play represents a state of negotiation between bodies and materialities is by no means a novel idea. I argue, however, that channels of broadcast play have, in some instances, come to represent important public articulations of these ideas; orienting viewers toward holistic ways of thinking about games. They also highlight dialectical tensions, through broadcast that takes steps to efface material and bodily constituents of play, and the agency of these actors.

BIO

Ben Egliston is a PhD candidate at the University of Sydney. He is currently researching the ways in which players learn and develop an understanding of videogames, and how this has shifted dramatically

in the age of livestreaming. One area of interest inquiry has been how players develop 'surrogate' gaming literacies through broadcast channels such as Twitch and YouTube.

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Tapping into the Gaming Community for Roguelikes

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ABSTRACT

We developed Roguelike Universe as a web scraping algorithm that looks for developer interviews, gaming journal articles, post-mortems, and developer diaries. The findings are turned into data visualisations of roguelike idea networks. However, computer algorithms are not intuitive for complex topics, and can lead to false positives. To speed up the efforts of error correction, we engage the gaming community to discuss the findings of our roguelike idea networks, and propose to open the data as a human-editable format that can be rendered into data visualisations in real-time. This allows the community to directly engage with us in a conversation that may uncover little-known insights, and correct any data they deem to be incorrect. This paper is a work-in-progress that aims to open a conversation about engaging with the gaming community for studies in game history and design.

Keywords

roguelike games, connected ideas, game history, idea network, community insight

INTRODUCTION

Roguelike Universe was developed to investigate the concept of a connected network of game ideas, as shown in Figure 1. Based on the list of roguelike games curated by the Wikipedia community (2016), We chose eighty-five roguelike games that embraced two high-value factors: *permadeath* and *randomly environment generation* (RogueBasin 2008). Our inclusions included traditional roguelikes, roguelite games (Hawkes 2013) and neo-rogue (Garda 2013).

The concept of remixing ideas is not new. Hagen (2012) found recycling of game ideas in industry game development from small to large companies alike. David and Grurin (2000) argues that remediation of culture and media requires an appreciation of different perspectives and insights. For game scholars, tracing the paradigm shift of game design is a life blood of our work. To this end, we developed a web scraping algorithm that looks for developer interviews, gaming journal articles, post-mortems, and developer diaries. The findings for a connected roguelike design network was submitted as a full paper to DiGRA-FDG 2016 conference (Ho et al., pending review), and we hope to discuss the in- progress efforts tapping into the gaming community for human insight.

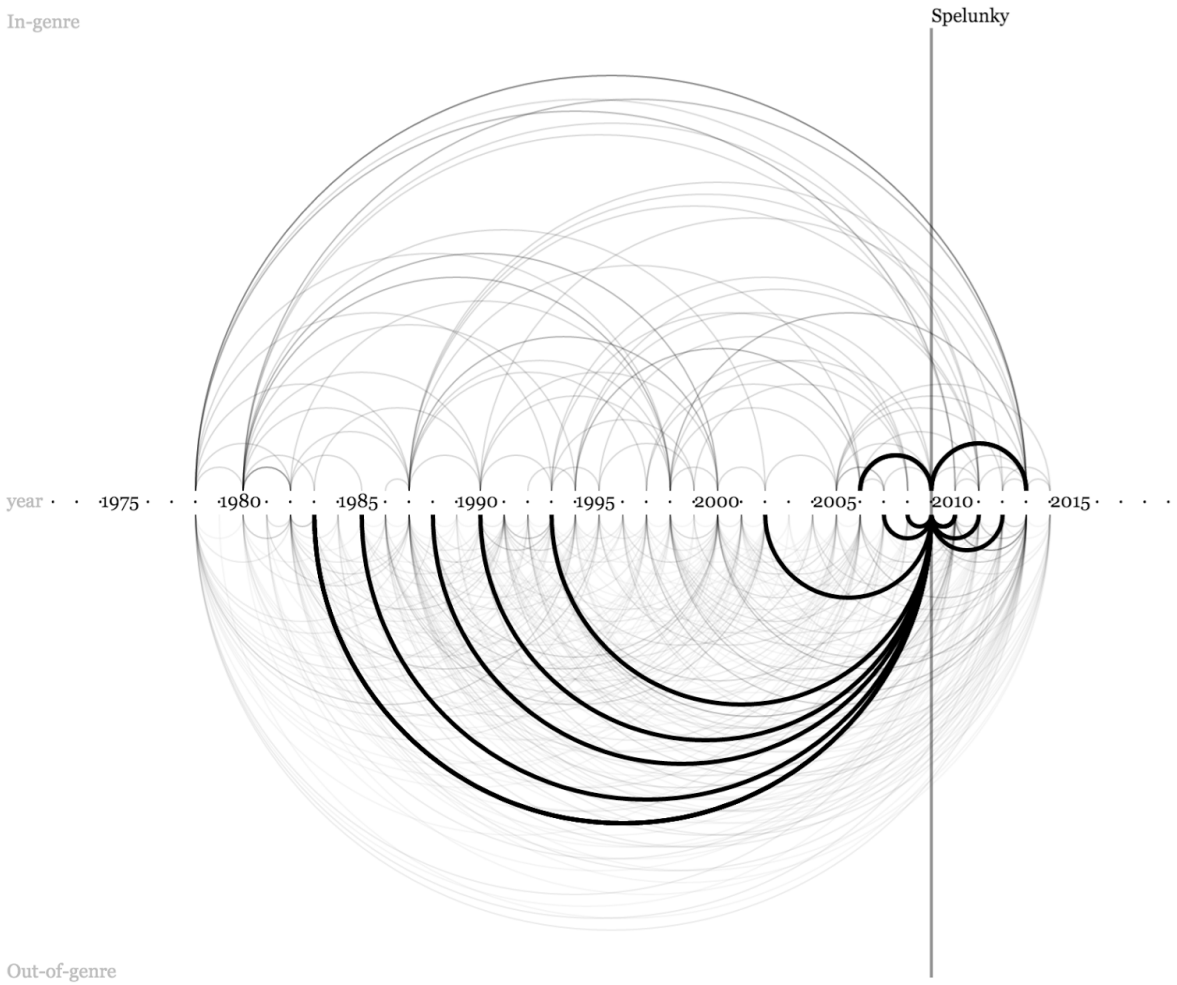

Figure 1: Roguelike Universe Timeline

Algorithms are not perfect, especially when it comes to natural language processing. In our previous design iterations, we often found false positives in our results, and had to tighten our heuristics. Even if the computer program is coded entirely by humans, computers do not have an intuition about games, reasoning, or context, and researchers often fallback to human-generated content (Cambria and White 2014). Computer knows a little about lexical affinity, distance weighting, word occurrences—metrics that can be stored in numbers—but lack the ability to make intuitive connections about complex topics. The logical step is to introduce human intervention at this stage of data gathering.

Our method to involve the community is two-fold: one, we interview gamers who are enthusiastic about roguelike games, as game developers and fan communities tend to have solid grasp of its own history (Watson 2012). By engaging in a gaming conversation with data and visuals generated by Roguelike Universe, we may come to a better understanding of both the fans and little-known history of roguelike games. two, we make the existing data readily available in a human-readable, human-editable format, and

drive the online visualisation in real-time. This allows anyone to see the results after they submit a change, and speed up the error correction in our data gathering efforts.

The result of our study is a user-led discussion and analysis based on the community response. At the conference, we will present the in-progress findings, and the insights gathered from the gaming community. We will invite the audience to an open conversation about ways to further the boundaries of game history. The contribution comes in two levels: the design process to gather community insights as a design research method, and a deeper insight resulted from conducting the design process. This mode of research can be applied by game scholars for future research projects in a similar area of study.

BIO

Graduated from Griffith University with a University Medal for Bachelors of Engineering (Software Engineering with Advanced Studies) with Class I Honours, Xavier currently pursues his Doctor of Philosophy part-time at Design Lab, University of Sydney under the supervision of Martin Tomitsch and at Queensland University of Technology with Tomasz Bendarz. Xavier works full-time as an interactive visualization specialist at CSIRO, supporting scientific research with a hybrid software and interaction design expertise. In his free time, he runs a Melbourne-based meetup called Computer Graphics on the Web, and he plays a lot of video games.

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Adolescents as Game Designers: What can be Learned from Young People?

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ABSTRACT

This proposal is the result of an innovative experience that explores new educational methodologies in which the design of video games becomes an all-important activity during school hours. These cultural tools, present at Spanish schools in Madrid, have become platforms from which to generate new literacies needed to cope in the 21st century society. The main goal of this paper is to analyze the experiences of adolescents when designing video games in an innovative learning environment based on the concept of participatory culture. More specifically, we will look at the process of designing video games in a collaborative and interdisciplinary workshop.

Keywords

adolescents, design, literacy, participatory culture

INTRODUCTION

The specific goals are the following:

- To explore the game design process in the classroom looking for educational strategies supporting the acquisition of new literacies. Students become producers, not just receivers.
- To analyze how the process of designing video games helps raise awareness of their internal mechanics in a virtual world.

- To examine the interaction and scaffolding situations among the workshop participants during the video game creation process.

We will consider **the theoretical framework** that structure these specific objectives. First, new technologies offer users not only the chance to be consumers (Jenkins, Itō, & Boyd, 2015; Wenger, 2015) but also creators. Playing is not enough, now it is necessary to create games and become the sender of information and not only the receiver. Second, the development of literacies demands becoming aware of the language used (Gee, 2013). In this case, the discourse is related to two dimensions, the game rules and the drama behind the presentation of its contents (Fernández-Vara, 2015; Schell, 2008). From this perspective, we understand **game design as a meaning-building process immersed in a specific cultural context.** Finally, the design of video games also offers new forms of collaboration that challenges the relationships between individuals and the social world. The complexity of the design (Murray, 2012; Squire, 2012) in virtual worlds no doubt calls for interdisciplinary collaboration. Besides, traditional social roles can be exchanged in the classroom: those who were teachers now become apprentices, even though they can keep their role as guides in learning situations (Lacasa, 2013; Lacasa, Pernía, & Cortés, 2015).

Considering **the methodology**, his study is part of a broader project which involved a whole secondary education school. The students used Game Maker to design the games and we were participant observers, adopting an action research and ethnographical perspective (Pink, Horst, Hjorth, Lewis, & Tacchi, 2015). The workshop lasted fourteen sessions during school hours and was carried out with the collaboration of the research team, the teachers and the IT support team***. In this paper, we shall analyze the process followed in the workshop to understand the process itself and not only the final product of the video game design activity.***

The corpus of data consists of all video-recorded sessions, the photographs taken in each session, the recorded computer game and the video games designed; moreover, the researchers elaborated an interpretative summary of the session. Besides, once the workshop was over, we carried out interviews to the groups. The *analysis* was carried out with Transana software in a two-phase approach in order to understand the adolescents' experiences in the context in which they occurred. In the first phase, the recordings of each session were segmented and transcribed in order to analyze the conversations from a discourse analysis perspective to understand the meaning that this experience had for teenagers and researchers. During the second phase, we explored the video games designed by the students.

Focusing on **the results**, we can conclude that the design of video games in the classroom contributed to generate a multi-modal educational activity with 3 key moments:

- Phase 1 (from session #1 to session #3): The students worked in a large group analyzing commercial video games guided by the researchers and the teacher.
- Phase 2 (from session #4 to session #5): The students prepared their projects' pitches in small groups, which helped them define their games. Each student plays a different role as part of the design team (director, art, sound, design, programing). At a later stage, the games were shown in a joint session and discussed with the authors.

- Phase 3 (from session #6 to session #14): This phase was focused on the prototypes creation, working in small groups.

The first analyses of the sessions and the games designed by the students show the following preliminary results. *First,* designing a video game in the classroom contributes to the development of new literacies, different according to the role that the students play designing the game. *Second*, the analysis of the video games created reveals the representation that the adolescents have of the game, according to the role they play as part of the design team. The elements that constitute the game (sound, images, stories, graphics) start making sense once they become aware of the rules, the virtual environments in which they are created and the arguments to attract the player. *Third*, the context created and the people participating in the workshop allowed us to design a learning space based on the different roles played both by the students when creating the games and by the researchers while supporting and helping the kids. *The roles played by the kids helped them understand that computational design is not the only important thing in the game, the artistic dimension, the sound and the director's role are also essential.* The researchers-educators favored reflection and analysis in the first stage, while the experts in the design and the technical part of the game were key at the time of creating it.

The **discussion and conclusions** will focus on how the roles that the play during the process determine the game representation. We will considerer the results of other research exploring teens and adolescents' game design (Kafai & Peppler, 2012) and especially how students develop a critical approach to the games when they design them in formal context for learning.

BIO

Dr. Pilar Lacasa. Visiting Research Fellow at the The Digital Ethnography Research Centre (RMIT) andProfessor of Audiovisual Communication at the Faculty of Humanities at the University of Alcalá (Spain). She coordinates the *Word, Images, and Ideas. Research Group* http://uah-gipi.org since 1998. She loves video games, new emerging communication technologies and classic European and American movies. Her research work has been developed from a socio-cultural approach. Pilar is the author of *Learning in virtual and real worlds* (2013) edited by Palgrave and very recently *Adolescents and Social Networks*. *Create and Participate*, an Interactive & Creative Commons iBook. Twitter @placasa

Dr. Sara Cortés-Gómez is Assistant Professor in Audiovisual Communication at the University of Alcalá, Spain. Sara is interested the role of new technologies and video games as cultural tools aimed to develop new literacies in a global world. The main lines are focused on analyzing the creation of new educational spaces where new technologies become literacy practices and the construction of one's identity when children and youngsters play with video games or use social media. She has been a visiting scholar at LCMI (University of Luxembourg) and GLS at the University of Madison.

Dr. María Ruth Garcia-Pernía is Assistant Professor of Audiovisual Communication and Research Fellow at the University of Alcalá. She is a member of the research group Images, Words and Ideas. She works on video games, new technologies and audiovisual narratives. Her current research on the topic of computer games and narratives is supported by the Spanish Ministry of Culture and Education. She has been a visiting scholar at the Department of Media and Culture Studies - Media and Performance Studies, Utrecht University.

Dr. Laura Méndez Associate Professor of Psychology. She was a teacher at several different educational stages. She currently teaches Educational Psychology at the National Distance Learning University (UNED). She has always been interested in learning environments and the socio-cultural characteristics that define them. This interest has driven her to explore virtual environments and the new spaces of relationship and learning enabled by technology.

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We Still Make Games Here: A Sustainable Australian Videogames Industry?

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ABSTRACT
In this paper we describe and analyse the profound structural transformation of Australia's videogames industry post GFC. Drawing on fieldwork semi-structured interviews with Australian videogames developers we consider the developers self-understandings of these transformations and the associated precarity that they experience as they have adapted to the new conditions of cultural production. Finally we focus on analysis for actionable reform, including government policy interventions, which may contribute to fostering a viable and sustainable Australian video game development industry.

Keywords
Videogames Industry, Australian Videogames Industry, Cultures of Production.

INTRODUCTION
The current Senate Environment and Communications Committee (www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Video_game_industry) into the future of Australia's video game development industry provides a welcome opportunity to consider the factors that might contribute to a sustainable and thriving local development industry.

The statistics tell a stark story of destruction of Australia's videogame development industry. Of the 1431 reported employees in 2007, by mid-2012 only 581 remained, and reported game development income had dropped from $116.9 million to just $44.4 million. The industry's revenue streams were massively exposed to overseas work for hire. It accounted for about 80% of the industry's total income (ABS 2013).

By 2012, the majority of the bigger studios had closed, especially in Brisbane, and the industry had retreated to be largely concentrated in Victoria. According to the Games Developers Association of Australia (GDAA), the main advocacy and professional association for the industry, somewhere between 60-70% of industry workers had either moved to another industry or had left Australia for more resilient

industry locations and/or those better supported by government policy and programs (Banks and Cunningham 2016; also see Apperley and Golding 2015).

In 2014, the GDAA documented about 800 now working in the industry. But it does not dispute that the industry has experienced massive revenue loss. This is the recent history of an industry much reduced in terms of turnover and traditional employment, but one which has transformed its revenue base from 80% work for hire to 75% original IP – an almost complete reversal in the balance between business models (Reed, 2014). The GDAA believes the official figures underestimate the extent of active involvement in the industry, suggesting that there are many 'indies'which fall below the official statistician's radar. This reassertion of a vibrant development scene is characterised by a range of business models and diverse approaches to the craft of making games. But can this more diverse ecology that has emerged support a sustainable local videogames industry that can have resilience through future shake-ups and shocks?

Australian policy making and support for local videogames development has been intermittent, half-hearted and often poorly targeted seeking to fit games into the established cultural template that had been developed over decades for the arts, film and television (McCrea 2012). The most important recent initiative, Labor's $20 million Australian Interactive Games Fund, was cut in half by the incoming Liberal government in 2013.

Concrete policy and program commitments at the state level especially in Victoria through the Film Victoria Games Development Fund have supported local developers and seen the survival of a thriving indie scene concentrated in Melbourne.

How then can we build from the pool of developer talent and expertise and convert it into a future sustainable and viable Australian videogames development industry?

This paper is grounded in fieldwork research conducted from mid-2014 to early 2015 involving semi-structured interviews with 22 developers from 17 development studios, and with Tony Reed, President of the Australian Games Developers Association (GDAA). Many of the developers interviewed described the distinct challenges that they confront as Australian-based developers seeking to compete in a rapidly changing global market. They invariably commented on their distance from key industry scenes (especially the USA) and the uneven and uncertain policy support they receive, especially at the Federal government level. In describing the rejuvenated Australian development scene none of the developers were especially panglossian or naïve about the challenges and precarity confronting Australian based developers.

Many of the Australian developers we interviewed commented on the favorable regulatory and taxation frameworks enjoyed by developers in other countries. They proposed that lack of similar frameworks and schemes in Australia meant that they faced further competitive constraints in an already turbulent and rapidly changing markets. Developers such as Wicked Witch in Melbourne, Defiant and Halfbrick in Brisbane, indicated their motivation to develop sustainable businesses to employ Australian developers. Many of the developers interviewed, including leading developers such as Morgan Jaffit (Defiant Development Brisbane) and Trent Kusters (League of Geeks, Melbourne) spoke of the benefits they enjoyed from the government support they had received. Indeed they commented that successful recent

games releases such as Defiant's *Hand of Fate* and League of Geek's *Armello* would not have been possible without this support at key junctures. But they also spoke directly to the challenge of converting these opportunities into sustainable and viable long-term enterprises that would provide good jobs and opportunities for Australia's emerging game developer talent.

A sustainable future for Australia's videogames industry is one that governments, industry representatives, researchers, as well as those who are *still* making games, can work on together. In this paper we draw on the fieldwork research with Australian videogames developers to consider their understanding of the conditions of cultural production that both constrain and enable this future.

BIO

John Banks is an Associate Professor of Media and Communications in the Creative Industries Faculty, Queensland University of Technology. He researches co-creativity, media industries cultures of production, labor and social media in the creative industries. He has a special interest in videogames developer organizational and studio workplace cultures. His most recent book is *Co-creating Videogames* (Bloomsbury Academic, 2013).

Stuart Cunningham is Distinguished Professor of Media and Communications, Queensland University of Technology. His most recent books are *Digital Disruption: Cinema Moves Online* (edited with Dina Iordanova, 2012), *Key Concepts in Creative Industries* (with John Hartley, Jason Potts, Terry Flew, John Banks and Michael Keane, 2013), *Hidden Innovation: Policy, Industry and the Creative Sector* (2013), *Screen Distribution and the New King Kongs of the Online World* (with Jon Silver, 2013), *The Media and Communications in Australia* (4th ed., with Sue Turnbull, 2014) and *Media Economics* (2015, with Terry Flew and Adam Swift).

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Indigenous Depictions in Strategy Games: An Argument for Flavour

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ABSTRACT

Video games have often depicted clashes in history between western forces and indigenous inhabitants; typically conveying or favouring the perspective and history of the West. The presentation will argue for greater inclusion of indigenous history in video games because of the flavour and entertainment value that the history adds to the game, specifically in the context of historical strategy game. Games with substantial indigenous content have the potential to be used as tools for educating an audience on the different and diverse indigenous histories of the world and their past interactions with western nations.

Keywords

Indigenous, Grand Strategy, History, Education

INTRODUCTION

Video games have often depicted clashes in history between western forces and indigenous inhabitants; typically conveying or favouring the perspective and history of the West. The presentation will argue for greater inclusion of indigenous history in video games because of the flavour and entertainment value that the history adds to the game, specifically in the context of historical strategy game. Games with substantial indigenous content have the potential to be used as tools for educating an audience on the different and diverse indigenous histories of the world and their past interactions with western nations.

Amongst scholars there is often much discussion about the idea of one historical narrative or a universal discourse of history (Smith 1999: 30 - 31). For discussions involving colonialism, this is usually depicted from a Western perspective. Uricchio believes this also rings true in video games with history usually only reflecting a singular western narrative as opposed to histories told from many perspectives (Uricchio 2005: 335-336). Bembeneck builds on this idea and notes that in Roman society the term "barbarian" was used to describe those who were not Roman and highlights the notion of “Self” and “Others” (2013: 81-82). She illustrates how this Roman view of non-romans has permeated into games, which shows the Others/barbarians as people that have limited potential and as a blanket culture with no or little diversity. We can see a similar notion in the depiction of some of indigenous peoples in *Civilisation IV*, as the Native American and *Civilisation V*, as Polynesia, which are represented as blanket cultures with several peoples and cultures being grouped into one Civilisation (Firaxis Games 2005, Firaxis Games 2010). The game sees them as one homogenous nation or people rather than being represented as nations by themselves with their own unique history and culture. We should include and better depict the world’s indigenous people in video games, not only because it is the ‘right thing to do’ or because of a more

socially progressive notion, but rather it makes the game more exciting with more flavor and immersion. To have a blanket culture or nation only impedes what could otherwise be a more colourful, fuller and historically accurate experience.

Grand Strategy games, such as *Europa Universalis IV* (EU4), express similar western-centric themes like the *Civilisation* series, however in contrast to other strategy games, the history of some indigenous people are explored and told more thoroughly (Paradox Development Studio 2013). EU4 has unique indigenous-specific game mechanics that reflect the previous nomadic lifestyle of some Native American tribes, and the religious and apocalyptic aspects of the Aztec Empire (Paradox Development Studio 2013, Paradox Development Studio 2015). Moreover, historical events that affect indigenous people are also expressed in the form of pop-up boxes. However, even in EU4, models and depictions of certain indigenous cultures (such as indigenous Australians or the Maori) are not fully represented or have generic/incorrect cultural depictions that break the immersion of the game. A way to overcome this issue is by creating mods for the game such as the Indigenous People of Oceania mod which introduces many pacific nations, histories and religions to the base EU4 game (Cosmosis7 2016). Inclusion of these nations and cultures provides opportunities to learn about histories we would not have otherwise known about.

BIO

Rhett Loban is an PhD student at the University of New South Wales in Sydney. His PhD thesis focuses on how Grand Strategy games could be used to assist in formal adult education.

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New-Wave Australiana and Making A Game About Australia

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ABSTRACT

Australiana is a term that is used to represent a collection of cultural artefacts with Australian origin,which became popular during the early 1990's. New-Wave Australiana is an emerging cultural trend which I will examine through looking at the external influences and the effects it has had on a variety of different mediums, including my experiences of making a game.

There are a variety of young local artists, who are focusing on producing Australian specific content, and through their work, they paint a picture of the type of world they live in. The focus of this work is giving the viewer an honest lens of contemporary Australia through the perception created by the artist. This is often idealistic, humorous, sometimes melancholic and very self-aware.

This work shows an understanding of Australia's rough history and attempts to find a positive understanding in national pride and what it means to be Australian. By focusing on topics and content that is specific to the artist, it steps away from what has been traditionally considered 'Australian', whilst also being relatable to its audience.

The recent resurgence of 90's aesthetic has helped in giving the New-Wave Autraliana trend traction. This can be seen with the successes of Courtney Barnett, *Black Comedy* on ABC, and the creation of Ian McLarthy's Ned Kelly mod for *Vertex Meadow*. Whilst a lot of what is being produced could be seen as a throw-back to Australia's cultural cringe, this trend is also a reaction to recent political and social changes.

The main focus of this presentation will be on drawing parallels between Australia's history and the use of iconography, nationalism, racism and symbolism. It will focus
on how New-Wave Australiana is being communicated by artists and how these elements have been appropriated in an attempt to subvert an audience's expectations.
By examining my recent work on a game titled *Paperbark*, I will deconstruct how this trend and my own experiences have influenced my design decisions and the types of considerations required when making a game about contemporary Australia.

Keywords

Australiana, Game Design, Cultural Cringe

BIO

Terry Burdak is a Melbourne based Graphic Designer, Printer and Game Maker. He has contributed design work for *Global Game Jam Melbourne*, *Freeplay Festival* and *RMIT*. He currently works with local Musicians designing and printing Album covers and promotional materials. He is currently working on a video game titled *Paperbark* that is set in the Victorian bush, which tells a typical story of life in an Australian Summer.

Time and Venue

The DiGRA Australia 2016 Queensland Symposium will be held on Saturday 2 April at This Must Be The Place, a gallery space in the heart of Fortitude Valley.

The address is Shop 8, Bakery Lane, 694 Ann Street. It is a 5-10 minute walk from the Fortitude Valley train station, or a short taxi ride from the CBD. It is also a pleasant 20-30 minute walk from the CBD, if you are that way inclined.

The day will start promptly at 10am. There are numerous cafes with good coffee practically within arm's reach of the venue.

Getting to and around Brisbane

Travel to and from Brisbane airport is relatively easy. The Airtrain stops at both Domestic and International Terminals before travelling into Brisbane Central via the Fortitude Valley station. A one-way ticket costs $17.50.

Between the CBD and Fortitude Valley, the train is the most convenient means of transport. The 60 bus also travels regularly between the two along Adelaide Street in the City (towards the Valley) and along Ann street in the Valley (towards the City). Google Maps is able to provide you directions in Brisbane with public transport information, and it is incredibly convenient.

Brisbane public transport uses ‘Go Cards’ that can be purchased at the airport Airtrain station and at most convenience stores. You can also buy paper tickets per trip, but these are much more expensive. Please note that student cards from other states are not eligible for concession travel.