The Limerence Project: Exploring the Affordances of Digital Media to Shape Narrative Experiences for Readerly Interactions

By Marianna Shek

Bachelor of Animation (Hons)

Queensland College of Art

Arts, Education and Law

Griffith University

Submitted in partial fulfilment of the requirements of the degree of

Doctor of Philosophy

July 2016

ABSTRACT

This research examines how writers can exploit the affordances of digital media to shape narrative experiences towards readerly interactions; that is, activities and behaviours distinct to literacy that give pleasure to the reader. Creating digital literature requires a multi-disciplinary approach, as it borrows language and design tools from games, film, visual arts, music, and creative writing. Despite being placed at this artistic confluence, works of digital literature are usually designed and critiqued based on gaming interactivity (Uglow 2014). My research seeks to address this imbalance by creating a story application for the tablet called *Limerence*. In producing *Limerence*, I propose a new framework to design digital literature: the transmedia triangle.

In this exegesis, I draw on the work of Marie-Laure Ryan to classify how digital narratives can present interactivity, analysing three case studies through a transmedial narratology framework: *Gone Home* (2013), *Journey* (2012), and *Device 6* (2013). From these case studies, I have furthered my understanding of readerly interactions.

I then explored these concepts further through the creation of two minor studio projects. The first is a game-novel, a classic pathfinding adventure for middle-grade readers, titled *Choose Your Own Death*. The second is a community-based arts project called *Player One/Player Two*, where I acted as writing editor and co-producer. This project was produced by the Edge, State Library of Queensland, and was exhibited at the In Real Life Festival (2015). The processes of developing these early studio works honed my skills to create my major research output *Limerence*. This story application presents themes of voyeurism, love, and friendship facilitated through social media platforms. Its creation occurred in three iterations, each version being exhibited and refined based on audience feedback. This led to the final identification of three distinct types of readerly interactions present in my work: controlling rhythm through digital tmesis, solving multimodal riddles, and exploring spatial–temporal framing.

In addition, as part of my studio practice, I conducted a series of interviews with practitioners in the fields of games, writing, and transmedia. Their insights combined with my studio output led to the development of the transmedia triangle. This model realigns digital narratives to consider gaming, readerly, and filmic interactions equally. It offers a new approach for digital writers to shift away from hybrid reading-gaming interactivity and to focus instead on the pleasure of the reader when designing for interactivity.

Statement of Originality

I declare that this work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Marianna Shek

15/07/2016

TABLE OF CONTENTS

LIST OF FIGURES

Unless otherwise noted, all works are by Marianna Shek.

ACKNOWLEDGEMENTS

I would not have been able to complete this PhD without the support, wisdom and intellect of those around me. First and foremost, I would like to thank my supervisors Associate Professor Andi Spark and Dr Sally Breen. I left every supervisory meeting with a sense of wonder at how much more there is to learn.

To James Warr, for everything from ensuring I performed my daily ablutions to tirelessly programming my *Limerence* application.

To my friends and colleagues at Griffith Film School—Gordon Moyes, Louise Harvey, Sue Swinburne, Jason Nelson, Hugh Burton, Jamie Lack, Darren Fisher, Leila Honari and Peter Moyes—for all the advice, debates and encouragement over the arduous years.

Finally, thanks to Evie Franzidis who pulled in a massive editing effort to meet my deadline.

GLOSSARY OF TERMS

Digital literature: Literary works that take advantage of the capabilities and contexts provided by the stand-alone or networked computer. It has also been described as works that are "born digital" to discriminate it from books that are purely reproduced on an electronic reader and does not add a layer of meaning-making to the reading process (Electronic Literature Organisation n.d). Refers to the same cultural phenomenon as electronic literature but the term digital literature appears to be in common usage

Electronic literature: See Digital Literature

Freytag's pyramid: Gustav Freytag's theory of dramatic structure, also referred to as a dramatic arc, includes exposition, rising action, climax, falling action and denouement.

Game genres: Video games have different genres, some of which are as follows:

> **Platformer game**: the player guides an avatar to navigate between suspended platforms, ledges, staircases or other physical objects to progress the game. It is typically depicted as a scrolling horizontal or vertical game screen; e.g.,Super Mario Bros
>
> **Fighting game**: the player controls an avatar and engages with close combat with an opponent; e.g., *Streetfighter*
>
> **Simulation game**: designed to simulate aspects of reality; e.g., *SimCity*

Interactive onion: Categorisation system for interactive stories devised by Marie-Laure Ryan (2011). Interactivity in digital texts is like an onion with different layers of skin. Interactive text that concerns story presentation sit within the outer layer of the onion design, while text that penetrates the core of the story reaches the inner layers of the onion (Ryan 2011, 37).

Intertextuality: Refers to the presence of a text A in a text B to provide additional meaning to by the comparison between the texts. Text A and B can both be literary texts or one can be a social or cultural text chosen to shape the reader's interpretation of the literary text. For example, the *Great Gatsby* alludes to works by Benjamin Franklin, another story of the 'American dream'. Forms of intertextuality include parody, allusion, commentary and pastiche (Moraru 2005, 256–61).

Intermediality: Refers to texts of a given medium that send tendrils towards other media. For example, a cross-medial adapation of film to video game, references within the text to other media objects, a literary text that references filmic technique such as a montage, the musicalisation of literature, or ekphrasis (Ryan 2014, 9).

Multimodality: The use of several semiotic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined (Kress 2003, 20).

Non-linear narrative structures: A narrative technique where events are portrayed out of chronological order. As opposed to linear storytelling where narrative follows a pattern of causality eg A happened, then B happened, then C happened, non-linear storytelling can present story outside this logical, chronological sequence.

> **Embedded narrative**: The narrative content is pre-generated by the game designer who strategically plants the bones of the story in the space (the nodes) and leads the players to find the information (Jenkins 2004).
>
> **Emergent narrative (game)**: A narrative arises from the player's interaction with the game world. The specifics of the storyline are unknown to the game designer beforehand; e.g., *The Sims*.
>
> **Maze**: The maze can be a labyrinth or multicursal. The labyrinth is a unicursal path that winds towards a centre but there is no wrong turn. The multicursal maze has many paths filled with false leads and dead ends but there is only one correct unicursal path (Doob 1992).
>
> **Network**: Nodes loop around in a cyclical structure so there are several pathways to get to the same node.
>
> **Open world game**: Game where players move freely through a virtual world. While there is considerable freedom in the objectives of the game—players can choose to explore the space, collect artefacts, complete pre-defined tasks—there is still some form of structured events that curate the experience.
>
> **Sandbox game**: Sometimes used interchangeably with 'open world game structure'; however, sandbox stresses playful creativity on the part of the player. For example, *Minecraft* is a sandbox game because the player builds freely (within the game engine limitation) but there are no structured events.
>
> **Sea anemone**: Each node can expand along multiple pathways that do not necessarily converge at a later point. It is suitable for narrative frameworks such as a searchable database.

Participatory dichotomy: Categorisation system devised by Marie-Laure Ryan (2006) for forms of interactivity based on user's relation to the virtual world. It is adapted from Espen Aarseth's typology of user functions in cybertext. Ryan proposes two binary pairings:

> **Exploratory/Ontological mode**

In exploratory mode, users navigate the system but their actions do not alter the plot. In ontological mode, the actions of the user drive the narrative onto forking paths.

Internal/External mode
In internal mode, users projects themselves as members of a virtual world by identifying with an avatar in first person or third person perspective. In external mode, users are situated outside the virtual world and play as a 'god-like' figure navigating the world from above.

Transmedia storytelling: Relates to stories that unfold across multiple media platforms, with each new text making a distinctive and valuable contribution to the whole. In the ideal form, each medium does what it does best; for example, a story may be introduced in a film, expanded through novels and television and game play (Jenkins 2006, 95–96).

Transliteracy/Transliterate: The ability to read, write, and interact across a range of platforms, tools and media, from signing and orality through handwriting, print, TV, radio and films, to digital social networks (Thomas et al. 2007).

Chapter 1: Introduction

This research project stems from a desire to explore my evolving identity as a transliterate writer and reader in the digital age. In the past decade, technology-driven changes in entertainment media have facilitated new forms of multimodal storytelling. It has becoming increasingly common for readers to perform outside the normative readerly tasks expected to interpret digital narratives. The first digital story I read was Kate Pullinger's *Inanimate Alice* (2005), a web-based work that incorporates motion graphics, music, games and narrative simultaneously. At the time, I felt that this seminal work heralded the identity of the digital reader—someone who could translate the juxtaposition of various text systems to make meaningful stories. As an undergraduate, I trained as an animator but moved towards script and novel writing. Yet the power of visual storytelling remains a strong driver in my practice as I consistently seek ways to conflate the writerly aspects through language-based applications. I was excited about the prospects of electronic literature; however, when I further investigated it, I found that many of the works were inaccessible due to their experimental nature such as hypertext or kinetic poetry. Other pieces were technologically focused gimmicks that overshadowed the essence of the narrative. I wondered in awe at the technological feat of these digital works, but ultimately I was left feeling that the story had no resonance. The readerly aspects were hopelessly tangled in the work's ergodic execution. I developed the major studio project *Limerence* out of frustration; a desire to prove that the transposition of readerly forms into a digital format could maintain an essential 'bookishness'. Specifically, my research question is as follows:

How can writers utilise the affordances of digital media to shape narrative experiences for readerly interactions?

In designing a story application for the tablet, I aim to explore how the digital writer can exploit the affordances of the tablet platform to present non-linear narrative structures that resonate with readers. *Limerence* is a story about love, friendship, and social connections in cyberspace. The term 'Limerence' was coined by psychologist Dorothy Tennov in 1979 to describe a compulsive addiction involving intrusive and obsessive

thoughts, feelings, or behaviours towards another person and an acute longing for emotional reciprocation. The story application *Limerence* explores how this addiction is played out online. It follows the life of Clarice Mahon, a twenty-something 'singleton' who has just secured her dream job in a photography studio. She is romantically entangled with her friend Joe Brody but cannot convince him to leave his wife. In an effort to re-organise her life, she hires (and then becomes obsessed with) her life coach Richard Wiley. When she finds out that Wiley has also deceived her, she uses social media to exact vengeance. *Limerence* explores themes of voyeurism, the evolving nature of human connections, and the curation of social realities in online spaces. The story takes place over websites, blogs, Instant Messenger, and a Facebook-type application to play with the vernacular and structure of virtual conversations. Clarice is an unreliable narrator; she curates her public face for a particular audience while her private messages reveal a different reality. More significantly, *Limerence* is a commentary on the way our culture digests media—the way that media has been embedded into our daily lives, our guilty, voyeuristic pleasure, and our addiction to being online (Cash et al. 2012).

This exegesis is divided into two parts. The initial enquiry that catalysed my PhD project was whether the affordances of digital media could present non-linear narrative structures for readerly interactions. The first part (Chapters 1–4) provides background information on narrative structures and forms, drawing on existing scholarship to contextualise my research question. The second part (Chapters 5–9) documents the evolution of this research topic through the practical components of the project; that is, my studio work, the development of the *Limerence* application, and my subsequent findings on the digital writing and reading experience. To complete this research and visual outcome, I have employed a practice-based methodology consisting of a three-pronged approach: studio experiments, practitioner interviews, and critical reflection. The creative artefact is the basis for the contribution to new knowledge within practice-based research; as such, the studio experiments make up the bulk of my work. By triangulating the enquiry into three components, I have optimised strategies to probe theoretical, cultural, and technical aspects of the research question in order to gain new insights.

I will briefly outline the chapters of this exegesis here.

Chapter 2 outlines the historical context of digital literature. Due to the multi-disciplinary nature of this practice, the terminologies, theories and applications are woven together from the fields of game, film, and literature. My supervisors Dr Andi Spark and Dr Sally Breen approached my research from their respective expertise in animation and creative writing, often demonstrating through their feedback how different disciplines apply similar techniques to storytelling. Furthermore, I was often met with conflicting advice and opinions regarding how to approach the creative development pipeline when discussing my research among work colleagues within the Animation and Games departments at Griffith Film School. The initial idea for the transmedia triangle model is a direct result of my numerous departmental debates. This is hardly surprising, as multimodality is a natural extension of media convergence. However, it appears that many practitioners are still perplexed as to how to approach design when combining moving images, sound, written language, and games. Often, one mode dominates while the expressive range of other modes is not done justice. This chapter discusses commonality between the terminologies and issues arising from the convergence of media. It evaluates the dynamic tension between terms such as 'transmedia', 'digital literature', and 'interactive narratives', and highlights the need to develop an unbiased framework when evaluating these works.

Chapter 3 discusses the transmedial narratology approach I took to my practice-based research. Transmedia narratology is a paradigm that does not privilege any one form but considers the relationship between form and media as essential in the meaning-making process. Through this lens, I explore the concept of digital affordances proposed by media theorists such as Lev Manovich, Marie-Laure Ryan, and Janet Murray, and I describe the adaptation of non-linear narrative structures in the digital space. Ryan's interactive onion and participatory dichotomy (terms I define in this chapter) become a taxonomical foundation for understanding how media affordances can manipulate these non-linear narrative structures. Chapter 4 is a narrative analysis of digital narratives, where I use Ryan's user binary classification system and interactive onion to evaluate technical aspects of story structure and interactivity. The works were carefully selected

based upon recommendations from my supervisors, notable scholars, and practitioners in the fields of transmedia, games, films, and literature, as well as reviews from reputable sites such as *The Literary Platform*, *Gamasutra*, and *Rock Paper.* Simogo's *Device 6* (2013), Fullbright Company's *Gone Home* (2013) and ThatGameCompany's *Journey* (2012) are presented as case studies to examine in depth how works can be designed for readerly impact. I show how *Device 6* (2013) elaborates on comic theorist Scott McCloud's 'infinite canvas' metaphor by considering the pleasure of the reader in its spatial design. The extensive analysis of Ryan's interactive onion and McCloud's infinite canvas sets the direction for my practical experiments in exploring readerly experiences in the digital space.

Having concluded the first part of the exegesis, in the second part, I describe a practice-based methodology as being the most logical choice for this research as I consider myself primarily a creative practitioner, who realises answers through my art. As creative arts researcher Linda Candy (2006) asserts, "Practice based research is an original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice." In developing my major studio project *Limerence*, I explored two non-linear narrative structures in digital literature. These precursor projects form the basis of Chapter 6. The first project is a classical path-finding adventure novella for young readers titled *Choose Your Own Death*; the second is an exhibition installation with audio story called *Player One/Player Two*.

Choose Your Own Death is an adaptation of a physical book to a tablet application. It highlights basic issues with user design interface and moves my research away from gamification techniques. The second project *Player One/Player Two* consists of twelve work stations installed in an exhibition space that each feature visual or interactive gaming elements as well as an audio story component. The audience meanders between the stations in any order, forming a physical enactment of an open world narrative structure. This project provides insight into how physical space can be translated virtually. These initial studio experiments narrowed my scope to focus on how narratives can be shaped using the spatial–temporal affordance of digital media.

Chapter 7 documents three iterative cycles of the *Limerence* application. The first iteration was shortlisted for the 2014 New Media Writing Prize at Bournemouth University, UK. The second version was exhibited in 2015 at the Mix Bath Digital Conference, UK, and the exhibition at The Edge, State Library of Queensland, Brisbane. This provided a platform to refine and further test the design for its third iteration. In the process of completing the *Limerence* project, I identified several areas in design where readerly interactions can be implemented, which I detail in Chapter 8: digital tmesis, multimodal riddles, and infinite canvas. Digital tmesis is an extension of Barthes' reader-response theory of tmesis: the pacing of stories generated by the reader as opposed to the writer. Multimodal riddles move away from the type of lateral puzzle-solving that is prevalent in game design towards a literary puzzle-solving where modes are juxtaposed to form a mixed semiotic system that requires a high degree of interpretation from the reader. The infinite canvas is a metaphor borrowed from comic book theorist Scott McCloud (2000), which urges designers to replace the restrictive process of fitting the page layout onto a screen with the infinite possibility of an endless canvas framed by a screen. This forms the foundation for how the tablet device can harness the spatial–temporal dimension of the story experience.

In addition to identifying these readerly interactions, the process of creating my studio work articulates a new approach to designing digital literature. Transmedial narratology serves as an appropriate framework that takes into consideration the expressive powers of all forms while acknowledging media in the creation rather than just the transmission of story. However, practitioners, critics and audiences still lean towards interactivity as a gauge to assess works, in particularly the types of interactivity associated with games. I propose a new model, 'the transmedia triangle', to re-align interactivity to consider gaming, readerly and filmic interactions equally. For digital writers, the interactive focus could be on digital tmesis, placing the writer as conductor of the experience or it could focus on the power of multimodal riddles, combining the visual aspects with the writerly. Due to time and cost constraints, I do not attempt to create a comprehensive list of all the types of readerly interactions that can exploit the affordances of digital media; rather, I

choose to focus exclusively on non-linear narratives. However, this does not mean that linear narratives have no place in the digital realm. Likewise, I briefly mention filmic/ visual interactivities in my transmedia triangle, but have excluded any real, in-depth discussion in this area for the same reason.

My research contributes to a growing body of work that seeks to evolve the specific field of digital writing so that it does not become a hybrid of or subsumed by the related disciplines of games or film. While it is inevitable that the convergence of media will tighten the gaps between these creative practices, it is worthwhile exploring these liminal spaces instead of relying on the process to occur organically. What techniques and structures can be adopted or manipulated from various modes to suit a readerly interaction so that digital literature finds its own aesthetic form in the digital age? To explore this research area thoroughly requires a broader understanding of how media convergence has operated throughout history, and I turn to this in the following chapter.

Chapter 2: The Convergence of Media

Communication theorist Henry Jenkins (2006, 2) defines the convergence of media as "the flow of content across multiple media platforms, the cooperation between multiple media industries and the migratory behaviour of media audiences who would go almost anywhere in search of the kinds of entertainment experiences they want". The convergence of media is not a new phenomenon. In the 1800s, the Lumiere Brothers patented the motion picture camera that led to the convergence of photography, music, and theatre to create modern cinema. In the 1920s, the radio was broadcast into people's homes. It was originally utilised to disseminate news but also contributed to the growing industry of mass entertainment in the form of popular music concerts and radio plays. Thirty years later, television superseded radio as the dominant form of mass media, communication and entertainment expanding on the episodic and serial storytelling forms. Victorian-era parlour games around the fire evolved to more sophisticated board games in the twentieth century for entertainment. Board games continued to hold a relatively small place in mass media forms of entertainment until games moved to the screen in 1972, when Atari Inc. launched the arcade game *Pong* heralding the rise of interactive media.

Jenkins (2006, 3) asserts that "convergence represents a cultural shift as consumers are encouraged to seek out new information and make connections among dispersed media content." Yet, past experiences show that when media converges, the cultural shift to adopt the new form is slow and often met with resistance and trepidation. In 1992, *The New York Times* published an article titled "The End of Books" (Coover 1992) that suggested that through the rise of hypertext, avant-garde computer hackers and cyberpunks would result in the death of books. Jenkins (2006, 14) dismisses the cultural fear that convergence means new media will displace old media: "A medium's content may shift, its audience may change and its social status may rise and fall ... but once a medium establishes itself as satisfying some core human demand, it continues to function within the larger system of communication options." A recent survey from Pew Research Centre (2013) showed that although e-readers were on the rise, parents valued print books more than their electronic counterparts for reading to children. It could be the case that

parents assign more legitimacy to the familiar form they grew up with. However, a study presented at the 2016 ACM Conference on Human Factors in Computing Systems (CHI 2016) revealed distinct differences in how readers process information between reading on digital and non-digital platforms. The study found that subjects who read textual information on a digital mobile device were able to recall concrete details but those who read the same information on a physical print-out performed better on abstract interpretation and problem-solving relating to the text (Flanagan and Kaufman 2016). Another randomised study testing school children in Norway found that students who had read texts in print scored significantly higher on reading comprehension tests that those who had read the texts digitally (Mangen, Walgermo, Broonick 2012). These studies suggest that reading for education versus pleasure may become a driver for the shifting preference between physical and electronic books.

The Buggles' iconic song *Video Killed the Radio Star* (1979), in which songwriters Downes, Horn and Woolley predicted the impact of the new video medium on future musicians who would have built their career on the radio, was appropriately the first music video broadcast on the new MTV channel in 1981. However, The Buggles' prediction was incorrect: television may have replaced the radio at the time as the dominant mainstream, storytelling form but this has freed up the radio to become focused on music distribution. Furthermore, Internet technology has resurrected audio narratives in the form of podcasts spearheaded by broadcasters such as This American Life and Radiolab. Although further research is required to understand cognitive learning between print and electronic text, preliminary data suggest that the electronic book will not replace its physical counterpart, but content, function, and audience will continue to shift until an equilibrium is reached between the two mediums.

Throughout history, art forms and media have been intrinsically linked. Art forms evolve because media have been combined, separated and re-mixed, but it is short-sighted to view this as a one-way transaction as it downplays the importance of the role of media. Media theorist Marshall McLuhan (2001) summed up the significance of media with his famous aphorism "The medium is the message". This does not mean that content is unimportant but that the power of the media on society is profound. In relation to the

railway, McLuhan argues that on a macro level it was unimportant whether trains carried people, food, or fuel. What was significant was the way the railway changed people's ideas and their relations and interactions by closing distances and changing patterns of leisure activities. Put another way, historian Lisa Gitelman (2008, 7) defines media firstly as a technological delivery system that enables communication but, equally importantly, as a set of social or cultural practices that has grown up around that technology.

Just as audiences need to learn the rules of engaging with new media art forms through trial and error, so do creators who design content for new delivery platforms. When new media give rise to new art forms, there is a period of self-consciousness. These emerging art forms are innovative and experimental but are also deeply rooted in the past, borrowing from what came before (Jenkins, Thorburn and Sewell 2003). For example, early films imitated the staging of theatre. Georges Méliès' early 'trick' films drew on the special effects of a theatrical magic show and did not contain significant plot. His films such as *The Vanishing Lady* (1896) and *The Haunted Castle* (1897) consisted of a single long, stationary shot, staged at eye level as if Méliès was seeing exactly what the audience in a theatre would see. The actors borrowed the gestures and movement of stage magicians building up and then revealing the trick. Méliès moved towards developing cinematic language with his famous work *Le Voyage dans la Lune* (1902). Unlike his earlier works, this film has a complicated plot about a group of astronomers, who fly to the moon, explore the surface, fight aliens and return to Earth victorious. This plot is revealed by using cross-dissolve to segue between different scenes. Edwin Porter further pioneered editing with his body of works, the most famous of which is *The Great Train Robbery* (1903). By cutting up film footage and re-arranging the order, he could show that events were happening at different locations but at the same time. Prior to this, the Lumiere Brothers' cinematograph recorded, processed, and projected the film. The brothers were more interested in the spectacle of the new technology than in its potential as a moving image art form. Louis Lumiere infamously declared in an unsourced anecdote that 'the cinema is an invention without a future.' When the brothers first screened the *Arrival of a Train at La Ciotat* (1895) in a theatre, the audience apparently panicked at the sight of the cinematographic train dashing towards the crowd and ran out

of the room thinking a real train was approaching (Karasek 1994). This reaction highlights that although the Lumiere Brothers' vision for the cinematograph was to showcase its technological powers, they had underestimated the power of the machine for storytelling. Our cultural sense to wonder at novel objects before questioning their usefulness persists in all new media forms (Gunning 2008, 39–43). In 2014, MIT Media Lab designed a sensory physical book based on the novel *The Girl That Was Plugged In* by James Tiptree. Their concept was to introduce a new level of immersion for readers through touch and temperature. The prototype had LED lights embedded in the cover that changed colour to signify mood, as well as a sensory vest worn by the reader to vibrate and change temperature and pressure to increase heart rate during tense moments in the story. In a review, journalist Carolyn Cox (2014) criticised it as detracting from the reading experience: "Scientists say sensory fiction will increase immersion in the story and hopefully slow the exodus from printed books to e-readers, but I'm just glad that pesky imagination part has finally been taken out of it!" Cox's flippant assessment is that Media Lab's sensory book may be innovative from a technological standpoint, but the design is flawed because it ignores that when readers use their mind's eye to fill in the gaps between the text, they are emotionally and physically moved by the impact of the words. This became a focal point for the development of my research enquiry into readerly pleasures.

From the Lumiere Brothers to MIT Media Lab, designers who use new technology create with the primary intention to instil marvel at its 'magical' abilities. The next stage is to experiment with form often borrowing from old technology such as the appropriation of theatre to early cinema. This often results in self-conscious works exacerbated by our cultural disconnect with the new art form. As resistance and fear dissolves, audiences become empowered finding new ways to engage with the media and to incorporate it into their daily lives. Transmedia producer Mike Jones (pers. comm., Sept 2014) from Portal Entertainment asserts that the "audience will always come back to the story even if it means mastering a new technology platform". Furthermore, the threat of extinction of old media has caused resurgence for the nostalgic; a recoil effect driving artists to return to the physical formats as creative anachronisms. For example, Quentin Tarantino shot his

film *The Hateful Eight* (2015) on the classic 70mm film and the resurgence in the popularity of arcade games, physical books, and vinyl records as *objets d'art* to be displayed in private collections, entertainment venues and museums supports this theory. Storytellers have always weathered a shifting landscape—traditional versus new forms, analogue versus digital media. My research focuses on the current transitory period where artists are testing the balance between media and story, where tools and language from various artistic disciplines are appropriated, and where audiences are finding new cultural meaning from these experiences. In this temporal phase, various terminologies have emerged describing similar forms. This next section dissects the key terms 'transmedia', 'multi-platform', 'interactive narratives' and 'digital literature' as temporary placeholder terms that describe a convergent art practice.

2.1 Is it Transmedia?

In the past thirty years, the rise of the machine has catalysed the convergence of media. Henry Jenkins used the term 'transmedia' in 2001 to describe "the development of content across multiple channels. As producers more fully exploit organic convergence, storytellers will use each channel to communicate different kinds and levels of narrative information, using each medium to do what it does best." In the ideal form, the storytelling potential of each medium should be considered so that that a story might be introduced in a film, side-characters can be explored through television, novels, or comics, and its world might be experienced through game play (Jenkins 2003). As the commercial value of transmedia became evident to the entertainment industry, the boundaries between transmedia and franchising became blurred, but Jenkins (2007; 2011) maintains that branding is only one component of this storytelling form.

The resurgence of the Lego brand in the mid-2000s is an exemplar of how companies can capitalise on the power of transmedia. Since the 1980s, there has been a small community of fan-made 'brick films'. Australian filmmaker Lindsay Fleay made one of the earliest sequences of works, titled *The Magic Portal* (1985), with funding from Australian Film Commission. Lego referenced this significant work in their widely popular *The Lego Movie* (2014) when the character Emmet jumps into the abyss near Lord Business' tower and passes through 'The Magic Portal' tube. The momentum of fan-made brick flicks

grew with online communities such as Brickfilms, Brickflicks, and My Lego Network. The toy manufacturer expanded on their empire, with franchises such as Lego Star Wars and Bionicles producing toys, games and television tie-ins. While there is justifiable concern from parents and advocacy groups such as the Australian Communications and Media Authority (ACMA) that television programming for children should remain focused on quality entertainment and education, restricting the advertisements of tie-in merchandise, the Lego example demonstrates how toys can be an integral part of children's development through play. Game designer Jesse Schell asserts that toys can provide a gateway to story, fuelling children's imagination within the story universe:

> In May of 1977, the film *Star Wars* premiered... the toys were a tremendous success...Some people believe that selling this kind of merchandise is just a way to cash in on hype and that ultimately, it cheapens a film... But for most children... they were a gateway into the *Star Wars* universe. For if you observed children playing with them, you would notice something very strange. Seldom would they act out scenes from the movie... instead, they would make up all kinds of stories featuring these characters. (Schell 2008, 336)

Perhaps, the debate of what is meaningful transmedia is best summed up by experience designer Steve Peters in this tongue-in-cheek flowchart:

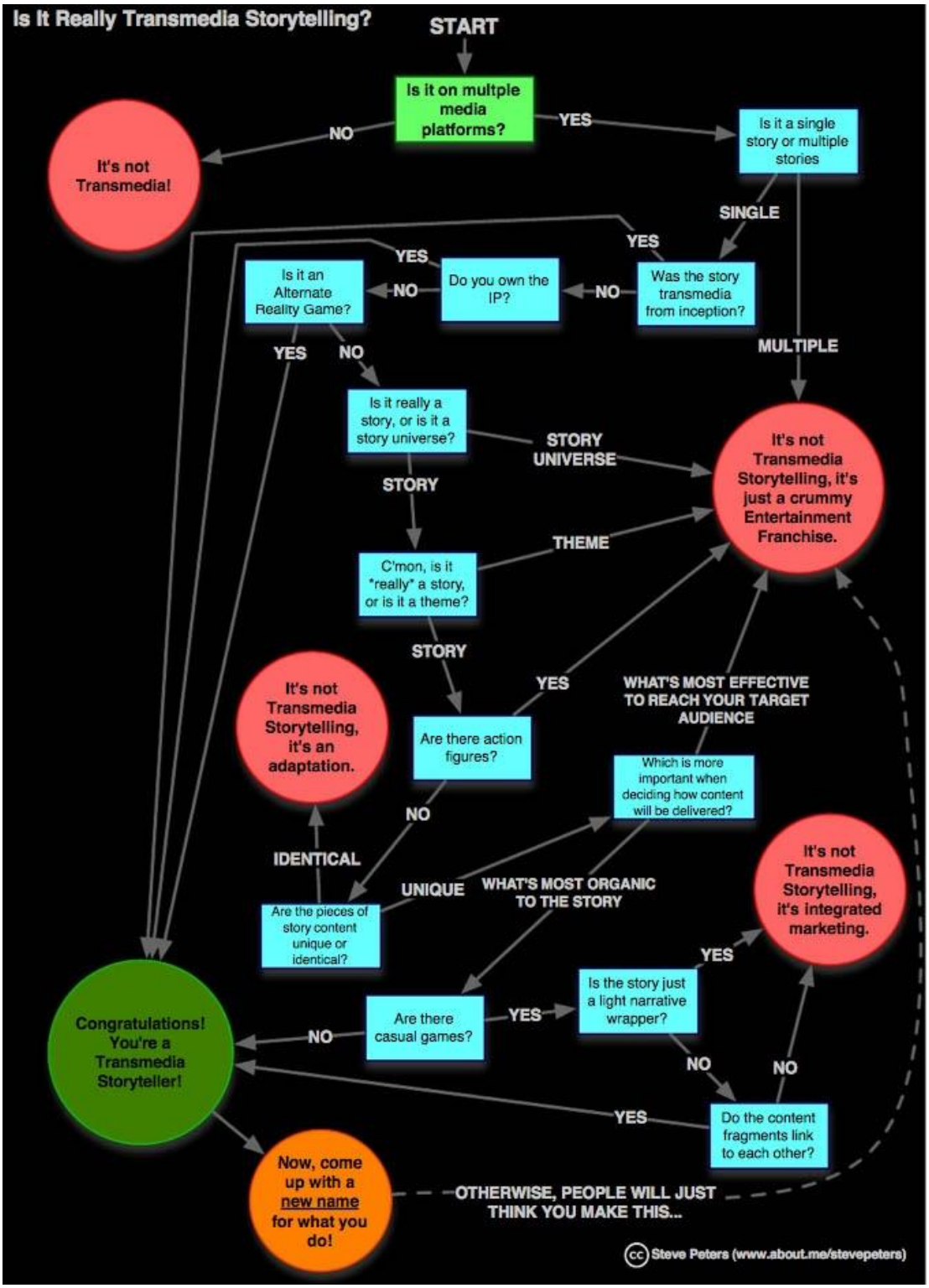


Figure 1 Steve Peters *Flow Chart Defining Transmedia Storytelling*.

Peters succinctly encapsulates the cultural backlash against the generic usage of this term in his final stage: "Now come up with a new name for what you do otherwise people will just think you make … (a crummy entertainment franchise)!" There are endless examples of profit-spinning franchises parading under the buzz of 'transmedia' but examples such as the Lego franchise are pertinent reminders of how fan-driven participation culture can drive an innovative story world. Transmedia consultant Robert Pratten broadens the definition of transmedia into a more practical model that fits both commercial entertainment enterprises and independent, experimental works.

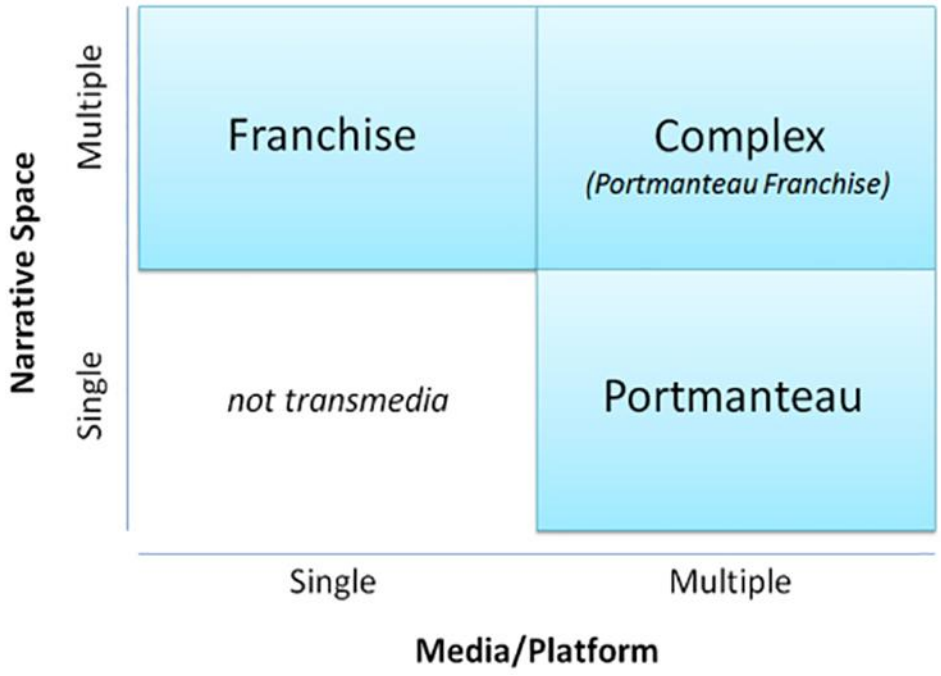


Figure 2 Robert Pratten *Types of Transmedia* 2011.
Reproduced from *Getting Started in Transmedia Storytelling* CC license.

The x-axis represents the number of platforms used to tell the story and the timing of these story events across the platforms, while the y-axis represents narrative space. Buchholz and Jahn (2005, 552) describe narrative space as the "physical existing environment in which characters live and move". In the next chapter, I will dissect the concept of narrative space further—in particular, its role in suspending the audience's disbelief—but for the purpose of understanding Pratten's model, narrative space is a

single plot line (one story) made up of one set of characters in a specific world at a specific time (Pratten 2011). A new set of characters can be created in this particular world and time to form a new narrative space that extends the story world. Alternatively, the same set of characters can be transported to another time and space to create a third narrative space.

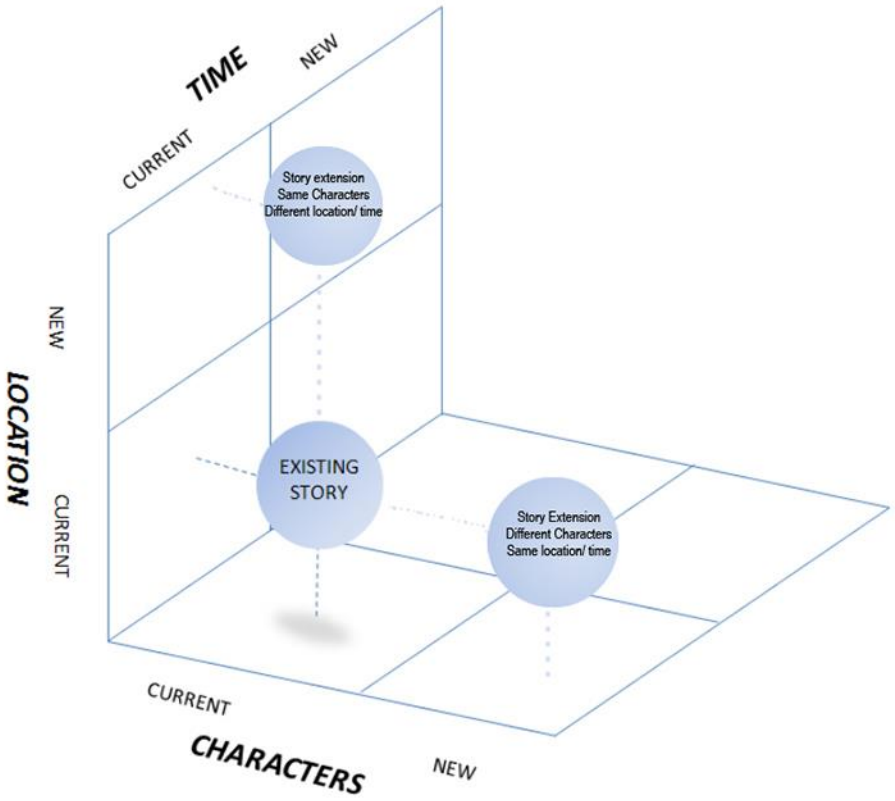


Figure 3 *Identifying Extensions to an Existing Story* 2016.
Adapted from Robert Pratten
Getting Started in Transmedia Storytelling, 2011.

In the case of the Lego franchise, the Lego universe is composed of the Lego building block environment, which is both an aesthetic style and a play mechanic that stimulates the imagination through customisable building. The *Lego Island* (1997) game involves the player customising the city and building vehicles. The plot of *The Lego Movie* (2014) centres on an ordinary construction worker, Emmet Brickowski, on a quest to defeat Lord Business by banding together with a group of master builders. Lego fan and artist Warren

Elsmore recreates iconic movie scenes using Lego in *Brick Flicks* (2014), while real life 'master builder' Ryan McNaught exhibits his artworks in museums.

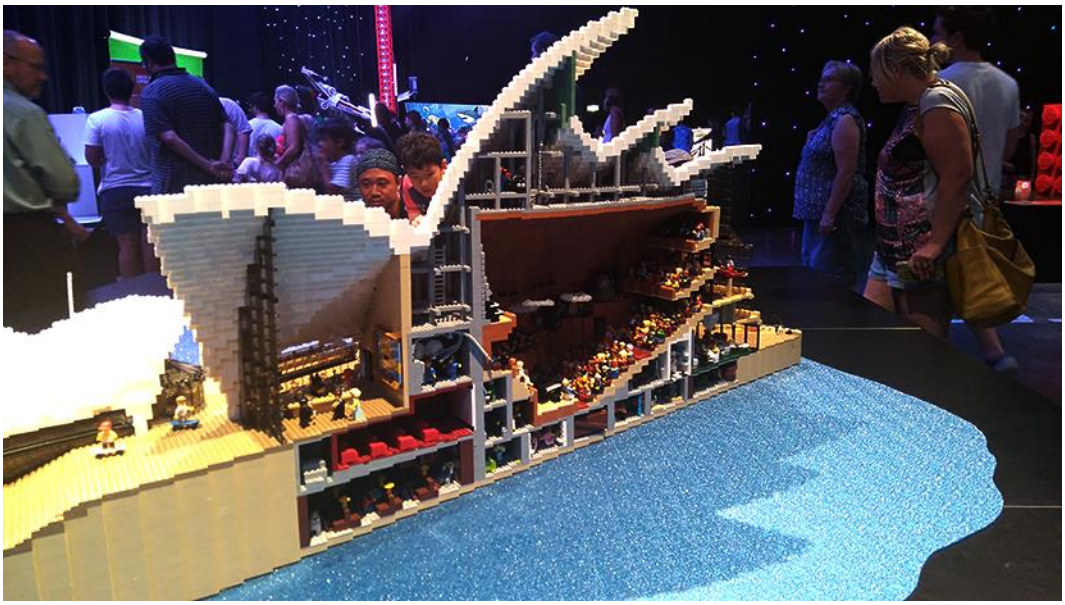


Figure 4 *Brick Man Experience* 2015. Exhibition at Convention Centre, Brisbane

The Lego universe is therefore composed of multiple narrative spaces and platforms united by an aesthetic style and mode of playing.

It is important to extend the concept of space into virtual environments, as like its physical counterpart, it represents concrete spaces. Hank Green and Bernie Su's *The Lizzie Bennett Diaries* (hereafter, *The LBD*) from 2012 also falls under transmedia even though it appears to be told through a single narrative space on one platform. This web native story is a modernised version of Jane Austen's *Pride and Prejudice* adapted primarily as a YouTube web series, with additional content released through other social media platforms such as Twitter and Tumblr. The original characters of *Pride and Prejudice* have been displaced to the virtual world. Not only has the story shifted to a modern society but it has also been forced through the lens of online culture. In this case, each social media channel almost becomes a discrete narrative space within the world of the web. In addition, the Internet may be considered one platform but the social media channels such as YouTube, Twitter, and Tumblr have such cultural currency that they act as independent story platforms. I explore the concept of the representation of virtual

spaces in my studio practice in my major work *Limerence*, which, like *The LBD*, exists on one platform (the tablet) but uses social media as discrete virtual environments.

The cross over between adaptations and transmedia storytelling come under the same scrutiny from transmedia purists as franchises and brands. The Emmy award-winning *The LBD* raises the question of how to critique translations between media forms. Should it be judged based on the fidelity to the source material or the adaptive qualities to the new media? A straight adaptation from book to film may transfer content between platforms but it is not necessarily transmedia unless it combines radical intertextuality and multimodality (Jenkins 2011). However, all adaptations require a degree of interpretation to suit the new media and, in some cases, can be highly transformative as the shift between media allows audience to draw new meanings (Dena 2009). The challenge for practitioners is to harness the inherent affordances of different media to create innovative representations of the same content. *The LBD* uses Twitter cleverly to develop secondary plot lines, such as how Caroline Bingley constantly tweets Darcy who brushes her off. Fans of the original text will also appreciate the interpretation of Kitty Bennet as a cat whose twitter tagline reads "@thelydiabennet is my master and I follow her everywhere" and Mary Bennet, who is recast as a cousin with the twitter tagline "I am Mary. Never Forgotten."

Similar to franchising, not all adaptations fit under the umbrella of transmedia storytelling; on one end of the spectrum, some works may be derivative, reproductions, or limited extensions of the storyworld but, on the other end, there are cases where pushing the same content across media channels produces a rich interplay between audiences and story. *The LBD* is an example of portmanteau transmedia where a single story experience is told over various platforms (in this case, over social media channels) such that you need to experience all or some of the media to receive a cohesive story experience (Pratten 2011). However, it can be argued that the bulk of the narrative is carried through video and that it also relies on the audience's familiarity with the canon text to fully appreciate the translation.

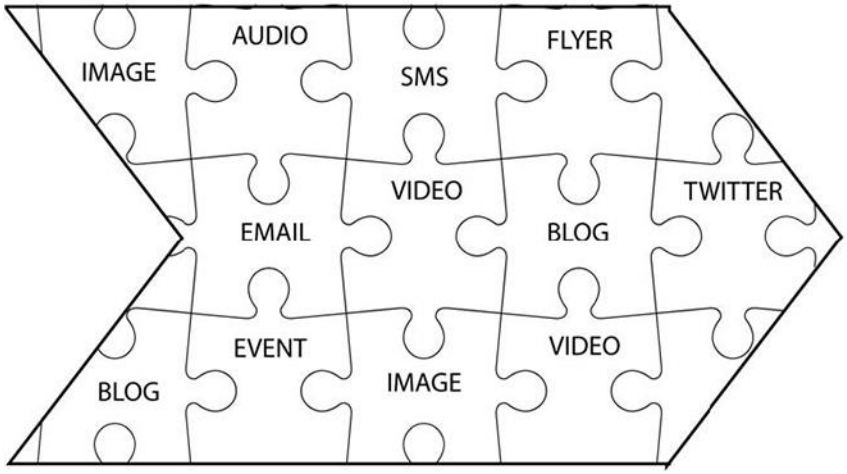


Figure 5 Robert Pratten *Diagram of Portmanteau Transmedia* 2011. Reproduced from *Getting Started with Transmedia Storytelling* CC license.

Alternative Reality Games (ARGs) provide a more definitive example of portmanteau entertainment. Leading up to the film release of *The Dark Knight* (2008), Warner Bros and 42 Entertainment released an ARG that followed a single narrative: *Who will take over control of Gotham City – Harvey Dent or The Joker?* It played out online and in the real world space. Clicking on the bat symbol of the official *Dark Knight* website turned out to be the entry into the game, bringing up a patriotic picture of Harvey Dent graffitied with the Joker's iconic painted face and smile, and emblazoned with the slogan 'I believe in Harvey Dent'. This led to the IbelieveinHarveyDent website where Heath Ledger's Joker gave them further instructions. Over time, the website built up a fan base who gathered at Comic Con to play the game. Real life Los Angeles became the fictional Gotham City as fans dressed up in full Joker regalia to complete tasks, such as scavenging the city for clues and taking photos of themselves at famous landmarks. These clues culminated with the opening of the *Dark Knight* premiere, where the Joker infiltrated the famous Bat signal with his own message. Despite being branded as entertainment, *The Dark Knight* ARG is generally considered a transformative work of transmedia, having won the prestigious Cannes Lions Cyber Grand Prix Award in 2009.

Representing a rich interplay between audience and platform that extends the storyworld instead of simply translating it between media sets it apart from other branded transmedia.

Thus, the *Lego* franchise, *The Lizzie Bennet Diaries*, and the *Dark Knight* ARG are three separate examples of transmedia that successfully combine various platforms and narrative spaces. Jenkins, Dena, Pratten and many practitioners and theorists have offered formulas and concepts for refining the boundaries of transmedia. This is not simply a pedagogical exercise but can provide insight into innovative techniques and new production culture for storytellers, as well as having implications for funding bodies. In 2013, Screen Australia hosted a presentation on their multi-platform funding programme. The speaker defined transmedia as "…not marketing, not a TV show and not a film...." (Halliday 2013). By describing it in terms of exclusion criteria, the Screen Australia representative appeared uncertain as to what specific characteristics defined transmedia. This ambiguity was evidenced in their evolving funding models for transmedia over the years. In 2012, Defiant Development's *Heroes Call* was funded through Screen Australia's All Media Fund (Digital Ignition) program. *Heroes Call* is an action role-playing game for the tablet. At the time, there was no separate category for game funding within Screen Australia. In the following year, Screen Australia also funded several story applications for the tablet through their Multiplatform Production program. Some of these were narrative extensions of their children's television production programs such as SLR Production's *Guess How Much I Love You* (1994) based on the children's book of the same title. The application featured two additional episodes with touch interactivity as well as puzzle-solving games. *The Wondrous Adventures of Desmondo Ray* (2016), a web series by animator Steve Baker, was funded through the same multiplatform initiative in 2014 despite the transmission of story occurring across a single narrative space with no added innovation in audience interaction. The same programme funded *Dandelion* (2012), an original tablet application by Protein creative agency.

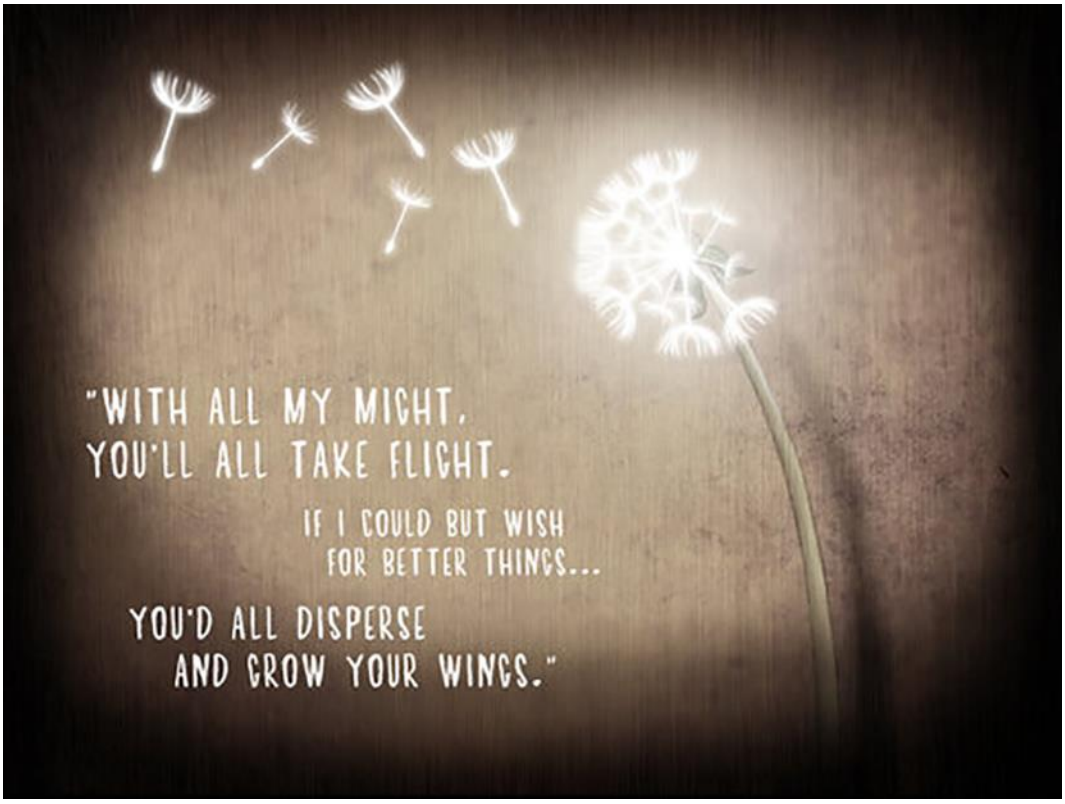


Figure 6 Galvin Scott Davis *Dandelion* (Screenshot from story application) 2012.

In *Dandelion*, the audience has to read the text, tap on the screen to move the story along, and re-enact the child-like activity of blowing a dandelion and making a wish. Utilising the microphone feature to shake the petals off the dandelion was a unique interaction. By Pratten's transmedia model, an application such as *Dandelion* does not span multiple platforms and should technically fall under the category of 'digital literature' given it is simply a multimodal combination of different textual systems to be interpreted within a single media. Transmedia storyteller Christy Dena has extensively discussed the various interpretations of what constitutes distinct media in her thesis "Transmedia Practice: Theorising the Practice of Expressing a Fictional World across Distinct Media and Environments" (2009) therefore it is not the focus of this exegesis to reiterate the multiple positions on what counts as distinct media. Instead, I shall elaborate on how innovative storytelling can occur across discrete spaces within one platform.

Dena (2009) emphasises it is the material experience, not just the nature of the technology that should be the qualifying trait for differentiating distinct media:

> This under-recognised phenomenon refers to expression of a (fictional) world across physically distinct hardware or objects such as television, laptop, book, photograph, cinema, statue or vase. The qualifying trait is its (usually) haptically-distinct nature...An audience member or player usually has to engage with more than one interaction technology. They may tap on a keyboard on a computer (and listen and watch and read), as well as turn pages in a book (and read text and images), as well as push buttons and twiddle a gaming console controller (and watch, listen and read), as well as run through the streets or shakes hands with an actor playing a character. (Dena 2009, 57)

At the same time, Dena acknowledges that innovation can occur in creative works within a single media platform but spread across various spaces (such is the case of *The LBD*) and does not exclude such works from the transmedia category. It appears that Screen Australia defined 'multiplatform' by innovative audience interaction with the media as opposed to the number of discrete media. In this sense, even though *Dandelion* was executed on one platform, its interactive complexity made it eligible for this funding programme.

2.2 Massaging the Boundaries

It is unsurprising that a blurring of the boundaries between similar concepts of transmedia, cross-media, multiplatform, digital literature, interactive narrative, and multimodality is occurring given the polysemous nature of this convergent form. All of these terms describe a similar sense-making experience based on narrative being expressed through a combination of language and media systems (Bechmann Petersen 2006, 95). It is a popular position to interpret 'across media' as being across distinct, physical objects; hence the term 'transmedia' is often used interchangeably with 'multi-platform'. However, many theorists including Jenkins and Dena have already shown that transmedia is more complex than just quantifying media platforms. Another term commonly used in describing works of this nature is 'cross media'. This term has been variously described as "create once, publish anywhere", the "ability to leverage content over a variety of media" and the "creation and implementation of single graphics for a variety of media" (Hannele, Kangas, and Vainikainen 2004, 7). Jenkins (2013)

differentiates cross media from transmedia because the former focuses on the use of media channels as distribution mechanisms of the same content whereas in the latter, the story world significantly transforms between media.

Multimodality is another term that has often been incongruously applied when discussing transmedia. A mode is a "socially and culturally shaped resource for making meaning" (Bezemer and Kress 2008). Multimodality is the combination of several semiotic modes in the design of an artefact that can be interpreted by an audience (Kress and Leeuwen 2001, 20). All cultural texts are multimodal. A newspaper is made up of written text, photos, graphic layouts, and comics. A film is made up of moving images, sound, lighting and performance. This echoes McLuhan's (2001, 19–20) pertinent reminder that the content of any medium is also another medium. The ease of combining multiple modes has been made more accessible by the affordances of digital technologies (Kress 2003, 5). A transmedia story that plays out across different media will always be multimodal as each media taps into different affordances to make narrative meaning. However, not all multimodal stories are transmedia. Transmedia storytelling can be viewed as a specific type of multimodal practice that focuses on how digital media resources can be combined to make narrative signs (Jenkins 2011). At the beginning of my research, I assumed that *Limerence*, as a tablet application was a transmedia project in the same way that *Dandelion* the tablet application or *The LBD* were. These works were technically executed over one media; *Dandelion* emphasised an original interaction utilising an affordance of that media and *The LBD* treated each social media platform as a unique narrative environment. However, I realised the crux of my practice was not necessarily whether it was a work was distributed over multiple platforms but how the literary aspects play with and against media. The focus is on transliteracy rather than transmedia. Transliteracy is "the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and films, to digital social networks" (Thomas et al. 2007). Because I was primarily concerned with how readers can map meaning between these multimodal states, I shifted my attention towards electronic literature—its modes, media and degree of audience interaction.

The Electronic Literature Organisation (the central research body committed to advocating and distributing digital arts) defines electronic literature (EL) as "works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer" (n.d). Electronic literature (EL) has also been described as works that are "born digital" to discriminate it from books that are purely reproduced on an electronic reader and does not add a layer of meaning-making to the reading process (Electronic Literature Organisation n.d.). EL includes forms such as hypertext fiction and poetry, chatterbots, literary apps, interactive fiction and novels that take the form of emails, SMS messages or blogs. In its infancy, hypertext was considered a prominent feature of EL. Hypertext is "text composed of blocks of words (or images) linked electronically by multiple paths, chains or trails in an open-ended, perpetually unfinished textuality described by the terms link, node, network, web and path" (Landow 2006, 23). The reader's ability to choose links was purported as agency that would transform reading and writing. However, this distinguishing technique had already been employed by print text in the form of footnotes, endnotes, and cross-references (Hayles 2007). Subverting the sequence of writing and reading text has also been the domain of experimental writers throughout history. Marc Saporta's *Composition No. 1* (1963) consists of 150 unbound pages in a box that is intended to be shuffled by the reader to determine the order of reading. The French writing group Oulipo imposed patterns and links in their creation of literary works. In Georges Perec's famous *Life: A User's Manual* (1978), the reader follows the movement of the knight piece in chess to move around the rooms and stairwells of a fictional Parisienne building encountering the stories of the inhabitants. Similarly, Aarseth asserted that the reader of hypertext fiction could only follow a sequence specified by the writer, which was more constraining than print. While hypertext may offer a new way of writing, it is not a new way of reading (Aarseth 1997, 77–78). Electronic poet Loss Pequeno Glazier (2002) claimed that EL lends itself to experimental practice, disrupting traditional notions and ego-centric discourses. This perhaps explains why the field of EL has not entered mainstream consciousness, despite being well canvassed among academic circles. The tagline for the 2015 Electronic Literature Organisation's conference was *The End(s) of Electronic Literature*. The intention of this controversial title was to probe the boundaries of EL now that

computational media have become ubiquitous, and transmedia practices have blurred where EL meets other fields such as performance, literature, films and games. For the remainder of my exegesis, I refrain from using the term 'electronic literature' as it is primarily associated with the first generation of digital writers who mainly produced hypertext. These first generation writers used the original Storyspace software developed by Eastgate System to create hypertext stories such as Michael Joyce's *Afternoon* (1987) and Stuart Moulthrop's *Victory Garden* (1992). These works were undoubtedly significant at the time when the processing power of computers limited graphics, animation, and sound, but technology has enabled modes to be combined with ease and sophisticated interactivity beyond the click and link mechanism. In recent times, EL has been superseded by cyber-literature, digital literature and future narratives.

The term 'future narratives' (FNs) emerged from the Narrating Futures Project (NAFU) funded through the European Research Council. FNs are narratives with more than one node; that is, more than one substantiation of an event (Bode and Dietrich 2013). These are distinct from 'past narratives' (PNs) that are unilinear. Therefore, FNs can cut across all fields such as books, films, and games. I do not use the term future narratives in my exegesis as it seems to privilege literary texts even where it uses concepts from ludology. For example, literary theorist Felicitas Meifert-Menhard (2013, 4–5) discusses game novels as part of FNs but "draw boundaries to the large (and, in many ways, interrelated) field of computer gaming (obviously, computer games can also tell stories, but their presentation is not based on written text, nor do they necessarily create such text) and film". The term 'interactive narrative' connotes a bias towards game design and 'transmedia' is embroiled in the debate over the nature of distinct media.

I prefer the term 'digital literature' since it appears to offer more flexibility in terms of its understanding of distinct media and modes. As screens become mobile, the reader is no longer confined to a desktop. Digital literature has evolved, taking on the affordances of tablets and phones such as the GPS, microphone and camera features. Audio stories are on the rise as they enable audiences to experience narrative in-situ. The popular mobile application *Zombies, Run!* (Alderman 2012) is an audio story that places the player as a runner surviving a zombie apocalypse. The physical location aspect of the story adds an

extra layer of experience for the player. These locative stories draw on the principles of pervasive games, demonstrating that the study of digital literature is an intermedial field spanning many practices.

It is evident that digital literature is a discipline in flux and these intermedial forms fluctuate as they re-purpose or imitate media objects in other fields. As Jenkins (2006, 16) reminds us, “convergence refers to a process, not an endpoint”. This process occurs organically but leaves practitioners, audiences, and critics with a conundrum. As media converge, what criteria do we use to assess whether the work is good? A sociologist may frame this question within how these forms affect the social fabric of groups of people. An art critic may only be interested in media as material tools (Ryan 2004, 15–16). A literary theorist may couch narratology within a written/ verbal language system. A ludologist would focus on how narratives are played out in the work. As Espen Aarseth (2015) points out, the next big question for digital literature is to work out which digital mode to innovate and what should be privileged when critiquing digital literature. Is it the medium, the literary aspects, the interactivity, or a new aesthetic that combines elements from various fields? In the next chapter, I discuss the significance of approaching my research through a transmedial narratology framework. Using this paradigm, I dissect narrative structures to investigate in depth what criteria can be used for evaluating digital literature.

Chapter 3: Building a Transmedial Narratology Framework

This chapter will build the case for applying a transmedial narratology paradigm when critiquing digital literature by discussing in-depth the affordances of old and new media, reviewing traditional narrative structures and evaluating their transformation to digital media. Traditional narrative has been defined by some as "a mode of verbal presentation and involves the linguistic recounting or telling of events" (Prince 2003, 58) that involves a narrator addressing a narratee (Ryan 2005, 2-4; Abbott 2008, 14-15). This language-based position, held by narratologists such as Gerald Prince (2003) and Seymour Chatman (1978), neglects other forms of storytelling such as music, theatre and events unfolding in real time as in a game. French structuralist Claude Bremond argued that story is transposable between media (cited in Chatman 1978, 20); that is, a story that can be read in a book can be performed as a ballet or enacted in film without losing its essential properties. Certainly within the Hollywood transmedia model, it is rare to see a stand-alone film as adaptations across media has become an essential part of a studio's marketing strategy. It has become common place for audiences to compare book-to-film adaptation or discuss narrative elements expanded upon in the game. There is a demand to reassess language-based definitions of narrative, as it disregards the intrinsic expressive powers of various media. Literary critic H. Porter Abbott (2008, 13) attempts a media-free definition, describing narrative as "the representation of an event or a series of events". Literary theorist Marie-Laure Ryan (2004, 14) proposes a binary pairing that acknowledges language-based versus other forms of narrative modes. The first category distinguishes between diegetic and mimetic modes, otherwise known as 'show and tell' storytelling. The diegetic mode assumes the story is told either verbally, through the tradition of an oral storyteller or through language (e.g. a novel). The mimetic mode shows the story through art forms, such as movies, theatre, dance, and the opera. The second category distinguishes between autonomous and illustrative modes. It deals with how any presumed knowledge of the reader influences their understanding of their text. In an autonomous mode, the text transmits a story that is new to the reader such that they need to problem solve the logical sequence of the story from the text. In an illustrative mode, the text retells or adapts a story that the reader is already familiar with, for example, the re-imagining of a fable in a pictorial form (Ryan 2004). The third category

relates to the position of the audience member as either receptive or participatory. A receptive audience member is an external witness who passively receives the story, whereas a participatory audience member plays an active role in the story because the script is not fully fleshed out. For example, a theatre performance may require improvisation on the part of the audience or a game requires players to act through an avatar to realise the plot. The fourth category describes plot structure as either determinate or indeterminate. The determinate text has a specific number of plot trajectories to make a script while an indeterminate mode contains one or two plot points and requires the audience to create stories by connecting these points. The fifth category of narrative defines whether the narrative is literal or metaphorical: the 'literal' narrative is specific and individualised, as opposed to grand, 'metaphorical' narratives that address broader themes of class, gender, or race.

Ryan's binary pairing approaches narrative under a transmedial narratology framework by using cognitive terms to evoke the mental image conjured up by the receiver:

> Narrative involves the construction of the mental image of a world populated with individuated agents (characters) and objects (spatial dimension). This world must undergo not fully predictable changes of state that are caused by non-habitual physical events: either accidents (happenings) or deliberate actions by intelligent agents (temporal dimension). In addition to being linked to physical states by causal relations, the physical events must be associated with mental states and events (goals, plans, emotions). (Ryan 2005, 4)

By changing the focus, Ryan opens up the possibility for narrativity; a receiver can create a story from any semiotic object regardless of that object's intent to tell a story. For instance, if I witness a woman crying on the park bench as a man walks away from her, I might deduce that the two have just ended their relationship. This scene possesses narrativity because of my interpretation, even if the woman has not deliberately told this story. Ryan (2005, 6–10) acknowledges that literary fiction may be the most versatile of narrative forms, but other media can make unique contributions to narrative meaning. For example, language cannot take into consideration the sensory quale one might experience upon seeing a painting, the adrenaline rush of a console game, or the ineffability of live

music. Furthermore, the sum of various media may often evoke what textual storytelling cannot do on its own. Picture the difference between watching a muted battle scene on screen compared to the surround sound, cinematic experience that comes with pulsing drums, roar of charged voices as opposing sides charge and the clash of swords. In Chapter 2, I applied an accurate albeit simplistic definition of media by Lisa Gitelman; media is a technological delivery system with a set of attached cultural practices. Designing digital narrative through the lens of a transmedial narratologist requires an expansion of the concept of media to take into account how the distinct properties of media can present and evoke narrative experiences.

3.1 Old Media/ New Media

Media can take on different meanings depending on a practitioner's perspective:

> Ask a sociologist or cultural critic to enumerate media, and he will answer: TV, radio, cinema, the Internet. An art critic may list: music, painting, sculpture, literature, drama, the opera, photography, architecture…An artist's list would begin with clay, bronze, oil, watercolor, fabrics, and it may end with exotic items used in so-called "mixed-media" works, such as grasses, feathers and beer can tabs. An information theorist or historian of writing will think of sound waves, papyrus scrolls, codex books, and silicon chips. (Ryan 2003)

For this reason, transmedial narratology defines media only as it pertains to narrative. Ryan (2005, 14–17; 2014, 29–30) asserts that media can affect narrative on three levels: semiotic, technical, and cultural. The semiotic level is about the codes and sensory channels that support various media. These can be verbal, visual and aural. Semiotics examines the extent to which different media such as painting or sound are capable of narration. Narrative differences ascribed to media can be further distilled into three semiotic domains (Ryan 2004, 354). Firstly, semantics is the study of plot or story. For example, film follows the narrative arc of the Freytag pyramid with an exposition, rising action and climax. This narrative structure works seamlessly because of the unbroken format of film. Television must accommodate commercial breaks so has developed a four-act structure that is related to the original structure.

Secondly, syntax is the study of discourse or narrative techniques. The spacing of panels is a unique comic convention interpreted by readers as the sequence of events happening in the story. By contrast, the sequence of images edited together in film conveys narrative temporally. In the multimodel novel *Extremely Loud and Incredibly Close* (2005), the protagonist Oskar constructs the world through photos, maps, and diagrams as he struggles to come to terms with his father's death in 9/11. The final pages of the novel show the now infamous image of the anonymous 'falling' man, a picture that became synonymous with the attack. In the story, Oskar re-arranges the falling man so that when the reader flips the pages like a flipbook, the man rises, symbolising Oskar's wish that his father resurrects. This visual imagery has a profound impact on the story; however, language remains the principal narrative mode of signification. If one removed the language, the image would not make sense (Hallet 2014, 154–55).

Thirdly, pragmatics has more to do with the modes of user involvement. We understand the worldwide web or the Internet as a distinct media structure, but to make more narrative meaning from this, we need to frame specific storytelling modes within this structure, such as blogging, webisodes, or Twitter fiction.

Semiotics produces a broad understanding of how media can affect narrative in terms of themes, user involvement, and techniques. Ryan's second and third categories refine the semiotic category, providing a new approach to thinking about old and new media. The technical dimension includes both raw material supports, such as the human body for dance, stone for sculpture, clay for pottery, as well as technological supports such as the computer. Transmedial narratologists are not interested in those types of technology purely for reproduction, such as a sound recording. They are interested in the technologies that create new media objects, such as radio, telephone, print, and digital encoding. The third area of interest for a transmedial narratologist examines the cultural use of media artefacts (Ryan 2005, 2014). Cultural study is interested in the role of media insofar as it influences and impacts social behaviours. It is similar to pragmatics in that it focuses on user experiences such as fan fiction and participatory cultures. In this field, social media is considered an independent medium even though it uses the same web technology of blogs and other online platforms because of its profound impact on media

ecology. My project *Limerence* draws on this expanded definition of media because it re-imagines social media platforms as distinct narrative spaces in order to commentate on how our reading habits and patterns have changed as a culture to absorb new media.

In the previous chapter, I discussed the ambiguity surrounding the term 'distinct media'. Transmedial narratology provides a framework for analysing narrative based on the semiotic, technical, and cultural dimensions of media. Most people know instinctively what would classify as old (analogue) or new (digital) media: records, books, paintings and radio are artefacts of analogue technology, while screen, Internet, video games, mobile phones and computer-based installations fall under digital media. As the gaps between analogue and digital technologies close, many scholars have attempted to come up with a definitive typology for classifying digital media in order to distinguish it from its predecessor. Lev Manovich (2001, 49–64) lists five principles for analysing properties of digital media: numerical representation, modularity, automation, variability and transcoding. Numerical representation points out that all digital media is composed of digital codes that are programmable. Modularity refers to how individual elements are arranged into a larger-scale object without losing their identity. Media elements such as sound, images, shapes or behaviours can be stored independently or remixed to form new artefacts. The third principle specifies that the computer automates many of the operations involved in media creation. For instance, the image editing software Photoshop can automatically correct for colour balance or add filters for different effects. Certain creative processes involved in creating a new media artwork can be completed without human intentionality. The fourth principle of digital media is the potential for infinite variations of the same media object. Computer applications are often updated to remove bugs that were discovered after release or to deliver added functionality. Text can be scalable to be read on devices with different screen resolutions. The audience can customise the media composition by clicking on various subheadings within menus to create a branching tree structure. The fifth principle of digital media considered by Manovich to be the most substantial is transcoding: "New media can be thought of as consisting of two distinct layers: the 'cultural layer' and the 'computer layer'... this composite is the new computer culture: a blend of human and computer meanings, of traditional ways human culture modelled the world and computer's own ways to

represent it" (Manovich 2001, 64). In other words, transcoding is the translation of cultural concepts/categories into computer representation.

Ryan (2004, 338) offers a different approach from Manovich to defining the dimension of digital media based on their effects on narrativity in either a positive or negative way. The first dimension is its reactive and interactive nature. According to Ryan, "Reactivity refers to responses to changes in the environment... interactivity is a response to a deliberate user action". The second dimension is its multiple sensory and semiotic channels; in other words it is likely to be composed of multiple media forms. The third dimension that distinguishes digital from analogue media is its networking capabilities. It can connect people across space within a virtual environment. Ryan's fourth dimension of volatile signs is similar to Manovich's variability, in that it highlights the ability of digital texts to be refreshed and rewritten. Likewise, she agrees with Manovich in claiming that modularity is a dimension of digital media. Of these five properties, Ryan believes that interactivity is the true distinction between legacy and digital media (2004, 338; 2006, 98).

A third view of the affordances of digital media comes from Janet Murray (2011, 51), who asserts that the digital medium exploits the representational power of the computer. She purports four representational properties of the digital environment: procedural, participatory, encyclopaedic and spatial. The procedural property is "the processing power of the computer that allows us to specify conditional, executable instructions" (Murray 2011, 434). It refers to game engines, search engines, sensor devices, and control conventions. The participatory property refers to the ability of the user (or interactor) to manipulate content. Murray asserts that the combination of the procedural and participatory affordances creates interactivity, which leads to a feeling of agency in the interactor. The encyclopaedic property is its capability to store large bits of information in databases, archives, and portable media players that can be accessed in different ways by the interactor. The fourth property is to do with how digital media represents space such as through virtual landscapes, maps, and GPS devices. This property is not just a function of visual representation, as text adventures can also create a sense of space in the reader's minds. It has to do with how interactors tend to create spatial metaphors as part

of their sense-making of the story world (Murray 2011, 66–71). This aspect forms an important element of my studio work, since I explore how non-linear narrative structures can be applied to virtual space.

There is clearly an overlap between Manovich's, Ryan's and Murray's categorisations of digital media. Ryan shares some of Manovich's principles on modularity and variability. She also shares similar ideas on the participatory nature of digital media described by Murray but Ryan's principles are purely from a transmedial narratology perspective in that they are driven by how the media properties affect digital narrative, whereas Murray is positioned as a designer. She asserts that the goal of all designers should be to design an intuitive interface that the user can navigate effortlessly (Murray 2011, 9). As an example, the trash can icon on a computer desktop is an elegant design in that the user intuitively understands that dragging a file into the trash will delete it as this mimics a real-world situation. This is despite the fact that as a culture we no longer use this style of trash can. An object that retains design cues that were of functional value in the original artefact but serve only ornamental purposes in their current form is called a skeuomorph (Basalla 1988). Skeumorphism can help users quickly learn new operations by associating new representations with prior knowledge and expectations. The Apple operating system was well-noted for its use of skeumorphs, as seen by their iBook application that was a pine bookshelf with graphical representation of individual books, or their Notes application that resembled a physical legal pad with lines and margin. Skeumorphic design may ease initiates into navigating a new system by presenting an interface with familiar schemas from their real-life experiences. Yet, game theorist Brenda Laurel (1993, xvii–xx, 14–19) suggests that when we engage with these graphical representations, we are operating through a mediator rather than engaging directly with the computer. She recommends thinking of the nature of human–computer activity in terms of an Aristotelian drama. In theatre, actors present imitations of reality through their performance on a stage. The computer screen becomes the visible stage seen by the audience with the applications operating backstage. The users are not audience members but are actors performing actions to enact the script. Laurel claims that "designing human–computer experience isn't about building a better desktop. It's about creating imaginary worlds that have a special relationship to reality—worlds which extend and

amplify our own capacities to think, feel and act" (Laurel 1993, 32). Like many users uncomfortable with technology, I have certainly found skeumorphic design to be of practical help when initiating a new application. However, I am also struck by the force of Laurel's analogy that the screen is like a theatre stage. I am reminded of one particular scene in the game *Heavy Rain* (2010) where the player has to soothe a crying baby. To do this, the player has to perform a slow, gentle, repetitive movement with the joystick that is reminiscent of the careful movement needed to rock a baby to sleep. The transformation of the player into a method actor adds a layer of meaning to the human–computer experience.

In the long term, skeumorphic design can hinder creativity and innovation when designing for digital narratives (Murray 2011, 11–12). The e-reader is an electronic device that repackages the content of a book from a physical to an electronic container. It does not take into consideration the organisational features of the legacy media—the chapters and pages that are essential to its 'bookishness'. It translates these bookish features directly into the e-reader format instead of considering a more logical design, such as a scroll bar, to enable a continuous scroll of text. Similarly, video-on-demand distributors produce television shows that follow the narrative arc of half-hour and hour formats produced for traditional analogue television even though they are no longer restricted by these conventions. Designing by skeuomorphic principles is lazy because it causes complacency about the organisational features of the particular media. The digital medium is not simply a container for content. Murray (2011) urges designers to look for new ways to restructure legacy formats to create satisfying interactions that exploit the unique affordances of the digital medium.

For my research project, I borrow elements of Manovich's, Ryan's and Murray's work to propose a hybrid categorisation of digital media: procedural, multiple sensory and semiotic channels, interactive/participatory, spatial and transcoding. The procedural property is the same as Manovich's automation and Ryan's basic principle of programmability. It has multiple sensory and semiotic channels (similar to Manovich's numerical representation). It is interactive/participatory in nature. It is spatial in both a goal-orientated as much as an experiential sense as it offers new pathways to journey

from point A to B in a narrative. It consists of two layers, the cultural and the technical, that can be transcoded. The possibility of meaning-making lies at their point of intersection (Murray 2014, 12). I have selected these five properties as they address the cultural, narrative and design aspects of digital media, providing a comprehensive framework for my investigation. The next section revises traditional narrative structures and discusses how they can be adapted to suit the properties of digital media.

3.2 Traditional Narrative Structures

To understand how digital media opens new narrative structures, we must first examine classical plots. Aristotle laid down the foundation for the linear plot structure in his treatise *Poetics* which stated that a story consisted of a beginning (the first act), middle (second act, where the main action develops) and end (the third act, where the action heightens and unravels) (Aristotle, Baxter, and Atherton, 1997, 77). He recognised two forms of narrative: the epic and the dramatic. The distinction was primarily based on the mode of presentation; the epic represents events through verbal narration (diegesis) and the dramatic represents events through an imitation of action (mimesis). Playwright and critic Gustav Freytag devised a model based on Aristotle's theory, which is referred to as Freytag's pyramid consisting of five parts (Jahn 2005, 189–90) (figure 7).

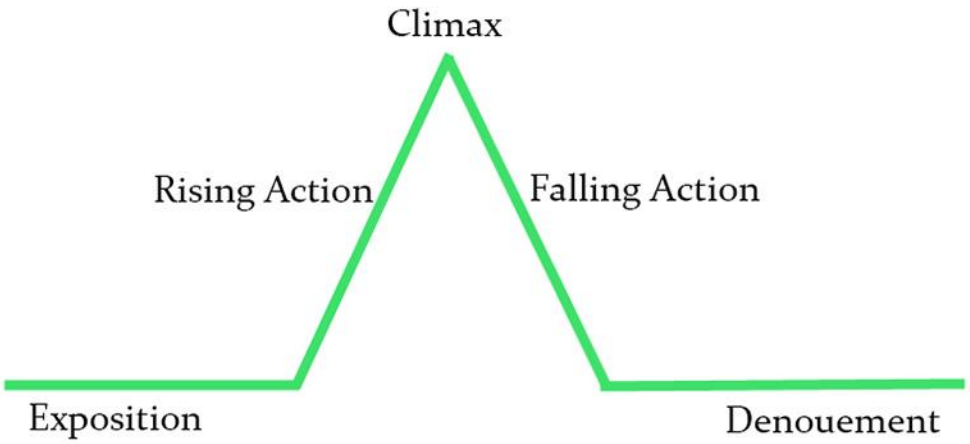


Figure 7 *Freytag's Pyramid* 2016

This linear pattern of rising and falling action in storytelling remained the dominant ideology up until 1960s when the structural narratologist Vladimir Propp (1927) analysed a collection of Russian folk tales and identified thirty-one functions (or events) in any narrative. Some of these functions include introduction (the villain wants something), the body (the hero leaves on a mission), the donor sequence (the hero and villain do battle) and the resolution (the hero returns home and is rewarded). The complete thirty-one events are listed in appendix 1. Propp claimed that although a tale can skip events, their unvarying order cannot be shuffled. These thirty-one functions became the building block for writer and mythologist Joseph Campbell's seminal text *The Hero's Journey* (1968).

Campbell ascertained that most narratives followed variations on a pattern, that of the mythic hero quest, regardless of culture, place or time: "A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man" (Campbell 1968, 23). He called this structure the monomyth. There are many variations on the monomyth, including a practical adaptation to twelve stages by screenwriter Christopher Vogler. However, the original monomyth consists of seventeen stages organised into three acts. Act one is 'The Departure' where the hero is called to adventure but they refuse the call. Eventually, a supernatural aid makes them feel confident to undertake the quest. In the second 'The Initiation', the hero enters the road of trials with tests of physical and emotional endurance. This leads to the final act, 'The Return', in which the hero refuses to return to their world having found happiness (Campbell 1968, 179). Campbell asserts that if writers followed these universal archetypes, situations, and solutions, they could make any story meaningful.

The foundational works of Aristotle, Propp and Campbell do not distinguish between linear and non-linear narrative structures. In fact, storytellers can still follow the monomyth but use techniques that jump through time, therefore presenting a non-linear structure. E.M. Forster (1990, 87) used the example "The King died, and then the Queen died of grief" to explain how a classic plot is a narrative of events with the emphasis on causality. As a result of event A, event B happened. This is a linear structure told in

chronological order. Portraying events in the order in which they occur not only confers causality but presents a logical story sequence that makes it easier for the audience to understand the narrative. However, in non-linear structures, storytellers can embellish a story to the point of changing the order of events but still have it make sense using analepsis (in literature) or flashback (in film). Gerard Genette became a major figure in the field of structural narratology with his body of work on discourse and story time. He describes the relationship between the time of the story and the 'pseudo' time, the duration and the 'pseudo' duration, and the frequency and the 'pseudo' frequency (Genette 1980, 35). A narrative passage can lead with "three months earlier..." to indicate that the narrator is about to segue to an event that occurred before the story. Similarly, many years can pass in the story but the pseudo-duration—that is, the length of the text—is only one sentence: "Twenty years later, she would look back on this event..." Genette uses the term 'anachrony' to describe the various types of discordance between the two orderings of story and narrative. Anachrony can be analeptic or proleptic. In the former, the narrator recounts an event that took place earlier than the present point in the main story. For example:

I stare at the box, unwilling to open it. My mind casts back to a similar locked box from my childhood that taunted my sister and me until one day we could stand it no longer and took a hammer to the padlock.

If these sentences formed part of a novel, the reader would not be confused as to the temporality of the story. They would understand that the narrator is telling the story in present time but is remembering an event from the past. In the latter, the narrator anticipates events that will occur after the main story ends. For example:

Knowing what I know about the hidden box, how can I look my family in the eye again? All openness is gone. Confidences destroyed.

This contraction of time is a specific technique in literary discourse. In linear novels, readers are accustomed to these temporal conventions such that when it occurs as part of a passage, it does not disturb their immersion in the story. Many films use editing techniques to convey a similar convention called flashback (or flashforward) to compress

time. Some writers deliberately flaunt non-linear structures, such as Julio Cortázer in his 1998 novel *Hopscotch*. Cortázer's 'anti-novel' is a mosaic of events presented non-linearly and can be read in any order. He advises readers of two ways to navigate it: a linear progression through the chapters or by hopscotching through the sections, following the instructions written at the beginning of the novel. Likewise, director Quentin Tarantino notably plays with disjointed narratives, deliberately presenting sequences out of order, in his films *Reservoir Dogs* (1992) and *Pulp Fiction* (1994).

Clearly, works that conform to linear structures can still display elements of non-linearity. However, digital forms such as hypertext, adventure game, interactive fiction, transmedia, digital literature, augmented reality gaming and pervasive gaming bring non-sequential experiences to the forefront. Murray (2004, 2) stated that 'Games are always stories, even abstract games such as checkers or Tetris... (The digital medium) includes still images, moving images, text, audio, three dimensional, navigable space— more of the building blocks of storytelling than any single medium has ever offered us.' Her argument suggests that the narratological framework can extend to such new digital works. Ludologist Markku Eskelinen (2012, 213) concedes that games can contain narrative. However, classical narratology cannot provide a suitable framework for analysing new literary forms such as games because it does not address the basic tenets of games, that being the rules, variable outcomes and player activity. Furthermore, the building blocks in digital media are used for a wide variety of purposes, not just constructing stories.

The tension between the narratologists' and the ludologists' position raises the question of what needs to be addressed in any hybrid paradigm for analysing digital media works. The procedural, multi-sensory, interactive, spatial, and transcoding affordances of digital media break down rigid linear structures and allow audiences a freedom of navigation. Multi-sensory channels open up combinations of text, moving images, sound, and interactivity not possible in analogue technologies. The various dimensions and screen resolutions of mobile, computer, and tablet platforms offer endless permutations of spatial layout.

Perhaps, most importantly, the division between analogue and digital has shifted the perception of what it means to be interactive. In describing the properties of digital media, Manovich (2001, 33) avoids the term 'interactive', claiming that it is tautological when it comes to describing human–computer interfaces. By contrast, Ryan (2004, 338; 2006, 98) believed interactivity to be the true point of departure between digital and analogue media objects.

All analogue art forms require some element of interaction with the audience. Manovich (2001, 71) cautions that it is a misperception to grade the physical interaction between a user and a machine as a higher form of interactivity than the psychological interaction of filling-in, hypothesis forming, recall, and identification that is needed to interpret all media forms. For example, when cinema was invented, audiences had to mentally work to understand the relationship between edited images with new narrative techniques which were emerging consistently such as film montage. Similarly, a reader needs to interpret the text to conjure up the imagery that the author has created and an actor on stage may speak directly to the audience, imploring them to listen to his/her story. Yet, Ryan's position is also valid in that the procedural and transcoding affordances introduce the possibility of randomness and improvisation by situating the audience member as an active participant—an immersion that is not possible with old media forms. Audiences can change the order in which action occurs; they can play as an avatar, influencing the story outcome; and they can react to the characters and plot by joining communities on social media. Interactivity has become an overarching term that has become exclusively attached to digital media. To thoroughly examine how affordances affect digital narrative structures, I consider next the meaning and role of interactivity.

3.3 Digital Narrative Structures

Espen Aareth (1997, 48) claims that interactivity connotes ideas about computer screens and user freedom, but it is such an ambiguous term that in describing a system as interactive, one may as well declare it to have magical powers. Just as the concept of media can vary between practices, so the emphasis on the meaning of interactivity is dependent on the approach of the designer. Computer semiotician Peter Anderson (1990, 89) described an interactive work as "a work where the reader can physically change the

discourse in a way that is interpretable and produces meaning within the discourse itself". This is a rather narrow definition of interactivity that stresses that the reader's interaction must form part of the sign production (that is, the meaning making) of the work and not just part of the discourse. This concept of interactivity excludes hypertext, where the reader controls the reading order that forms part of the meta-semiotic expression (Aarseth 1997, 49–50). It also overlooks the discursive elements of interactive fiction, where readers parse key words to complete commands that unlock story segments. The correct key phrases form part of the overall story but words that deviate too much from the programmed repertoire of commands will cause the game's voice to state that it does not understand, breaking the illusion of the story world.

Aarseth (1997, 1) prefers to use the term 'ergodism' to interactivity. The term is derived from *ergo* and *hodos*, meaning 'work' and 'path', respectively. He asserts that ergodic literature requires non-trivial effort to allow the reader to traverse the text: that is, actions occurring outside human thought. A traditional piece of literature such as a book is non-ergodic because it does not require any extranoematic activity other than eye movement and the turning of pages. Game designer Chris Crawford observes "Interactivity mandates choice for the user. Every interactive application must give its user a reasonable amount of choice. No choice, no interactivity. This is not a rule of thumb, it is an absolute, uncompromising principle" (Crawford 2002, 191). Murray (1997, 128–29) emphasises agency over interactivity. Interactivity can be just clicking a mouse or swiping an interactive screen. If a user swipes the screen twenty times in a minute, does this make it a successful interactive experience? On the contrary, Murray argues that a new device may be praised as being highly interactive but it is a meaningless criterion. By contrast, a chess game may have infrequent action but grant the players a high degree of autonomy. Thus, agency extends beyond participation and activity. The focus should be on designing a system to create a satisfying experience of agency.

As mentioned earlier, Ryan (2011) prefers the term interactivity to either ergodism or agency as it conveys the ability for the media object to modify itself dynamically. The operator kicks the machine, the machine kicking back, and this back-and-forth process results in an interactive story experience. She claims that non-linear and multi-linear

branching structures such as trees, rhizomes, or networks offer the ideal system of choice (Ryan 2006). She presents the analogy of an onion to explain how interactivity in digital texts works. The outermost layers are concerned with story presentation and themes while the deeper layers penetrate the core of the story.

3.3.1 Ryan's Interactive Onion

The first layer concerns works where the medium echoes themes of the narrative. A clever example of this is *Cruising* (2001), a digital poem by Ingrid Ankerson and Megan Sapnar. The poem is about a teenager driving up and down the main drag of a small American town. The reader can control the text size, speed, and direction with the mouse. The second layer of the interactive onion are works where content is pre-determined but the presentation to the user is highly variable. An example would be hypertext or interactive fiction. Hypertext is a form of electronic literature that consists of chunks of texts connected by links that branch along different pathways and allows choices to the reader (Nelson 1993). Borges' (1998) short story *The Garden of Forking Paths* is considered as the ultimate metaphor for hypertext. In this story, the protagonist describes a world where all possible outcomes of an event occur simultaneously, each one leading to further proliferations of possible worlds. To maintain narrative coherence, a discontinuous narrative is designed like a branching tree structure that prevents looping (figure 8).

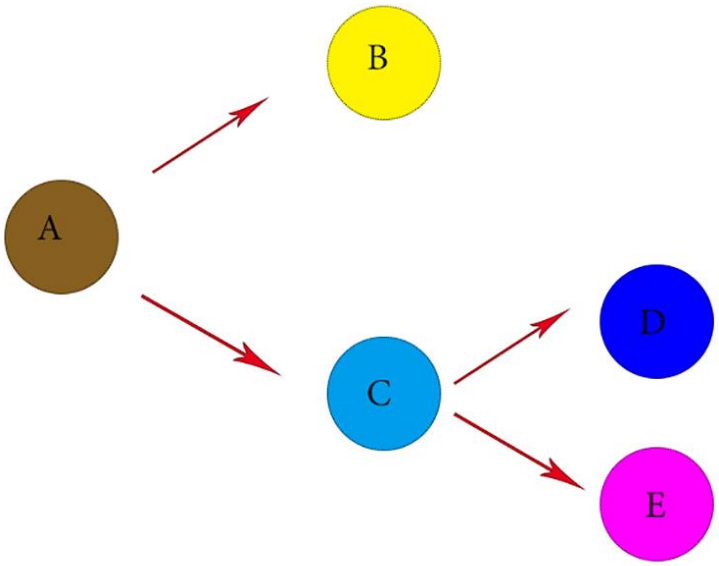


Figure 8 *Simple Branching Narrative* 2016

Discontinuous narrative can be represented in physical books. Ryan proposes more complex structures are made possible by the procedural power of computers. The maze (figure 9) has been used as an analogy for classic hypertext exploration. Historian and literary academic Penelope Reed Doob (1992, 42, 46–48) distinguishes between two types of mazes: the labyrinth and the multicursal maze.

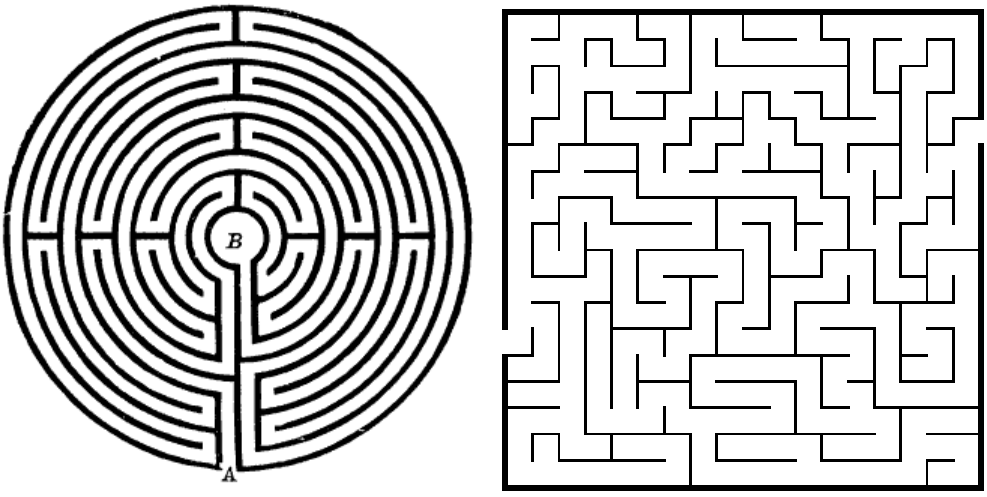


Figure 9 *Examples of Mazes.* Source: Wikimedia Commons

The labyrinth is a unicursal path that winds towards a centre but there is no wrong turn. The multicursal maze has many paths filled with false leads and dead ends but there is only one correct unicursal path. Another analogy for postmodern hypertext structures is the rhizome concept developed by Gilles Deleuze and Félix Guattari. "A rhizome has no beginning or end; it is always in the middle, between things interbeing, intermezzo" (Deleuze and Guattari 1987, 25).

Unlike a tree, a rhizome does not expand in an arborescent order from root to branch. A rhizome expands in all directions; one point can be connected to any other point. In speaking of the rhizome structure, Deleuze and Guattari were not specifically referring to narrative structures. Rather, they were using it to oppose the hierarchical structure of knowledge: the use of the tree metaphor in Western philosophy in all fields from science to theology.

Nevertheless, narrative theorists have used the maze and rhizome as foundations to develop metaphors for non-linear, digital narrative structures. Ryan (2006) proposes sea-anemone and network structures as extensions of branching narratives that offer greater freedom of navigation by utilising the procedural and spatial affordances of digital media.

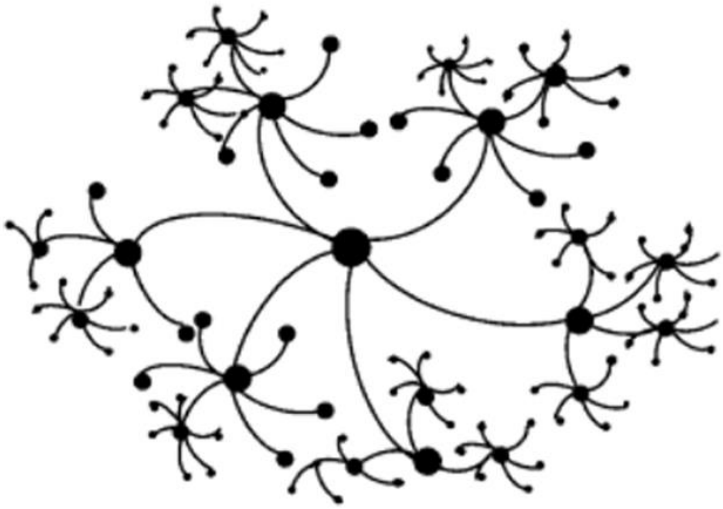


Figure 10 *Sea- anemone Structure* 2006. Reproduced from *Avatars of Story*, by Marie-Laure Ryan. Minneapolis, MN, USA: University of Minnesota Press. p103. By permission of Marie-Laure Ryan.

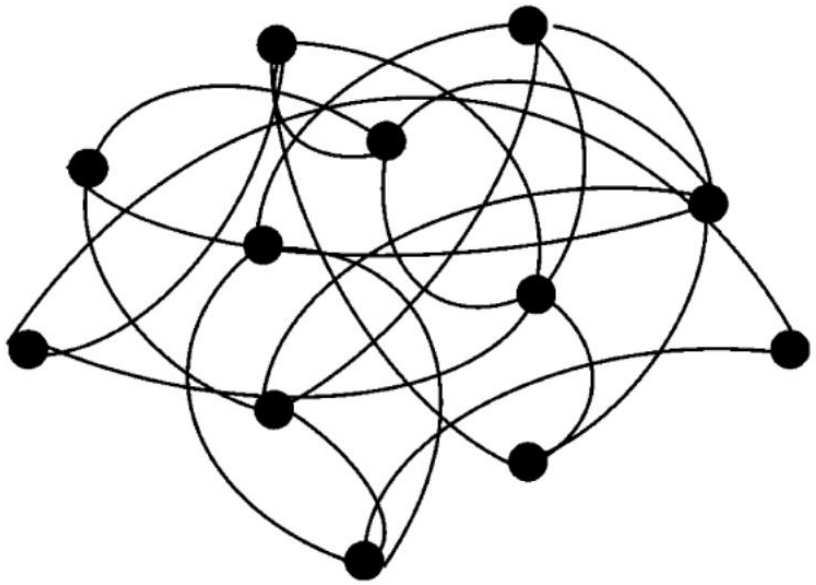


Figure 11 *Network Structure* 2006. Reproduced from *Avatars of Story*, by Marie-Laure Ryan. Minneapolis, MN, USA: University of Minnesota Press. p103. By permission of Marie-Laure Ryan.

A searchable database is one example of a sea-anemone structure (figure 10). This system may not suit stories that require a strict chronological order but can be used where a broad outline of the story is generally known and each node may present different thematic material or perspectives on the events. The network structure (figure 11) is the most sophisticated of level two structures and emulates the interconnectedness of the rhizome structure. The structure is cyclical in that it loops around—there are several pathways to get to the same node. This requires ingenuity on the part of the writer to create story events that make sense of these cyclical nodes on both a narrative and/or a discourse level.

Role-playing games (RPGs), mystery and adventure games sit within layer three of the interactive onion. The user plays as an avatar that can directly interact with their environment. The player has more freedom in their actions but ultimately the actions drive variations of a pre-defined story. These narrative computer games suit Campbell's

hero's journey structure. For instance, the hero's goal is typically to rescue the princess, escape the dungeon or recover a missing artefact. This level of interactivity means every run of the computer game produces a variation of the avatar's experience and an alternate history that puts the life of the avatar at stake. Ryan reconfigures the maze structure as it applies to narrative games in layer three of the onion (figure 12).

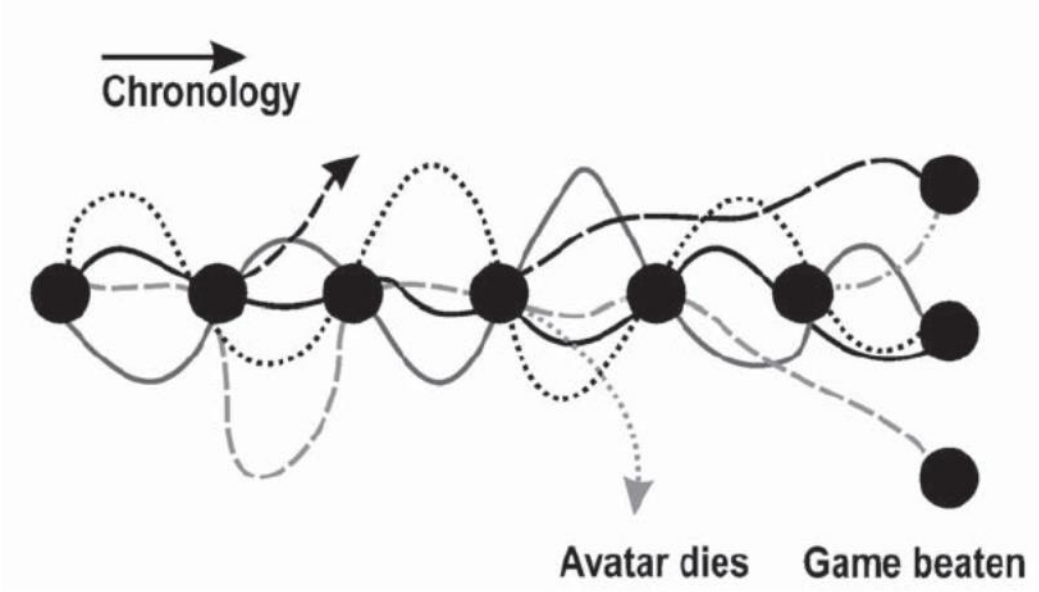


Figure 12 *Structure of a Game with Predefined Scenario and Multiple Endings* Reproduced from *New Narratives: Stories and Storytelling in the Digital Age*, edited by Ruth E. Page and Bronwen Thomas, by permission of the University of Nebraska Press. Copyright 2011 by the Board of Regents of the University of Nebraska. Created by Marie-Laure Ryan.

Players have flexibility to explore the spaces between the nodes. This can be in the form of completing mini-quests, talking to non-playable characters to find out back story or collecting artefacts. This fluctuation offers more agency but inevitably each game variant merges at the checkpoints. These pre-scripted nodes ensure that players move forward in the game with specific narrative information to make the story cohesive or have achieved certain skills or gained certain artefacts to reach the next stage. It is worthwhile noting that Eskelinen (2012, 225) criticises the application of Ryan's interactive narrative model

to games. While some role-playing games have closed sequences of events, they also contain open events which take place as players attempt to fulfil the quest. This produces variation in game play so that each narrative experience will be unique depending on the player's skill and strategy. These experiential variations do not occur in films or books.

Ryan's third layer is similar to Henry Jenkins' (2004) proposal that game interactivity be approached through narrative architecture. He suggests that game designers create worlds and sculpt space for players to enact a story. They need to embed the bones of the story in the space (the nodes) and lead players to find the information. This is comparable to classic narratology studies that make the distinction between story and discourse: "Story is what is told whereas discourse refers to how the story is transmitted" (Shen 2005, 566—567). Russian Formalism (a movement that strongly influences modern-day narrative theories) provides a further refinement on the story–discourse division. These practitioners recognise the 'sjuzhet' (the artistic arrangement/presentation of the narrative) and the 'fabula' (the narrated events and actions of the characters). In language-based text, the sjuzhet could refer to lexis, syntax, and techniques such as analepsis or prolepsis.

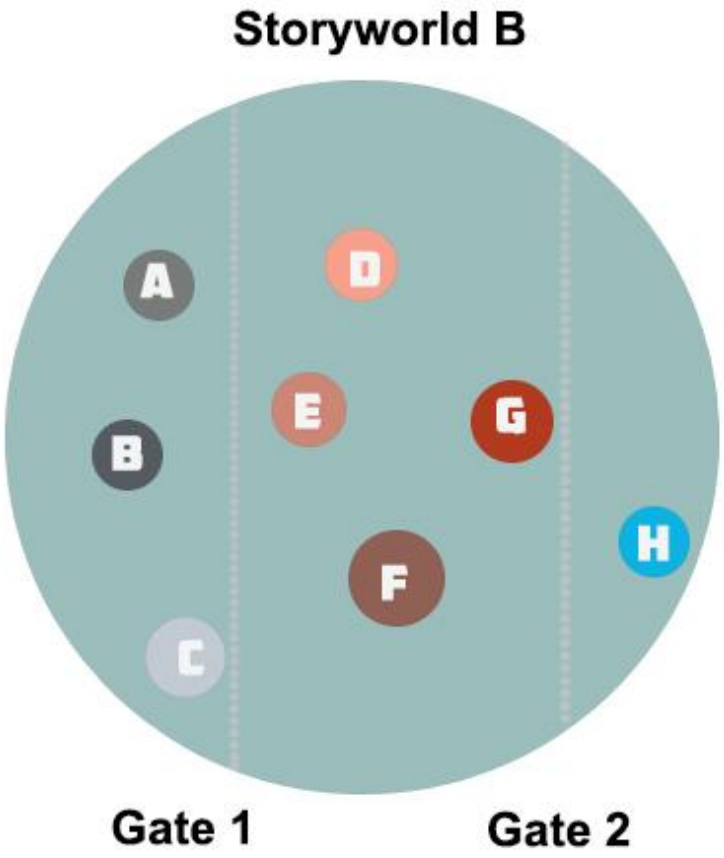


Figure 13 *Embedded Narrative Structure* 2015

In a game, the sjuzhet could refer to narrative architecture. In the diagram above (figure 13), story world B could represent the corrupt underbelly of a metropolis city. Nodes A through to H are connected events (fabula) that sit in this story space but are strategically placed out of order. The placement of events has been embedded this way by the designer to create a challenge for the player as they explore the seemingly open world and unlock the secrets. The gates are similar to the nodes in Ryan's model. Players need to achieve certain information or gain certain skills/artefacts before unlocking a new area for exploration. Few stories are absolutely linear (Fludernik 2009, 4) in that they rarely follow the same ordering as the plot. In a detective novel, the author rarely reveals the events in a chronological order but will spread out the inciting incident, the motivation, and the investigation to build suspense. Both the detective novel and the narrative game are in a sense 'embedded narratives' as they are less like temporal structures than a body

of information strategically laid out in a space for the reader/player to reconstruct the events (Jenkins 2004).

In layer four of the interactive onion, real-time story generation moves away from agency in navigation to a more direct interactivity where users are co-authors. This is similar to interactive fiction, where the player needs to fill in the correct words to unlock the next section. However, the point of difference being the real time, direct responses from non-playable characters to the player's input. Jenkins (2004) calls this approach 'emergent narratives'.

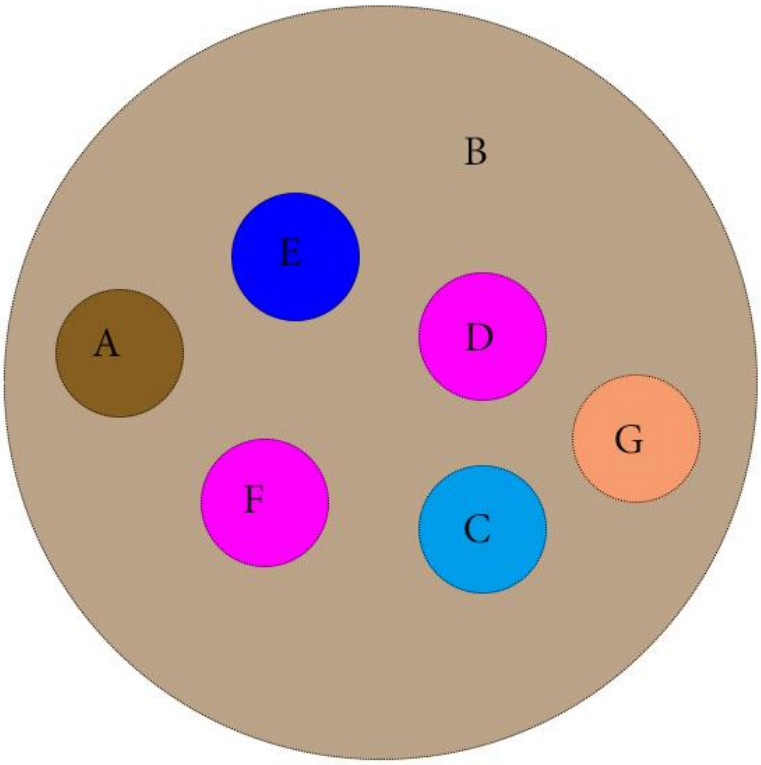


Figure 14 *Open World Narrative* 2016

Open world narrative consists of building an open story world where players can explore, complete quests, and build their own story. Games such as *Minecraft* (2011) and *Grand Theft Auto* (1997) are examples of this sandbox style of exploration.

The deepest layer of the interactive onion refers to meta-interactivity, such as the world-building activities in massive, multiplayer online games (MMOGs). Devoted gamers

participate by building maps, designing costumes, changing characters and introducing new objects to enrich their communal story world. These fan-based modifications (known as 'mods') are often approved by the publisher and increase replay value for the gaming community. At this level, the player takes on the role of co-author.

3.3.2 Ryan's Participatory Dichotomy

Ryan's interactive onion offers one way to classify how users interact with a system by focusing on levels of user participation within digital narrative structures. She has also devised a second typology that dissects the onion model based on the player's position and navigation within the narrative space: internal/external and exploratory/ontological (Ryan (2004:339, 2006:108). The internal/external mode describes the player's position within the story world. In internal mode, the player projects themselves as members of the virtual world by controlling an avatar. This avatar can interact with their physical environment; for example, by moving, jumping, or shooting. This can be shown in either first person or third person mode. In a typical first person mode, the player sees the world through the eyes of an avatar. This is designed to be a more immersive gaming experience as the player is able to project onto the avatar more effectively and therefore feels more concerned for how their decisions will affect their avatar. In third person mode, the camera is positioned over the shoulder of the character so the player can see the avatar's back to facilitate more interaction between character and environment as well as greater customisation of the character. In the external setting, the user is situated outside the virtual world. For instance, real-time strategy games usually present a top-down view of the entire game map that tends to distance the player from the space (external mode) as they control their avatar through the terrain. Players take on the role of 'god', who controls the virtual world from above, or conceptualise their own activity as navigating a database (Ryan 2004, 2006). The second mode describes how the user navigates through the story world: that is, whether the system is exploratory or ontological. In an exploratory mode, the user will freely move around the database but their movement will not alter the plot. In the ontological mode, the decisions of the user send the history of the world on different forking paths. Based on this model, digital

narratives fall under four categories: Internal/ontological, Internal/exploratory, External/exploratory and External/ontological.

Ryan's participation dichotomy and the interactive onion models can be combined to offer a deeper approach to describe interactivity as it applies to digital narratives. Texts that access layer one and layer two of the interactive onion can also be described as an external/exploratory mode as the user does not play a role of a member of the fictional world and their activity is limited to exploring a textual space (Ryan 2011, 44). Both types of classification system are useful as the interactive onion provides specific information on how interactivity affects narrative structures while the user participation dichotomy focuses on two specific types of interactions enabled by the affordance of digital media: a positioning of the player (framing the story world) and navigation through the system. My initial experience with digital literature suggests that most language-based texts sit within layer one or two of the interactive onion. However, the question of framing the reader is more complex as the mechanism of reading does not require the performative aspect of projecting onto an avatar. I suspect that an external mode would suit the interactive design for my main studio work, the *Limerence* project. Classic path finding adventures and interactive fiction also swing between ontological and exploratory mode depending on whether navigational choices are replayable. In a book format, you can always return to the previous page but in a digital environment, the return path can be tightly controlled. In the development of *Limerence*, I will explore a balance between ontological and exploratory modes. The combination of Ryan's taxonomies establishes practical criteria for analysing works through a transmedial narratology lens. By adopting a neutral position that does not privilege any particular art form, the theory considers equally the effects of the semiotic, technical, and cultural affordances of digital media on narrative structures. In the next chapter, I explore Ryan's criteria as a framework to analyse a range of digital works and deconstruct three seminal case studies. Deeper investigation of gaming and readerly interactions enabled me to develop the concept of the transmedia triangle as a production model for the *Limerence* project.

Chapter 4: Narrative Analysis

The first great works of digital literature are already being written.

(Naomi Alderman, 2015a)

In her regular gaming column for *The Guardian*, novelist and game designer Naomi Alderman (2015a) claimed that games are the first great works of digital literature. She cited works such as *Portal* (2007) for its colourful antagonist GLaDOS; *Papers Please* (2013), which is both game and social commentary on America's immigration policies; and *Gone Home* (2013) for its immersive mystery narrative. When I raised this article with several of my game designer colleagues, it raised derision that games needed to be merged with literature to be considered a 'high' art form. It made me re-consider the film critic Robert Ebert's edict that games can never be art (2010). While I realise that Alderman's article is in support of the artistic merit of games, does her claim trivialise both the reading and gaming experience by hybridising the two forms and encouraging digital writers to emulate games in their works? From an outward appearance, it seems dismissive of the rich tradition of games to say that narrative games cannot exist as independent artworks without being subsumed into literature. Alderman's attempts to link literature to games is revealing of a culture that evaluates works of digital narrative based on interactivity. Her attitude is not unique. In his keynote speech at the Electronic Literature Conference, Espen Aarseth (2015) claimed the future of electronic writers resides in game companies. In Chapter 2, I pointed out the shifting boundary of the term transmedia to encompass everything from ARGs to story applications. Part of the confusion rests with the uncertainty of privileging gaming interactivity as the primary criterion for judging digital works. My research centres on investigating 'readerly' interactions: are they just a subset of games? Do digital readers need to embrace interactive fiction and multimodal narratives or otherwise return to the traditional book form? To answer these questions, I needed to conduct a broad preliminary analysis exploring the types of narratives that can be represented in new media.

4.1 Preliminary Data Analysis

I combined Ryan's user participation dichotomy and her interactive onion layers to draw

out user patterns and trends in the literature. Twenty-five works were selected for review based upon recommendation from academic scholars in the discipline and industry practitioners. Despite my initial intention to select works based on readerly interactions, a cross section of works from various media were selected including books, mobile, tablet, video, web, and broadcast television. I did not restrict the analysis to language-based works because I needed to explore whether transliteracy has changed the act of reading. If all texts are multimodal, do we access different or additional reading skills to accommodate new media technologies? While I will discuss some results here, Appendix 2 tabulates the full results. Each entry contains a brief description of the media and narrative premise. The extent of language-based narration is assessed by the mode of narrative transmission, establishing whether it is diegetic/mimetic and autonomous/illustrative. I investigate user position (external/internal), navigation (exploratory/ontological) and the layers of the interactive onion to evaluate the types of interactivity of each work.

i. Ryan's Interactive Onion:

I categorised language-based narratives that require more reading in the traditional sense such as the interactive fiction *Glass* (2016), the interactive comic *Bottom of the Ninth* (2012), and the novel *To Be or Not to Be* (2013) within layer one or two of the onion. Their interactivity is limited to echoing themes or allowing the audience to choose pre-scripted pathways in a simple, branching narrative structure. In contrast, Michael Joyce's *Afternoon* (1987) is a classic hypertext story created in Eastgate's Storyspace software that extends beyond the basic branching tree narrative. The protagonist witnesses a car accident and fears the victims were his ex-wife and son. Throughout the course of the story, the protagonist re-visits this accident repeatedly. The reader has several options of interpreting his actions. The protagonist could be a time traveller but, as this story is clearly not in the science fiction genre, this is unlikely. A more reasonable explanation would be that the protagonist can't stop thinking about the accident and is revisiting it in his mind. This version incorporates the hypertext structure into the plot, making it a significant part of the story world. In making the navigation part of the inner discourse of the narrator, Joyce has presented a more clever solution than if he set a time travelling premise or if the repetition of the original scene has no significance to the story and is just

accepted by the reader as part of the structure of the machine (Ryan 2006). This work is an example of a more complicated networked structure where the reader can move around with more flexibility but inevitably loops back to the beginning. *Highrise: Universe Within* (2015) is an online interactive story produced by the National Film Board of Canada. This non-linear narrative resembles the sea-anemone structure. The narrative explores the digital interconnectedness between isolated people around the world. Users have the choice of following three avatars who guide them through the stories. This leads to more story choices, which branch out like satellites surrounding the main avatars. There is a story about a woman fighting amyotrophic lateral sclerosis in Tokyo, one about an ex-convict in Harlem, and one about a female Saudi comedian. To accommodate the indeterminate ordering of events, the designer needs to build in a level of narrative abstraction. In *Afternoon*, the looped event forms part of the discourse— in *Highrise: Universe Within* we experience a more searchable database. Each story is self-contained and connected by a theme so the entry point into the story does not matter. While the basic branching narrative seen in *To be or Not To Be* can be reproduced in print or digital media, the complex structures seen in *Highrise: Universe Within* or *Afternoon* can only be achieved through the procedural properties of digital media.

The classic, adventure game *Myst* (1993) fits within the third level of Ryan's interactive onion model. The user plays as the 'Stranger' who arrives on the deserted island of Myst. They need to work out what has happened to the missing explorer Atrus by choosing to follow the advice of his manipulative sons Sirrus and Achenar. The game has a maze structure that exists on two levels. Firstly, the play environment consists of winding paths, secret rooms, and abandoned buildings, which are designed to disorientate the player and facilitate exploration. Secondly, the narrative choices the player makes throughout the game, culminating in whether to trust Sirrus, Achenar or neither, will determine the various endings. *Her Story* (2015) presents a variation of the third onion layer with its interactive movie-game format. In this police procedural game, players search through a database of video clips. The videos consist of police interviews with Hannah Smith whose husband Simon has disappeared. These videos are short excerpts played out of order and players have to type in key words, similar to a Google search engine, to unlock more videos in order to work out a chronological order of events, the

nature of the relationship between the characters and ultimately solve the crime by discerning the criminal's motivation.

Facade (2005) is a real-time game drama that demonstrates the fourth layer of Ryan's interactive onion. The game starts with a telephone call from Trip who is inviting the player over for drinks. The player takes on the role of an old friend of Trip and his wife Grace. The player navigates using the arrow key and can input text to speak directly to Trip or Grace. On the surface, Grace and Trip appear to be model dinner hosts but during the fifteen minutes of game play, the player's interference can either unravel or save their marriage.

ii. Internal/External Mode:

All the games reviewed are presented in internal mode; the player is situated in first- or third-person mode within the story world and players interact with the virtual world through an avatar. The text-based interactive fiction *Glass* is presented in second-person narration and is also in internal mode. Second-person narration is not equivalent to first-person mode in gaming but is a literary device utilised to immerse the reader so that they are able to project more directly onto the character. I found it difficult to engage with the story world of *Glass* as I found the prose unsophisticated and it seemed more focused on providing directions to achieve the next goal rather than setting up the narrative. This is not to suggest that second-person narration cannot have literary merits. *The Treatment* and *The Cure* (both 1984), two two autobiographic novellas by Peter Kocan, tell the compelling story of the author's incarceration into a mental institution following an attempted assassination. The use of second-person narration throughout echoes his feelings of being a cog in the wheel of the mental health institution and perpetuates his disconnectedness from the crime. This is also the style of narration used in the classic *Choose Your Own Adventure* book series (1979–98) where the simplicity of language pitched at middle-grade readers coupled with the gamification element worked to its advantage. Ryan North's *To Be or Not To Be* is an adult path-finding adventure book using second-person narration, and North lends his comedic writing style to adaptation of Shakespeare's *Hamlet*. It may simply be a case that second-person narration is challenging to write well because readers and writers are unaccustomed to this style and

not because it shifts the reader's position in the text. *Inanimate Alice* demonstrates both internal and external mode. For the most part, the reader does not directly control story outcome or play as part of an active member of the story world. However, there are segments where the reader plays games (as Alice the protagonist) to get past certain points.

iii. Exploratory/Ontological Mode:

Whereas most computer games offer an ontological mode of navigation, digital readerly texts such as interactive fiction and hypertext are usually designed to be explored. Chris Ware's *Building Stories* (2012) is an excellent example of a literary work in exploratory mode. The story follows the life of an unnamed protagonist as she moves from an apartment block while she is in her early twenties to a domestic life as a mother and wife in the suburbs while she is in her thirties. It has been playfully designed to resemble a board game but when the reader opens the box, they are confronted with fourteen separate items, among them a game board, comics, graphic novel, newspapers, and a flipbook.

The reader can explore the work in any sequence but each piece has a self-contained three-act structure and the overall story progresses chronologically. Even if the reader picked up the work from when the character is forty years old and then jump back to when the character first moves into the apartment in her early twenties, this would be accepted as a flashback and would not interrupt story consistency.

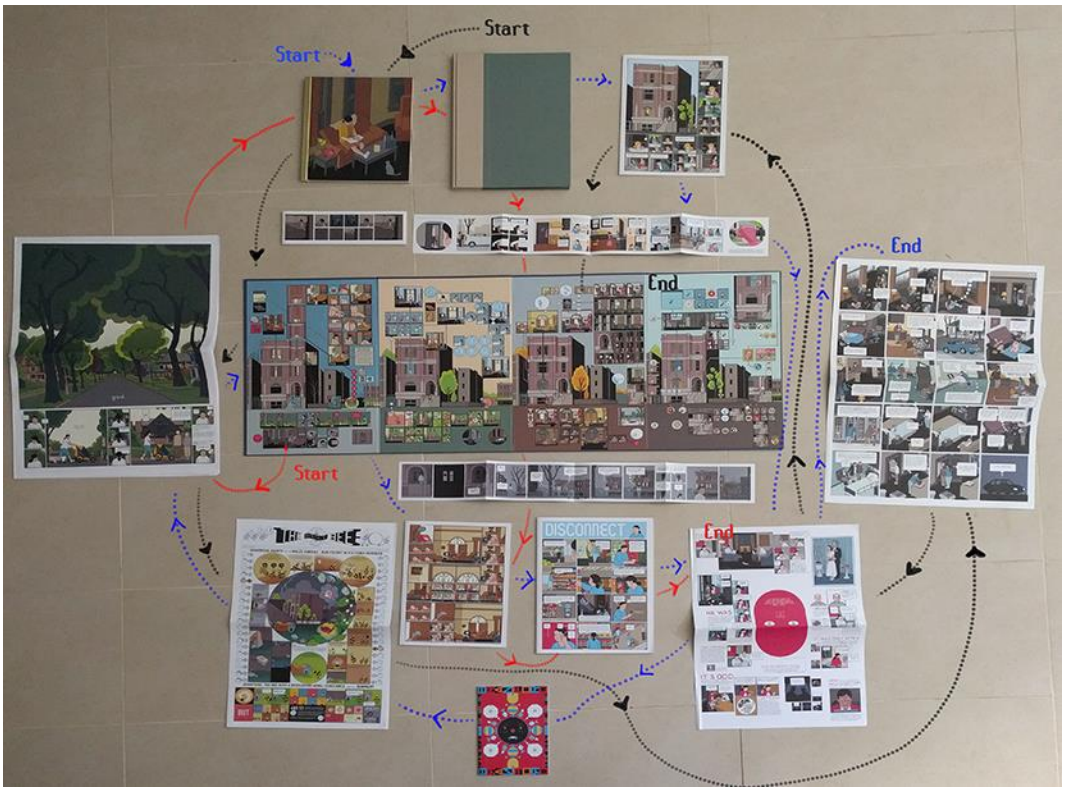


Figure 15 *Diagram Showing Navigational Pathways for Reading* 2016.

I composed a diagram to map the various pathways I took on three different reading experiences of *Building Stories* (figure 15). *Building Stories* is structured like a rhizome; entry can be from any node. Game theorist Alison Gazzard (2013, 19–25) describes three types of routes to traverse between point A and B. In one, the routes can be determined by the walker through the process of wandering. In another, it can be a prescribed path such as shortcuts or a concrete sidewalk. The third route can be determined by ritual; that is, it can be part of a prescribed pathway that diverges to take on new meaning for specific sets of people. The routes I took in *Building Stories* were non-prescriptive and can be likened to wandering through a forest, with the pathways emerging as I walked. There is no sense of escaping the maze, overcoming obstacles or reaching the end. The goal is in the wandering and the exploration of the space.

Ryan's interactive onion and user participation classification provided a sense of how interactivity had been tailored to reveal narrative in different media forms. Language-based works sit within the superficial layers of the onion, focusing on presentation to create new ways to explore space. Where deeper levels of interactivity were incorporated

(such as *Inanimate Alice*), the gaming elements were distinctly separated from the readerly elements. To delve deeper into how narrative meaning is communicated between language and non-language-based modes, I also included aspects of Ryan's binary pairing for transmedial works in the analysis.

i. Autonomous/Illustrative Mode

To Be or Not To Be demonstrates how non-linear narratives can take advantage of the illustrative mode to engage audiences with more sophisticated plots by relying on presumed knowledge of the reader. Adaptations of classic stories are a recurring technique, as seen in *The Lizzie Bennett Diaries*, *Glass*, *Ipoe* (2012), and *Frankenstein* (2012). This approach seems to provide a narrative shortcut as players arrives at the story experience with collective knowledge, allowing the writers to focus on playing with the affordances of the media to present established information.

ii. Diegetic/Mimetic Mode

I experienced a sense of disconnect when multimodal works jumped between diegetic and mimetic storytelling techniques. In *Inanimate Alice*, I frequently had to switch between reading and gaming tasks. Similarly, I experienced the same disruption in interactive fiction works such as Emily Short's *Glass* when I had to stop reading to input the text to advance the next story section. The amount of effort to guess the text made me quickly give up and search for the cheat play through. In *Inanimate Alice*, I eventually elected to turn off the gaming option, rendering it into a full reading experience. Part of the underlying problem could be the effort required of the receiver to switch between the different activities so as to understand diegetic and mimetic storytelling. In diegesis, the audience is often perceived as taking on the more passive role of a listener/observer/witness. In mimetic mode, there is an expectation that they work harder to interpret the nuances of the actors or the artistic choices of the director. In addition to the 'show, don't tell' style of narration, game designers adopt a 'do, don't show' philosophy whereby it is much more effective to make the player complete an action so that they empathise with the character's emotional state in response to a plot point. Jumping between different activities in multimodal works can be disruptive to the overall narrative experience.

This preliminary review provided insight into how designers present interactivity in digital narratives and how audiences engage with the interactive elements of story. The majority of works were designed non-linearly, with a mix of branching, labyrinth, and open-world structures. Narratives that were described as games by their designer were able to penetrate the deeper levels of Ryan's interactive onion and positioned the player internally. Ludologist Eskelinen (2012) considers Ryan's model poorly suited for game analysis. He reiterates the importance of framing games using formal features such as the presence of rules, as opposed to shifting the emphasis to stories which he considers only a possible side effect of games. I find the opposite is true; Ryan's model provides a lens to focus on narrative games whereas literary texts have difficulty penetrating the deeper layers of her interactive onion. Readerly texts (that is, works where written language is used as the principal mode for expression of thoughts) tended to be limited to echoing themes or choosing branching pathways. Based on observations from the preliminary review, I singled out three case studies that demonstrate different approaches to designing for readerly interactions: *Device 6* (2013), *Gone Home* (2013), and *Journey* (2012).

4.2 Case Study: *Device 6* (2013)

Simogo Studio's philosophy is to create game-like experiences that are playful and do not fall under particular game genres. Their past works *Sailor's Dream* (2014) and *Year Walk* (2013) do not fit the traditional definition of games in that there are no definitive goal-orientated activities. *Sailor's Dream* (2014) is an exploration of space where the audience can listen to music, read short stories and interact with various artefacts in a space. *Device 6* continues this temporal–spatial exploration but focuses on readerly text as a visual expression. The official description of the game claims that it "plays with the conventions of games and literature, entwines story with geography and blends puzzle and novella" (Simogo 2016). The protagonist Anna wakes up trapped in a tower with no recollection of how she arrived there. The words on the screen form both the story content and the space the player has to navigate to escape. *Device 6* cleverly uses the text to visually represent the ontological choices of the reader. For instance, when Anna walks down the hallway, the text is squeezed into a single line. If she has a choice between two rooms, the text splits into two paths and the reader has to choose between swiping left or

right. The maze-like layout of the mysterious house is emphasised as the reader flips the tablet left, right, or upside down to follow the text.

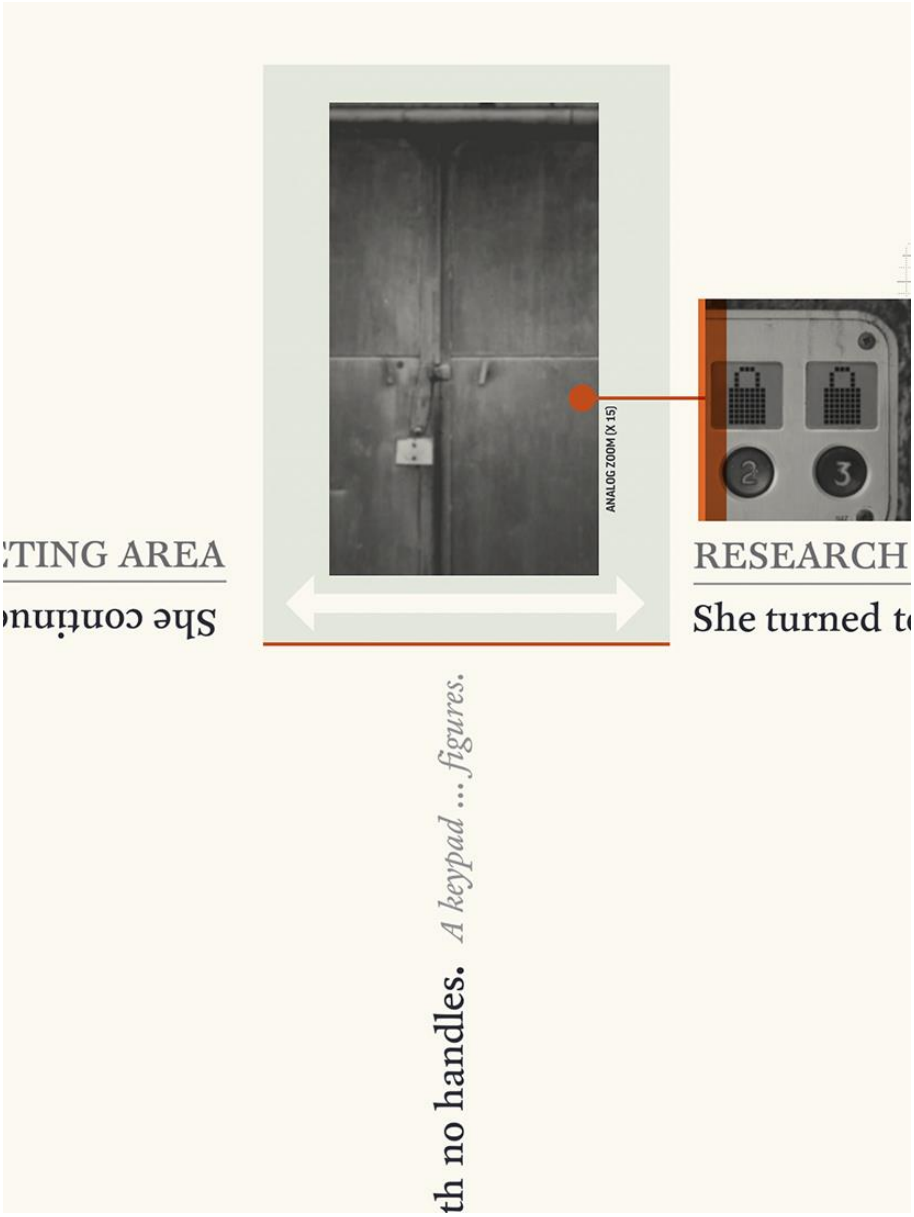


Figure 16 Simon Flesser *Device 6* (Screen shot 1 from mobile game application) 2013. © Simogo Studio.

Each chapter is a multi-cursal maze, with obstacles such as safes to be opened and doors to be unlocked. As the reader explores the rooms, laboratories, garden, chapel, and galleries, they build a visual map of the geography of the castle.

4.2.1 Spatial–Temporal Storytelling and McCloud's Infinite Canvas

Literary theorist Mikhail Bakhtin devised the concept of the 'chronotrope' to point out the intrinsic connection between the temporal and spatial dimension of narrative (Bakhtin 1981, 119). The chronotrope is a way of understanding the story world by making narrative events concrete. Space in stories provides more than just a background; in novels, both space and time are required to anchor characters' actions. Take, for example, the following passage from a theoretical story:

When she was certain Trevor was sleeping soundly, she slipped out of the bedroom and padded down the hallway. It seemed the ancient portraits hanging on the wall were staring at her as she rummaged through the chest of drawers. Her hands closed around the brass key at the moment Trevor let out a snort. She froze. After a suspended moment, his snoring resumed its normal rhythm. She took a step forward but the floorboard creaked under her weight. Damn! She stared at the knot of rotting wood at her feet. Where was the carpet that lay there, muffling the sound and lighting a path to the front door?

The action describes a girl sneaking away from her captor, but, to build suspense, the reader needs to have an image of the story space. The protagonist has sneaked out of the bedroom but she is still only down the corridor, close enough to hear the villain snoring. Freedom is through the front door at the end of the corridor, but there are creaky floorboards in the way. The textualisation of space lets the reader visualise the story world. Textual description can act just like framing in a film, drawing the reader's attention to detail such as the close up of the knot of rotten wood in the floor boards or providing a broad atmosphere such as the scary hallway with the portraits that seem to be alive. In this passage, the time taken in the story for the girl to sneak down the corridor is realistic. The reader uses temporal and spatial information to build up a cognitive map to comprehend the narrative (Ryan 2004b).

In *Device 6*, there is a double articulation of this temporal–spatial link:

As she got to the bottom of the stairs a door blocked her way. She peeked through the keyhole. A long corridor. There was nobody there. Anna opened the door and lightly stepped onto an expensive looking carpet that stretched out as far as she could.

As text presented on a page, the reader can work out that Anna is inside a room peeking outside down a mysterious, long corridor.

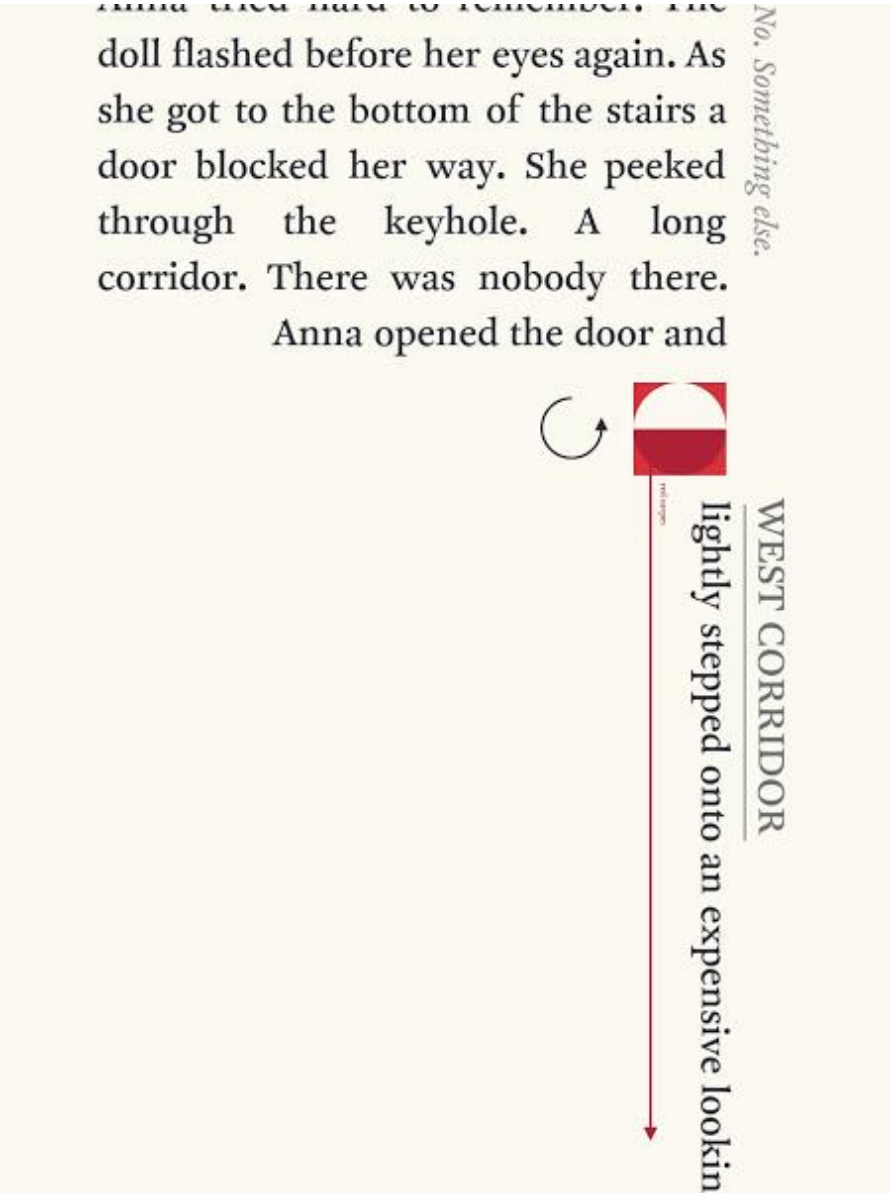


Figure 17 Simon Flesser *Device 6* (Screen shot 2 from mobile game application) 2013. © Simogo Studio.

However, game director Simon Flesser has also visually represented the action by using the shape of the text to form a long corridor. The reader has to flip the tablet on its horizontal axis and swipe the screen right to continue reading what happens as Anna traverses the corridor. In Chapter 3, I discussed the need to move past skeumorphic designs in digital media. Flesser uses the procedural and spatial properties of the tablet to extend beyond the page layout to form an additional dimension to spatial–temporal narrativity.

Many story applications designed for children borrow the page metaphor to prompt readers to make the connection between turning the page and swiping the tablet screen.

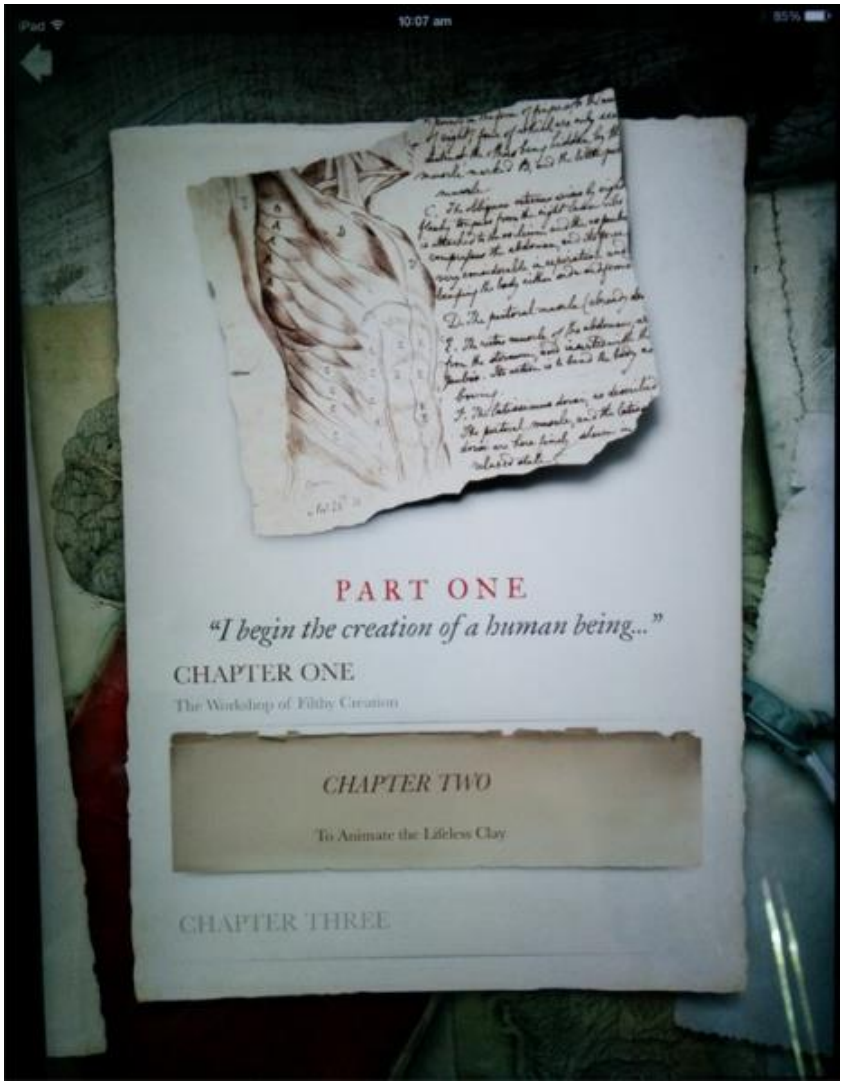


Figure 18 David Morris *Frankenstein* (screen shot of story application) 2012. © Inkle Studio.

The story application *Frankenstein* (2012) goes so far as to use yellowing, old style parchment for their background, with sound effects like crumpling paper as the reader navigates between sections (figure 18). This is both a stylistic choice—adding to the gothic undertones and a navigational cue. Although skeumorphism can aid the readers to navigate new media, it can also hinder creativity and innovation when designing for iPad applications because the designer continues to think of content as page-sized chunks instead of a layout that suits the properties of the media. Comic book theorist Scott McCloud (2000, 200–222) proposed the concept of the digital space as an infinite canvas for artists to create story maps, with the screen acting as a window frame. He defined the comic form as a sequence of pictures moving in time; according to this definition, comics always existed as a temporal map until the introduction of the book medium. Before the advent of the page, cultures produced hieroglyphs, tapestries, and scrolls. Even the Palaeolithic paintings on the Lascaux caves were a form of sequential art works unbroken by the page.

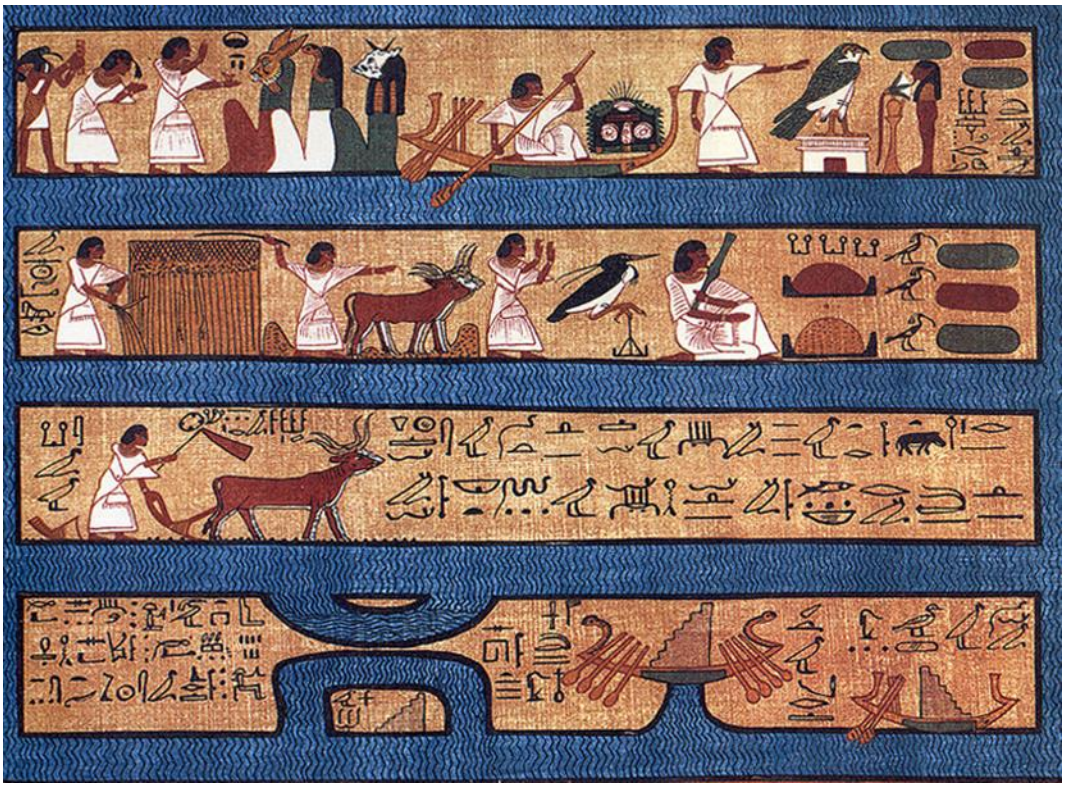


Figure 19 *Bd Field of Hotap.* From Book of the Dead of Ani showing the afterlife of Hotap. Courtesy of Wikimedia Commons

Digital comics open up the opportunities to return to the infinite canvas. Using the computer screen (or in this case, the iPad) as a window, the reader must navigate through the sequential images in infinite space. McCloud describes layout possibilities from vertical stacking to a series of panels that turn at right angles. *The Right Number* (2003) is his web comic that utilises the z-plane; with each click of the mouse, readers move deeper into the z-plane to reach the next story level.

McCloud correctly predicted that the infinite canvas metaphor has application in other art forms. This is true of the game *Device 6* where story world is spread out past the constraints of the page. Flesser also applies multimodal techniques to play with spatial–temporal storytelling. The sound design is sparse but deliberate; at times, it provides a cue to circumvent text description. For example, Anna's movements into and out of rooms are rarely described in text. Instead, footsteps can be heard getting louder followed by the turning of a doorknob or the knocking on the door. Black-and-white photographs of old-fashioned machinery, and surreal paintings and props convey the eeriness of the rooms. The images scroll creating a parallax effect enhancing the sense Anna is moving through the room. The writer has designed a thoughtful balance between diegetic and mimetic storytelling using imagery, interactivity and text, as evidenced by the following passage describing the Product Evaluation Area:

All around her were panels, buttons, screens and cables that together formed the skeleton of an outdated—yet unarguably advanced—operation. An earthen floor and weeds by the corners contrasted the high tech surroundings. This was truly a shell, nothing more than four brick walls stuck in the ground. She stopped by an enormous magnifying glass device. Around it stood a couple of mannequins that all had melted in different ways.

This is accompanied by an image of the magnifying glass. Pressing the button causes a slot in the machine to pop up and down while emitting a low-fidelity, retro beep.

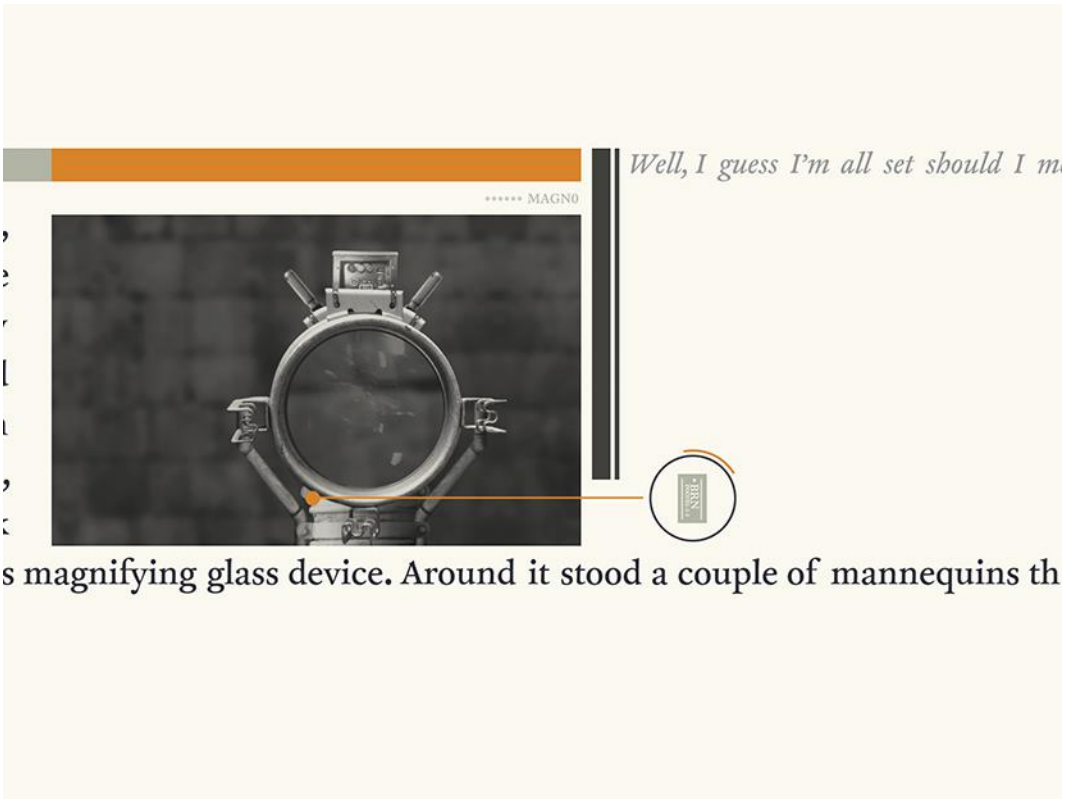


Figure 20 Simon Flesser *Device 6* (Screen shot 3 from mobile game application) 2013. © Simogo Studio.

The text offers a brief description but does not get into the details of the device or offer any back story explaining what this device can do. The reader's knowledge of the machine is exactly as Anna narrates it. We see what she sees and we play with the machine exactly as she would without understanding the machine's capabilities. The multimodal elements can occur naturalistically, often without having to be switched on. For example, sound starts as we move close to a target and fades as we move away. We can operate different devices as part of our exploration. The various devices do not use the symbol of a triangle inside a circle to signify that a video should be played. This intuitive navigation system makes it easier to switch between diegetic and mimetic storytelling modes. The multimodal elements work together to mimic hallways, staircases and rooms twisting and turning to create a sense of disorientation. *Device 6* can be described as a readerly text insofar as written texts forms the majority of the action and the story world. It is an innovative exploration of text-as-storyspace with separate

language and puzzle elements. In the next section, I analyse *Gone Home* (2013), which has a different approach to hybridising gaming and readerly elements.

4.3 Case Study: *Gone Home* (2013)

In *Gone Home*, the player takes on the role of Kaitlin, who returns home after a year abroad. She arrives on a dark and stormy night and finds the house completely deserted. There is a note pinned to the door from her sister Sam telling her she is gone and not to go looking for her. The player must find out what happened to Sam by exploring the house. They can open drawers, read letters, listen to tapes, and examine the objects in the house to piece together the mystery.

Figure 21 Steve Gaynor *Gone Home* (Screen shot 1 from game) 2013. © Fullbright Company

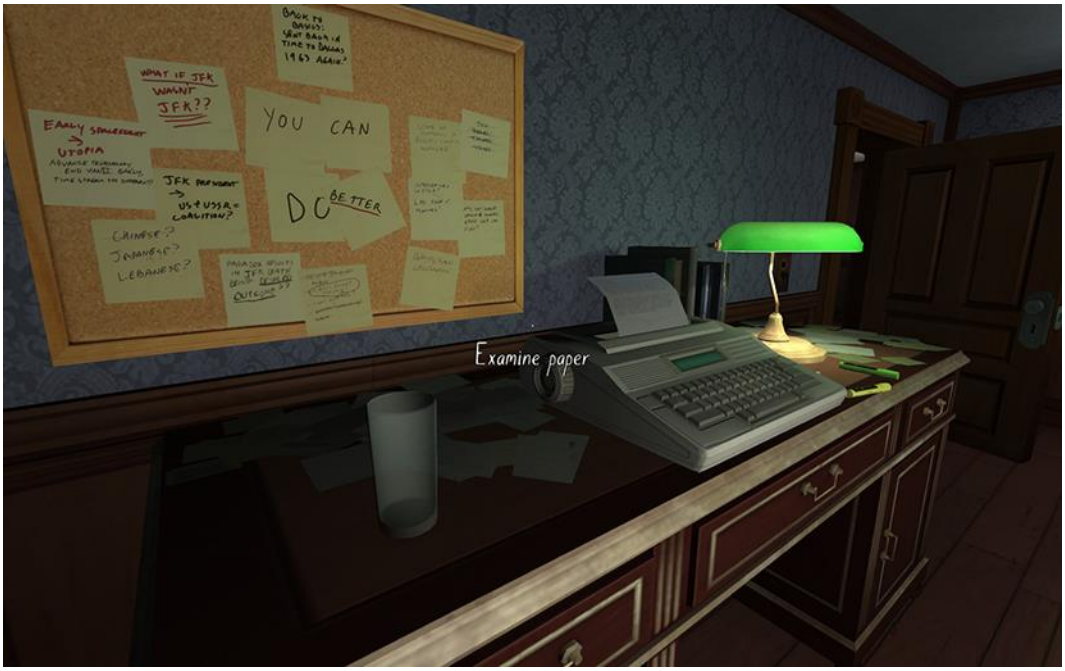


Figure 22 Steve Gaynor *Gone Home* (Screen shot 2 from game) 2013. © Fullbright Company

Unlike *Device 6*, which uses words to form the environment, *Gone Home* (2013) uses 3D models to create the house interior. The mansion is carefully designed to give the impression of wealth with expensive-looking furniture, floral wallpaper, and elegant, family photos. Half-opened boxes reveal that the family is in the process of moving in. The artefacts have been designed with meticulous detail; cassette tapes, typewriters, Sonic Youth Posters, and zines all suggestive of a nineties setting. This deliberate curation builds a superficial layer of family life, leaving the player wanting to delve deeper, since, clearly, not everything is as idealistic as it seems. The ominous undertone is heightened by the storm outside; the occasional rumble of thunder and flickering of lights. The designers have played cleverly with the genre schema and subverted expectations that this is just another scary mansion story. We see red smears on the bath tub. Sam and her girlfriend Lonnie have a macabre, gothic fascination with performing ghost hunts in the house. An obituary of their Uncle Oscar and separate references to Sam being called the 'Psycho house girl' suggests the uncle committed a transgression, became a recluse, and his spirit still haunts the house. However, as players delve into the

mystery, the flickering lights are explained by a building inspection letter and the red paint turns out to be hair dye. There is no supernatural reason for Sam's disappearance.

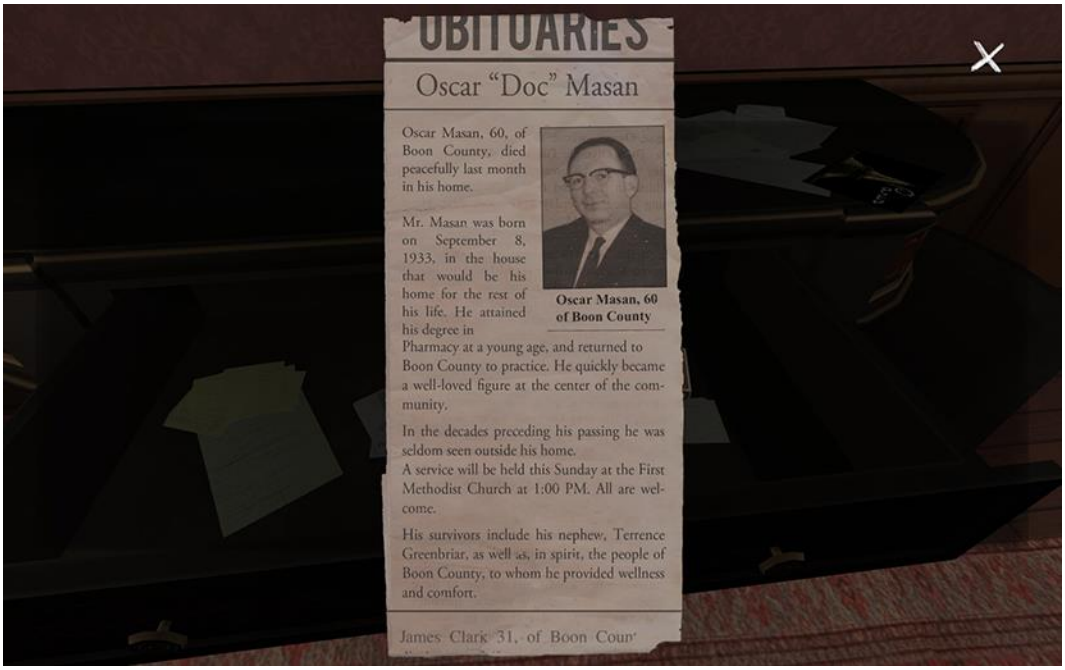


Figure 23 Steve Gaynor *Gone Home* (Screen shot 3 from game) 2013. © Fullbright Company

The bulk of the story is told in epistolary form—through letters, post-it notes, and journal entries carry—although other hidden objects are vital for building a picture of the family dynamics. A hidden bottle of alcohol in the father's study, a box containing his unsold novel, and some letters from his editor suggesting he is battling with writer's block. Similarly, a note from the mother's girlfriend, a trashy romance novel, and a wrapped condom paints the picture of an unsatisfied wife having an affair. The denouement is revealed through Sam's journal. She explains to her sister that she has eloped with her girlfriend Lonnie. Sam's journal is the very last item found in the game but as the player explores the house, she reads aloud snippets of her diary. This is necessary to tie together the main plot points.

Players are granted a high degree of freedom to roam the house but the actual structure is a branching narrative with fluctuations best described by Ryan's game structure in layer three of the interactive onion or my interpretation of Jenkins' embedded narrative

structure (see Figures 12 and 13). Gates lock the various floors of the mansion. Players can explore different areas on the ground floor in any order but some gating mechanisms require keys or codes to unlock certain rooms. These puzzles are not challenging and are clearly mechanisms utilised to control the order in which players can access stories. The father's story is mainly contained on the ground floor, in his study and library. The mother inhabits the garden room, the hallway, and the kitchen. Oscar's story haunts the basement. Sam intrudes into all these spaces but her main presence is in her bedroom and attic.

Gone Home has received numerous accolades since its release, including the IndieCade Audio Award, two Spike VFX awards, as well as being a finalist for Excellence in Narrative at the Independent Games Festival, San Francisco. Despite its success, reviews are polarised, with some critics unable to reconcile the disparity between its gamefulness and narrativity. It has been criticised for having a simplistic game mechanic for a puzzle/mystery game (Tassi 2013). The point-and-click mechanism allows the player to explore most objects in the house yet only a handful of these artefacts directly relate to the story. There is no need to store items in your backpack for later use.

Interestingly, the criticism against *Gone Home* happens to be the aspect lauded by the positive reviewers. *The Wired* (Kohler 2013) praised it as "a videogame without all that pesky videogame in the way". Reviewers saw it as a groundbreaking work that pushed the scope for how games can tell narratives. Once the player rules out the mystery/ horror genre, they realise that they are dealing with a real-life drama situation. The dramatic question then centres on what happened to Sam but because this not a horror or adventure game, there is no sweeping action. It is a coming-of-age story about a girl dealing with her sexuality. The minimal point-and-click interactivity is praised as appropriate to the narrative style.

Level designer Steve Gaynor asserts *Gone Home* is a first-person interactive story (Couch n.d.). He argues that to define a video game as needing to have win-or-lose conditions limits the scope of the video game form. Alderman (2015b) concurs, citing a rather practical philosophy: "If the creators or players of the thing call it a game, it's a game." Instead of focusing on naming a work, she urges the emphasis to be placed on critique if

it is done well. This forms a rather circular argument, since to critique a work requires a paradigm and context hence the discussion of taxonomy. Depending on whether *Gone Home* is critiqued from a ludological or a literary framework will influence its execution and reception.

4.3.1 Balancing Ludic/Readerly Design

From a ludology framework, *Gone Home* does not have enough gaming-like interactivity driving player agency. Ludology describes play as a "a voluntary activity or occupation executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy and the consciousness that is it is different from ordinary life" (Huizinga 1968, 28). Huizinga uses the terms 'play' and 'game' interchangeably, referring to play as guessing games, games of chance, strength or skills. Caillois (2001, 25–35) expands on Huizinga's work by separating 'game' from 'play' with his concept of *paidea* and *ludus*. Paidea has no win/lose conditions; it is motivated from the pleasure of improvisation or the "spontaneous manifestations of the play instinct: a cat entangled in a ball of wool, a dog sniffing, and an infant laughing at his rattle represent the first identifiable examples of this type of activity" (Caillois 2001, 27–28). Ludus refers to games with complicated rules (such as chess) which have a definitive winner and loser. There are four categories of ludus games:

- Alea – games that are based on chance, such as lotteries
- Agon – games that are based on competition where players try to beat each other
- Ilinx – games that are based on the pleasure of movement, such as mountain climbing or riding a roller coaster
- Mimicry – role-playing games, where players pretend to be part of an alternate reality.

Typical video games, such as platformers, fighting, and simulation, are ludus because they have complicated rules and win/lose conditions. It is true that in some open-world role-playing games, players make up their own goals but nonetheless they have rules, conventions, and techniques. *Gone Home* technically has no win/lose condition as described by Caillois' ludus. There is no sense of overcoming obstacles through the

player's skill. There is no pleasure from rolling a dice and relying on luck. Instead, the game falls into a similar category to interactive fiction where the goal is to find out what happens in the story. Similar to *Device 6*, *Gone Home* also relies on language-based text in the form of letters, post-it notes, and old files. Although the epistolary format is unengaging as prose, I was more engaged in the narrative than that in *Device 6* and, at times, felt genuine anxiety over the fate of Kaitlin's sister. Despite the simplicity of its gate-keeping mechanism, there is a subtler problem-solving required that is similar to how readers interpret literary works. In the story, there is not a clear explanation given for the estrangement between Oscar and his nephew Terry Greenbriar (Kaitlin's father). Players can find an obituary naming Terry as heir of the estate. In the basement, a growth chart chalked onto the wall marking Terry's growth up to his twelfth year in 1963. A newspaper clipping shows young Terry as the first customer at the new soda fountain operated by Oscar. In the safe, a return-to-sender letter from Oscar addressed to his sister (Terry's mother) begs forgiveness for his 'transgression'. In this letter, he claims he sold his pharmacy to prevent temptation. More touching is that Terry clearly dwells on the year 1963; the plot of Terry's science-fiction novel is about a time traveller who returns to that year to stop JFK's assassination. A letter from Terry's father congratulating him on working through his personal issues through the publication of his fictional work provides the last clue as to why Terry is consumed with changing events in that year. Although it is never confirmed, players conclude that the rupture is the discovery that Oscar abused his nephew. Working out this storyline gave me more satisfaction, sense of connection, and empathy than finding Sam's diary in which she spells out the denouement. This is perhaps what Alderman meant when she referred to games such as *Gone Home* as the first great works of digital literature. It is not the prose that makes it a literary success. It is because *Gone Home* uses the same type of puzzle-solving associated with books. It relies on the reader understanding the nuances of the communication of the text to make sense of the story. To further explore this style of puzzle-solving, I turned to a third case study.

4.4 Case Study: *Journey* (2012)

Journey (2012) is another game Alderman touted as a work of digital literature although it is entirely text-less. In this game, the player wanders through a desert landscape as a robed figure. No clear directions or goals exist in the game. They can touch strips of cloth that charges the character temporarily allowing them to float. Over time, the figure's scarf gets longer. The player can emit a wordless shout or sing a musical note. They meet other robed figures on their journey but cannot interact with them other than singing or leading them to find strips of cloth. There are some creatures throughout that can hinder or aid the player's progress. For instance, some floating cloth creatures remain dormant until the character sings to them. Other monsters will attack and shorten the character's scarf. Throughout the entire experience, the beautiful graphics and music as well as the lack of traditional goal-driven activities, such as completing tasks within a certain time or evading enemies, creates a soothing rhythm. The lack of pressure puts the player into a meditative, mindful state. At the end of the game, the robed figure ascends a mountain but collapses before he/she reaches the top. White figures appear to give the player new energy, allowing them to make it to the top of the mountain where they are consumed by white light.

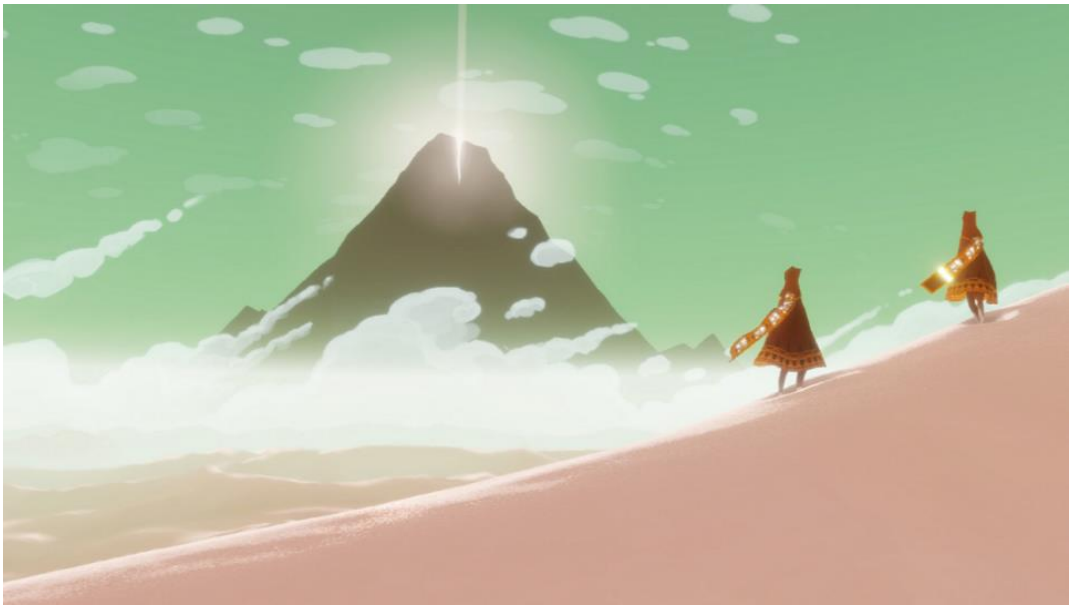


Figure 24 *Journey* (screenshot from game) 2012. © ThatGameCompany.

This game is a beautiful visual presentation but to turn it into a meaningful experience, the player must interpret their interactions to understand the metaphor for the journey of life. The robed figure is born and wanders through the world, gaining experiences that affect their vitality (as symbolised by the lengthening or shortening of their scarf). They are lonely and can seek companionship with other robed figures and the world around them by singing to other players but they are limited in their ability to communicate because, essentially, a life journey must be taken alone. There is no time limit on this game and most players will stop simply to admire the beauty of the landscape just as people often take time out of their lives to wonder at the world around them. At the end of the game, the robed figure cannot make it up the mountain, but is given a second chance to reach his/her final destination. It becomes clear that the robed figure represents the player on a journey seeking meaning, yet at the end of their life, they realise there is no definitive meaning. Their purpose lies in the beauty of seeking.

Similar to *Gone Home*, the goals of this game are not initially apparent. From a ludology perspective, there are no clear win/lose conditions. The game does not require a high skill level to overcome obstacles. *Journey* sits apart from the concrete puzzle-solving typically seen in games. Puzzles such as finding a key, remembering a pattern, or manipulating

parts of the environment to overcome a physical impasse are concrete problems that involve lateral thinking. However, the problem-solving in *Journey* is likened to thinking through a riddle laced with double meaning. It requires players to work out what the various interactions and graphics symbolise to piece together a metaphor for the meaning of life. Whereas *Gone Home* uses language-based elements (letters, post-it-notes, books) to provide clues for the player-reader, *Journey* does not even use language as a code. Instead, it relies on the player enacting the movements as they meander through a vast landscape, collecting pieces of cloth as if they are an actor on stage mimicking real life. The weighted performance adds believability to the narrative and helps the player transfer the journey of the hooded figure to their own life.

We have come to expect computer games to be designed towards chance, skill, role-playing, and the pleasure of physical movement. These are the types of interactivity/agency that designers drive towards regardless of whether the work is a game, an art installation, or digital literature. *Journey* demonstrates that it is not necessarily that books have moved towards gaming interactivity, but that games have moved past the win/lose, goal-driven design associated with ludus to a subtler type of problem-solving that involves filling the gaps between texts. Approaching these works from a transmedial narratology perspective moves criticism away from a language-based ideology but we still need to consider the purpose of user interactions in relation to the story. As Ryan (2011) points out, even though the inner layers of the interactive onion are much harder to conquer than the outer layers, we should be mindful not to evaluate works simply based on programming virtuosity. A layer-one work may have a compelling narrative but a simplistic interaction whereas a layer-five work may have sophisticated AI system, creating a highly replayable system, but a superficial narrative. When it comes to evaluating digital narratives, I have negotiated between Alderman's all-encompassing 'anything goes' approach and the hierarchical ordering that inevitably follows Ryan's interactive onion. My transmedia triangle model is not intended to supersede Ryan's classification system; instead it seeks to expand the literary dimensions of interactivity that is absent from Ryan's interactive onion by taking into consideration the pleasure of the digital reader.

4.5 The Pleasure of the Digital Reader

In all forms of storytelling, there is a contract between the author and the audience. The audience promises to suspend their disbelief and buy into the story but it requires the storyteller to follow certain narrative conventions (Kantor, Waddington and Osgood 2000). The phrase 'suspension of disbelief' was first coined by philosopher Samuel Coleridge in reference to literature. Coleridge hypothesised if a writer could infuse a sense of humanity into a fantastic tale, the reader would suspend judgment no matter how implausible the narrative (Coleridge 2004). A mystery genre keeps the audience guessing with a cast of possible culprits and red herrings. A romantic comedy will have a love triangle between the heroine, a 'good' guy and a 'bad' guy. Traditional genre schemas are entrenched to the point that audiences are familiar with the basic tenements of the three act structure moving from development to climax and denouement. When film schemas are played too predictably, the audience will feel it is too contrived. Alternatively, if a film does not follow any story schema, the audience will have difficulty meeting their expectations. When the storyteller achieves a correct balance between formulaic and subversive, the audience derives pleasure from being immersed in the experience (Douglas and Hargadon 2000).

The affective pleasure of games can be very different from that of being told a story. Similar to genre schemas, there are game play schemas associated with combative engagement of an enemy, exploring a labyrinth, interacting with a trader non-player character, and negotiating and carrying out quests (Lindley and Sennerton 2008). These schemas are designed to give pleasure from achieving goals, such as overcoming a challenge or finishing a level. Lindley and Sennerton (2008) describe the three types of pleasures: effectance is a sense of empowerment created when an action of a player results in a response from the game system; closure refers to the completion of expected outcomes and resolution of dramatic tensions; and imaginative displacement is the ability of the player to identify with their character (for instance, the sense of reward players feel when they complete in-game tasks as if they have personally gained the experience points). The game represents a form of escapism to an alternative reality provided by a

fictional world. The concept of pleasure is a broad topic that can be approached from various perspectives such as gaming, psychology and philosophy; For the purpose of my study, I have provided only a brief overview as it pertains to games and literature.

Fundamentally, the pleasures from books and games are different because games evoke a sense of curiosity, discovery, or empowerment when an action results in a response from the game (Lindley and Sennerton 2008). Books are appealing because we can participate in events as a superior external observer without being actively involved with the consequences of these events (Scholes, Phelan and Kellogg 2006, 241). With the digital era catalysing media convergence, how can such opposing pleasures be reconciled in the hybrid game-reader? Aarseth (1997, 4) argues that the pleasures of a cybertext reader are the pleasure of influence whereas the joy of the traditional reader is that of a safe but impotent voyeur. Ryan (2008) makes a further distinction between narrative games and playable stories; in the former, the player pursues a goal associated with winning and in the latter, the production of a satisfactory narrative is the goal. Narrative immersion is derived from three forms:

- Spatial – the pleasure of exploring the story world, such as in *Gone Home* (2013), where rummaging through the family's personal communications gives secret knowledge to the player/ reader
- Temporal – a burning desire to know what will happen next. This is driven by curiosity, surprise, and suspense
- Emotional – the affective reactions to the story and characters that players/readers experience

Ryan (2008) claims that the game-reader would enjoy an epistemic mystery plot because it gives both spatial and temporal pleasures as the person tries to solve the 'whodunnit' premise. Dramatic plots are difficult because the complexity of human emotion is not well simulated with only goal-orientated actions. In first generation interactive fiction, players had to correctly parse the text to progress the story. The challenge became guessing words such as 'turn left' or 'open box'. As a result, the story plot tended to be derivative. Emily Short's *Glass* is a successful example of interactive fiction because it plays on existing archetypes and relies on player-reader's pre-existing knowledge of the

Cinderella fairytale. The pleasure does not come from reading the prose but in subverting the original fairytale by imputing key words that change the events in the story. The player-reader's interference determines whether Cinderella or one of her stepsisters marry the prince. From a narrative perspective, early interactive fictions were like action games; it did not matter if the player was shooting aliens or monsters. The suspense came from the action, not from finding out whether earth was invaded. Interactive drama evolved with games such as *Facade* (2005) and *Heavy Rain* (2010).

In *Facade*, the natural language parsing makes it less like a word guessing game so the focus can return to story. Unlike older interactive fiction where if the player deviates too far from the script, the system will tell the player they don't understand, in *Facade* the computer does not drop out of the story world. There is more freedom in the conversation between human and machine. Below is an extract of text from the game:

Trip: Oh I just realised I haven't gotten us drinks.

(Action: Grace rolls her eyes)

Trip: So what's your poison?

Player: Can I have a martini?

Trip: Martini. Great idea.

Grace: Well it didn't take long for you two to bond or whatever.

Despite the freedom of user input, there is still a lack of subtlety in the dialogue that does not build the drama. In her criticism of *Facade*, Ryan (2004, 347) suggests that its success lies in the cleverness of the AI system in responding to user commands as opposed to any emotional involvement in the narrative. Where gamers situate themselves in a game can be different from the position of a reader in a book. In a narrative game, the player takes on the role of a character who can influence the outcome of the drama. In a novel, readers situate themselves as an external observer. Ryan's argument draws on the differences between literary and gaming experiences to build a case as to the difficulty of synthesising an emotional journey through an interactive drama. No matter how strongly

one empathises with the doomed lovers in the novel *Anna Karenina*, they wouldn't want to share the heroine's fate. "We simulate mentally the inner life of these characters, we transport ourselves in imagination into their mind, but we remain at the same time conscious of being external observers" (Ryan 2004, 347). This argument seems to trivialise the importance of empathy and writers' ability to create a space where readers suspend their disbelief. Readers may not want to share Anna Karenina's fate, but many have cried in empathy over the plight of this fictional character. In addition, Ryan's argument implies that the reader's mental visualisation of the characters is somehow less of an emotionally charged experience than a first-person game. In other words, I would be more immersed in the narrative if I had to enact Anna Karenina cheating on her husband through some form of game controller regardless of the execution of the game than if I read the most literary interpretation of the story. However, a reader's immersion in the story is not only driven by the plot. If I retold the story of *Anna Karenina* to someone who had never heard the story, relaying the events in a candid conversation—"and then this happened ... and that happened ..." and so on—I doubt the person would cry. It is Tolstoy's power as a storyteller, and his eloquent prose that he uses to reveal the plot that gives pleasure to the reader.

This is part of the problem with the readerly elements in *Device 6*. While the prose was perfectly functional, it was disengaging and lacked the nuance and rhythm that makes language lyrical. Reading the text became a mechanical task towards solving the puzzles that unlocked new chapters. It felt like working through a crossword puzzle. One utilises letters and words as tools but the overall goal is not so much to appreciate the language as it is to solve the puzzle. Despite the cleverness of the text-as-space, the pleasure of *Device 6* does not lie in lingering over the prose but in exploring the space and solving the puzzles.

Ryan's, Aarseth's, Lindley's, and Sennersten's positions on the nature of pleasure in gaming and reading reveal the dynamic tension in hybridising the two forms. In considering the concept of pleasure, one must also take into account that pleasure does not always have to mean a joyous experience; a pleasurable state has to do with audience

expectations and encompasses a spectrum of expressions from immersion and engagement to mindfulness and meditation.

4.5.1 Immersion, Engagement and Flow

The hedonistic effects of games and books are further elucidated by psychologist Daniel Kahneman (2011, 24–31), who identifies two types of cognitive processing: fast and slow. Fast thinking learns associations between ideas to the point where our actions are instinctive. This type of thinking applies from understanding nuances in social situations to automatically filling in the gaps within individual stories because of our understanding of genre schema. Kahneman deduces that fast thinking produces heuristic pleasure where our judgement is not based on logical reasoning but because of intuitive recognition (or programmed behaviour such as schemas). Douglas and Hargadon (2000) liken this immersive pleasure to being under a spell where the reader/viewer/player is oblivious to their external environment for extended periods of time. Slow thinking requires effortful mental activity such as solving a mathematical puzzle or interpreting a difficult literary work (Kahneman 2011). When a piece of work breaks narrative or technical conventions, the audience have to mentally work to understand the story. This type of audience interaction is an engaging pleasure (Douglas and Hargadon 2000). Reading does not always involve fast processing just as games do not always indicate slow processing. For instance, most people will choose genre fiction as a 'holiday' read or will re-read the same book if they are looking to relax. However, they will occasionally seek out literary classics such as *Anna Karenina* if they desire a challenging, engaging experience that requires more effort. Similarly, some games have high replayability even after the player has solved the puzzle, simply because the story world is so immersive and the player takes comfort in the familiarity of the game. Most works require both immersive and engaging qualities to interest their audiences. Janet Murray (1997, 134) posits that good interactive texts sit between these polarities. Psychologist Mihaly Csikszentmihalyi (2014) calls this creative process 'flow'. According to him, "Flow is the holistic sensation present when a person acts with total involvement" (Csikszentmihalyi 2014, 136).

Using his Experience Sampling Method, Csikszentmihalyi (2014, 91–100) investigated the experience of happiness by following large cohorts of teenagers and adult workers.

He gave them electronic pagers that would ring at various times throughout the day. When their pagers went off, the participants responded to a series of questions about the quality of experience of whatever activities they were participating in at that moment. These self-reportage data were then collated to develop Csikszentmihalyi's work on happiness and the pivotal concept of flow.

In flow activities, there is little distinction between stimulus and response, self and environment, past, present and future. Flow is a state of concentration so focused that it amounts to absolute absorption in an activity (Csikszentmihalyi 1990). Csikszentmihalyi goes on to make special mention of play and games in relation to flow. Games set tasks that can commonly lead to flow although they are not the only type of activity that can produce flow. Creativity, religious ecstasy, and other structured behaviours can also induce this state. Csikszentmihalyi (2014, 231–33) identified nine conditions to achieving this flow experience:

1. Goals are clear

2. Feedback is immediate

3. The person's skill level matches the challenges

4. Concentration is deep

5. Problems are forgotten

6. Control is possible

7. Self-consciousness disappears

8. The sense of time is altered (time passes faster)

9. The experience becomes autotelic (it is worth having for its own sake)

When playing *Device 6*, I experienced a jarring sense of disconnect when I had to stop reading the text to solve the puzzles. Within each chapter, there are gates to prevent the

player moving to the next section until they solve the puzzle. Clues are provided in the form of visual, text, and audio cues. In one puzzle, the text is reversed and has to be viewed with a mirror to be deciphered. I was frustrated at being drawn out of the story world to complete tasks to access the next story level. The displeasure I felt was due to the disruption of flow. I had been immersed in Anna's story world. The text was easy to read and the types of interactions up to that point were playful but not particularly difficult. It was the switch between fast and slow processing—the interruption of flow—that led to my displeasure. While I enjoyed the exploratory elements of the endless canvas, eventually I used cheats to solve the puzzles in order to progress the narrative. By contrast, *Journey* created a rhythmic ebb and flow as the player moves organically between peaceful exploration of the beautiful landscape and some darker moments in the murkier, aquatic environments. The rhythm has been designed to put the player into a mindful state of flow by deliberately mimicking the rhythm of life.

The pleasure of the digital reader must be considered when designing for readerly interactivity. In dissecting the interactive onion, Ryan (2011) cautions against judging works for their programming virtuosity, while Murray (2011) urges that a system should be designed to create a satisfying experience of agency. From a ludology perspective, this means that the player should virtually control the entire gaming experience from the order in which they receive the plot to manipulating the environment to access certain story points. This is not necessarily the case from a transmedial narratology standpoint. Following my narrative analysis, I identified two types of readerly interactions that needed further investigation. *Gone Home* and *Journey* deviate from the concrete puzzle-solving in games by harnessing interpretative problem-solving that is similar to the skills needed to solve riddles. In *Gone Home*, the emotional responses to the characters do not come from the manipulation of the environment but by interpreting various pieces of text to understand the family dynamics. This is similar to *Journey*, which involves solving a metaphor, a riddle in game form. In contrast, *Device 6* contains readerly interactions to spatial exploration. There is a clear distinction between readerly and gaming puzzle-like interactivity.

This concludes the first part of this exegesis. In part two, I report on a series of studio experiments I conducted to test how readerly and gaming interactions can be hybridised. In particularly, I explore the spatial–temporal framing of narrative and return to reader-response theory to explore interpretative style of readerly problem-solving.

Chapter 5: Methodology

Based on the narrative analysis and subsequent case studies, I broke down my enquiry into two sub-questions for the studio analysis:

1. How can the spatial–temporal framing of narrative be translated from traditional to digital media to create pleasurable experiences for the digital reader?

2. How can multimodal techniques be applied to riddle-based problem-solving in digital literature?

5.1 Studio Experiments

To explore spatial–temporal framing, I returned to the classical non-linear narrative structure by creating a path-finding adventure for middle-grade readers titled *Choose Your Own Death*. This was followed by a prototype for a story application to investigate how hypertext in the physical book can translate to digital media.

The second studio project was an interactive installation piece titled *Player One/Player Two* for the In Real Life Festival at the Brisbane Powerhouse. *Player One/Player Two* is a playful commentary that traces the participatory culture of games, starting from the iconic *Pong* to the modern MMOGs such as *Call of Duty*. This community project was commissioned by the Brisbane Powerhouse and produced by The Edge, State Library of Queensland (SLQ). I was engaged as co-producer/writing editor. This work provided an opportunity to map user experience to a physical space and enabled me to visualise how I could extend spatial–temporal story experiences into a virtual environment. Although this project was not designed for tablet implementation, it highlighted differences in production culture between traditional and digital writers. The latter are no longer individual workers but need to communicate with other writers, artists, producers, and programmers to enable successful world-building. This idea of co-authorship led to the development of a third sub-question:

3. What techniques and strategies can be adopted by digital writers to construct readerly experiences that reflect our cultural digestion of new media?

My main studio output is the publication of the story application *Limerence*. The development of this work occurred in three published iterations. The magnitude of this piece required collaboration between creative and technical cast and crew (See Appendix 3). I took on the role of writer, designer and director, and James Warr served as programmer throughout the process. Each iterative cycle provided opportunities to observe, reflect, and adapt the previous model. This type of fast prototyping is borrowed from the game production pipeline where the interactive elements open up more variables. Testing a vertical slice of the finished product allows for quick feedback and insight into the process. Through iterative refinement, *Limerence* manages to push spatial–temporal framing by applying McCloud's infinite canvas concept to the Z-plane of the tablet. It also plays with multimodal puzzle-solving by the presentation of narrative content over various social media platforms, at times juxtaposing story arcs to mislead the reader and emphasising the tenuous border between online/real-life spaces. The parodying of online forms as well as the tone of the writing reflects the evolving vernacular of social media, a stylistic shorthand that has changed the way society transmits and receives stories.

5.2 Practitioner Interviews

As part of my research, I participated in the Northern Territory Virtual Writer-In-Residence programme, during which I created the first prototype of the *Limerence* project that was published as a website. This process has been thoroughly documented through a blog and a series of vlogs administered by the Northern Territory Writers Centre. As part of the residency, I conducted structured interviews with practitioners across games, film, transmedia, and electronic literature. The interviews were designed to examine the third sub-question by targeting the practitioners' story-building methods in their specific fields. The resulting video content provides the building blocks for digital writing techniques, particularly through mapping non-linear narrative and approaching narrative through media. This led to my formulation of a new approach to digital writing: the transmedia triangle model. This model shifts away from gaming interaction and identifies key areas of readerly interactions that digital writers should design towards. In doing so, it also addresses the differences between traditional and digital readers, highlighting our cultural

engagement with the digital format. I apply the philosophy behind this design model in the final version of *Limerence*.

5.3 Critical Reflection

To evaluate the processes I employed during this research, I have regularly presented my findings at workshops and conferences. These formal occasions provide an objective lens through which to examine my work. The studio-based nature of practice-based research makes it occasionally difficult to process the theory. By structuring regular workshops and conferences as a component of my research process, I was able to gain critical distance to assess my work in reference to contemporary theories and practices amongst academic and industry experts. In 2013, my work-in-progress was presented at the *Creative Manoeuvres Conference* hosted by the Australasian Association of Writing Programs. Following my digital writing residency at the end of 2014, I compiled my findings for the *Romanticism and Creative Writing: Legacy and Resistance?* hosted by the Griffith Centre for Cultural Research. In 2015, I exhibited the second iteration of *Limerence* at the *Mix Digital Conference* hosted by the University of Bath and at the *TEXTure* exhibition at The Edge, SLQ. Observation of user interaction at the exhibitions and feedback from these conferences revealed an additional dimension to the digital reading experience. I identified 'digital tmesis' as a third readerly interaction, an extension of literary theorist Roland Barthes' reader-response theory of tmesis.

The final version of *Limerence* represents the culmination of the findings from my studio experiments, practitioner interviews, and critical reflection. It brings together my enquiries on spatial–temporal framing, multimodal riddle-solving and digital writing strategies given the shifting pleasures of the transliterate reader. Through my practice-based research, I continually refined my area of enquiry to reflect my insights, arriving at my final research question:

How can writers utilise the affordances of digital media to shape narrative experiences for readerly interactions?

Chapter 6: Studio Experiments

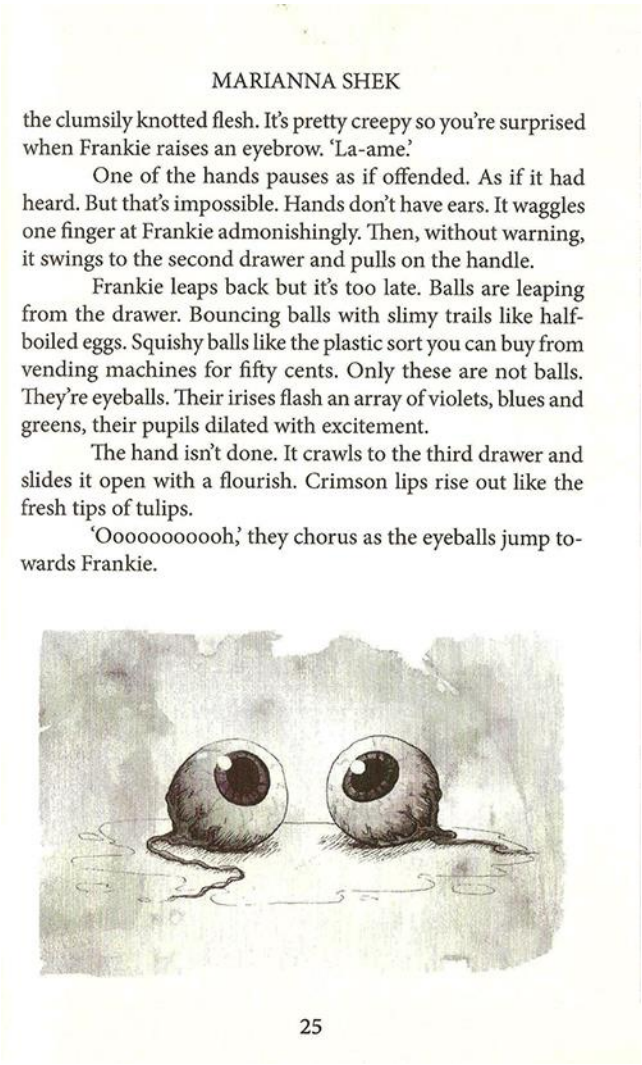
I produced my studio work over a three-year period concurrent to the narrative analysis, and the aim was to create pieces to test some of the ideas that emerged from this analysis. As evidenced in Chapter 4, the narrative analysis identified the types of non-linear narrative structures that can be presented in new media, which were exemplified in the case studies. The studio component of my research project has explored strategies and techniques to construct readerly interactions for the tablet, focusing on spatial–temporal framing and multimodal riddles.

6.1 Experiment One: Choose Your Own Death

During the first year of my research project, I produced a path-finding adventure book to explore branching narratives. The book *Choose Your Own Death* is a macabre adventure aimed at middle-grade readers. It follows the classic structure of non-linear novels such as *Choose Your Own Adventure* and *Goosebumps*. The aim was to publish the story in a book format and then experiment with paper prototypes to investigate how the affordances of the tablet can interpret the book. The plot follows a basic branching narrative structure (figure 25).

Figure 25 *Diagram of Branching Narrative Map for Choose Your Own Death* 2015

I collaborated with illustrator Tara Brown to produce the artwork for the story. Below are extracts from the book with illustrations (Figs 26a & 26b).



MARIANNA SHEK

the clumsily knotted flesh. It's pretty creepy so you're surprised when Frankie raises an eyebrow. 'La-ame.'

One of the hands pauses as if offended. As if it had heard. But that's impossible. Hands don't have ears. It waggles one finger at Frankie admonishingly. Then, without warning, it swings to the second drawer and pulls on the handle.

Frankie leaps back but it's too late. Balls are leaping from the drawer. Bouncing balls with slimy trails like half-boiled eggs. Squishy balls like the plastic sort you can buy from vending machines for fifty cents. Only these are not balls. They're eyeballs. Their irises flash an array of violets, blues and greens, their pupils dilated with excitement.

The hand isn't done. It crawls to the third drawer and slides it open with a flourish. Crimson lips rise out like the fresh tips of tulips.

'Ooooooooooh,' they chorus as the eyeballs jump towards Frankie.

25

Figure 26a *Page Excerpt* 2015. From *Choose Your Own Death* © Rock On Kitty

Figure 26b Tara Brown *Amelia* 2015. Watercolour and Photoshop. Illustration from *Choose Your Own Death* © Rock On Kitty

The branches are structured so that one option leads to a dead end, while the second path progresses the story. Picking the right path eventually leads to the final denouement, Story X. However, there is an epilogue that reveals an additional evil character. It is designed this way to take advantage of the storage and retrieval capabilities of the tablet. In the tablet version, I wanted to create a more substantial experience for readers who stumbled onto the dead ends. In the traditional branching narrative, the wrong path usually results in the reader's demise and signifies that the reader has somehow 'lost' the game. There is no pleasure in exploring the story world; no reward for meandering along

paths that may not open up new story possibilities but may present another dimension of the world or its inhabitants.

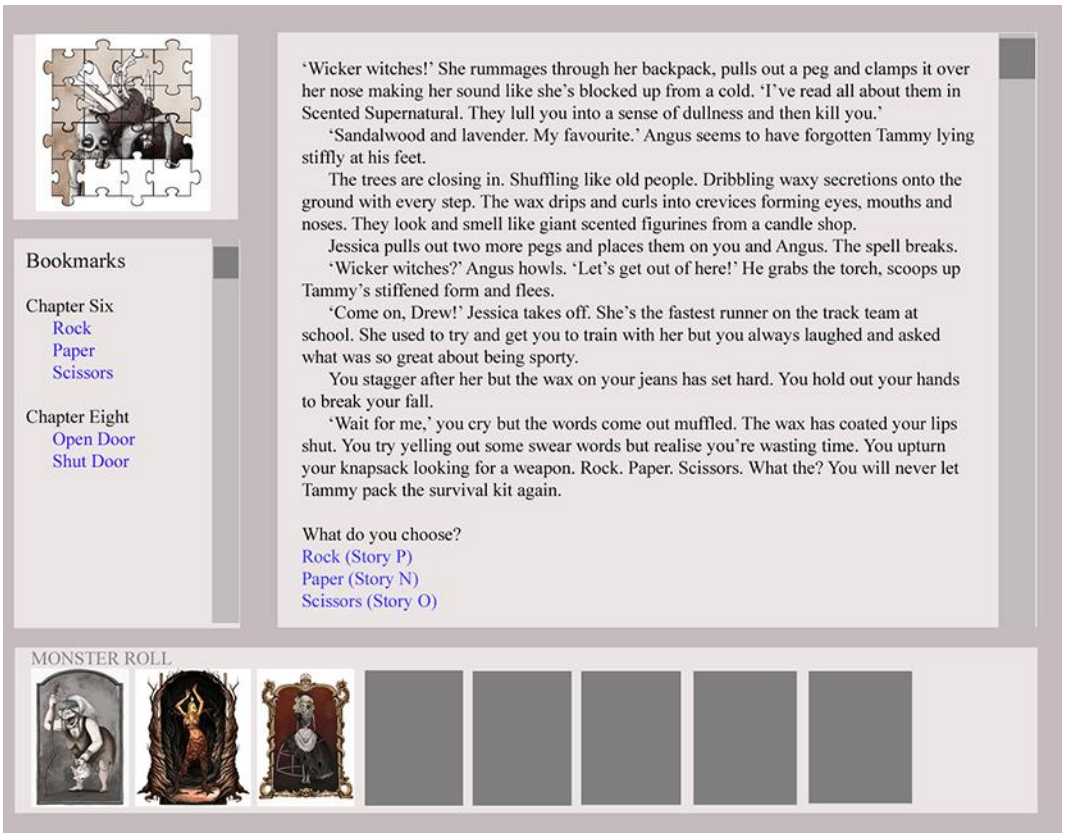


Figure 27 *Diagram of Story Application Version of Choose Your Own Death* 2015

For the tablet version, I wanted the readers to be more playful and consider the dead ends as part of the experience. While it does lead to their demise, it also reveals more secondary characters and plots. As such, I designed the tablet version to keep track of the various dead ends encountered by the reader. At each ending, the reader receives a piece of a puzzle. Collecting all the puzzle pieces unlocks the epilogue and reveals a coloured image of the final evil boss character.

The layout moves away from the standard page set up, where the user swipes the screen to imitate flicking a page turn. Instead, I designed a scrolling canvas that can be navigated up or down with a scroll bar. The text is still divided into chapters and the illustration plates flow on from the text. The choices at the end of each chapter are hyperlinks that scroll the screen to the appropriate section. This canvas takes up most of the screen on the

right hand side. The left hand side is a navigation panel, a ‘monster roll’ (an inventory of the evil characters the readers have encountered) and the puzzle map that unlocks the final monster. Clicking on the monsters in the monster roll takes the reader to a separate screen that shows more pictures and information about the monster, like a fun fact sheet. The navigation panel contains a list of the chapters read from the most recent to the oldest. Readers can bookmark certain sections to return to later. The top-most panel shows the progress of the puzzle map.

In terms of design, the concept for the tablet version of *Choose Your Own Death* does not innovate the reading experience. The tablet screen representation of the physical page has changed but the reading experience remains mostly the same. Certain gamification elements act as incentives to read more playfully and to gain pleasure from the act of exploring. In the physical book form, some readers obtain a certain pleasure in bookmarking all the possible endings with their fingers to return to at a later time. The digital interface eliminates this physical bookmarking by providing a navigational panel and hyperlinks. It was not the intention of this experiment to create a fully functional tablet version of the book. The paper prototype was to explore how interface, navigation, and game-like mechanics could exploit the procedural properties of digital media. To programme such a project was always beyond the scope of this small experiment. I became mindful of the third component of my research enquiry. What new strategies and tools can facilitate digital writers to move away from traditional creative practices? Traditional writers are auteurs; they are the soloists unaccustomed to the production culture of film, animation, and game studios. However, to create multimodal, digital literature requires a full ensemble of crew and cast. My next experiment was a collaborative writing project that explored how narratives could be arranged in a physical space.

6.2 Experiment Two: Player One/Player Two

Player One/Player Two was an interactive installation commissioned for the *In Real Life Festival* at the Brisbane Powerhouse (Figure 28). It is a playful commentary tracing the participatory culture of games starting from the iconic *Pong* to the contemporary

MMOGs such as *World of Warcraft*. The audience follows an audio track that is a conversation between Player One and Player Two as they debate various existential questions: Who are they? Why are they here? What is the meaning of life? Is there free will? Is there life after death? Each game station is individually designed to reflect the various games.

Figure 28 *Player One/Player Two* installation 2015. Part of the *In Real Life Festival*, Brisbane Powerhouse.

I was engaged by The Edge, SLQ, to work on this community project as co-producer and story editor. My role was to guide the writing team to develop an audio script to go along with each station. As co-producer, I was also responsible for assisting in the production and installation of the artworks. Overall, we created eleven stations based off the following games: *Pong* (1972), *Space Invaders* (1978), *Street Fighter* (1996), *Contra* (1987), *Mario Brothers* (2008), *Day of the Tentacle* (1993), *Bubble Bobble* (1986), *Legend of Zelda* (2004), *Diablo*, *Portal* (1996), and *World of Warcraft* (2004).

The audience member starts the experience at the *Pong* station, which introduces the Player One and Player Two characters. Guidelines are marked on the ground to show the recommended viewing order, but audience members are free to wander through the exhibition space. Each station has an audio track activated by pressing the button on the speaker box (figure 29).

Figure 29 *Speaker Box* 2015. Part of *Player One/Player Two* installation at *In Real Life Festival*, Brisbane Powerhouse. Image courtesy of The Edge, State Library of Queensland.

There is also a didactic consisting of information about the original game. Some stations consisted of playable games while others are artworks. For instance, the *Portal* station was designed to be an interactive questionnaire. A computerised voice that sounds like GLaDOS, the artificial intelligence from the game *Portal*, asks a series of humorous multiple-choice questions the audience member answers by pressing down on the discs. Each disc is connected to a potato wired to feedback into the computer (figure 30). The concept, script, and programming were created by Bob Dobson and the design was implemented by Mick Byrnes.

Figure 30 *Portal Station* 2015. Part of *Player One/Player Two* installation at *In Real Life Festival*, Brisbane Powerhouse. Image courtesy of The Edge, State Library of Queensland.

Here is a sample of the quiz:

> **Test Start**
>
> Thank you [participant name]. The following multiple-choice test has been rated low risk. If any injury or death does occur rest safe in the knowledge that your sacrifice has furthered the cause of scientific advancement. You will be asked four questions. The results will determine whether you are player one or player two. Remember there are no correct answers in this quiz. Having said that, there are consequences for getting it wrong.
>
> **Question 1**
>
> First question. You are walking in the desert. That's dangerous, you'll dehydrate. No wait, just reading ahead. You're walking in the desert and you come across a

turtle, though I think they mean tortoise, flipped on its back. It's unable to get back on its feet, or flippers, I really think that's a typo. Anyway, what do you do?
A) Gently flip the tortoise back on its feet. (P2 +1)
B) Eat the tortoise. Cook it first obviously. You're not a monster. (P1 +1)
C) Collect the tortoise to throw at a plumber. (P1 +1)

Successful test

Player One result

Congratulations! You are a Gryffindor…. No wait, wrong quiz. Sorry… I mean, you're [Player One]. In this game and also in life, you've won. Now please go away so we can test more participants.

Player Two result

Good news [participant's name] the test results are back and it says you are [Player Two]. Don't worry. This is a non-fatal condition. There are many others just like you. Did you know that when two Player Twos marry, they have a one in ten chance of producing Player One progeny?[1]

Other stations are artworks inspired by the original game designers. For instance, Leila Watson and I designed the *Bubble Bobble* station to resemble 3D models of the computer game characters entrapped in bubbles (figure 31).

[1] Text courtesy of Bob Dobson, writer.

Figure 31 *Bubble Bobble Station* 2015. Part of *Player One/Player Two* installation at *In Real Life Festival*, Brisbane Powerhouse. Modeller and photographer: Jessica Fay

The models were 3D printed by Jessica Fay. The audio track for this station merely consists of sound effects and random dialogue that does not progress the story. For the *Diablo* station, Tara Brown and Angela Hibbard chose to re-create the stereotypical gamer's bedroom with a 1990s' computer and various artefacts, such as the Tetris lamp and an old game cartridge (figure 32). They created a machinima style animation using footage from the game.

Figure 32 *Diablo Station* 2015. Part of *Player One/Player Two* installation at *In Real Life Festival*, Brisbane Powerhouse. Photographer: Tara Brown

For the *Zelda* exhibit, I wrote the script, Tara Flynn developed the design, and Gregory Davies created the stained-glass artwork.

Figure 33 *Zelda Exhibit* 2015. Part of *Player One/Player Two* installation at *In Real Life Festival*. Brisbane Powerhouse. Image courtesy of The Edge, State Library of Queensland.

Below is the audio script extract for this station:

ZELDA: FOUR SWORDS ADVENTURE (STATION EIGHT) LEVEL TWO

(One actor putting on different voices as if he had a split personality)

LINK (PLAYER ONE)

(pompous voice)

Well, that's another forest razed to the ground. Ever since I became the four-in-one, I've been in top form. I'm four times as fast. Did you see the way I was able to throw that sword and watch my back at the same time? And now with my new efficient killing method, I have time to go to the pub before I kill Shadowlink.

(niggardly voice)
and then maybe Zelda will marry me.
(pompous voice)
Shut up! We're just friends
(niggardly voice)
But suppose I don't rescue her
until she learns to be grateful?
(pompous voice)
Why do you always have to be that
guy?
(niggardly voice)
Why do you always get to lead?
(squeaky voice)
Is it because you're wearing green?
(pompous voice)
No it's because I get all the force
gems and you always walk into your
own fire stick.
(squeaky voice)
Who told you about that?
(niggardly voice)
Was it Link?
(pompous voice)
I am Link!
(squeaky voice)
No I am the real Link!
(groan)
I hate you all so much or maybe
just myself

To create a cohesive script for a non-linear story, the writing team approached the project as if writing for a television series. In the development phase, we decided on the overall story arc before assigning individual stations to pairs of writers. I created a 'Writers' Guidelines' document (Appendix 4) that included the narrative themes, the overall story structure, and individual plots for each station. This document helped the writing team stay on brief and understand how all the individual stations tied in together. I edited several drafts of the writers' stories to create a cohesive audio script. We worked back and forth with the design team, sometimes changing their design to match our narrative, and vice versa. From the development phase, we knew the audience members would receive the story as audio and they would control the story order by walking between the stations. Therefore, it was imperative we designed a story structure loose enough to

accommodate non-sequential viewing. After deciding on the layout of the exhibition space, we were able to work out which stations would carry the main story arc based on how people were likely to navigate the space.

Originally, we designed two different map layouts depending if the audience member chose the Player one or Player two route (figures 34 and 35).

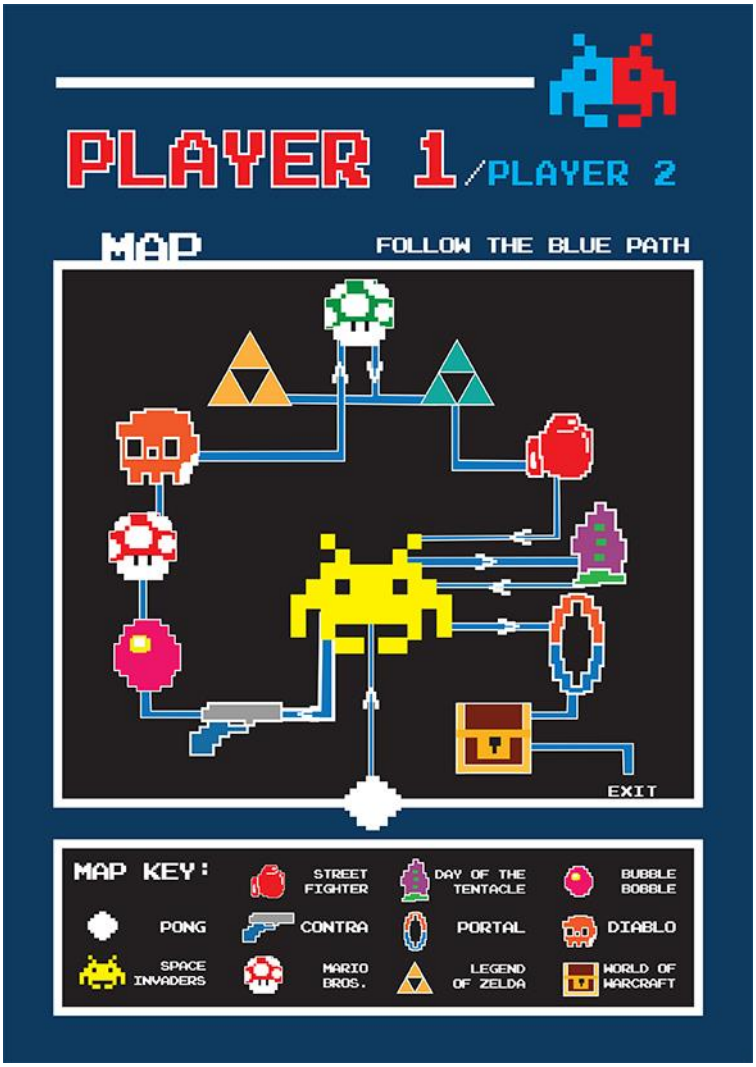


Figure 34 Caitlin McGowan *Player One Map* 2015. Catalogue for *Player One/Player Two* installation at *In Real Life Festival*. Brisbane Powerhouse

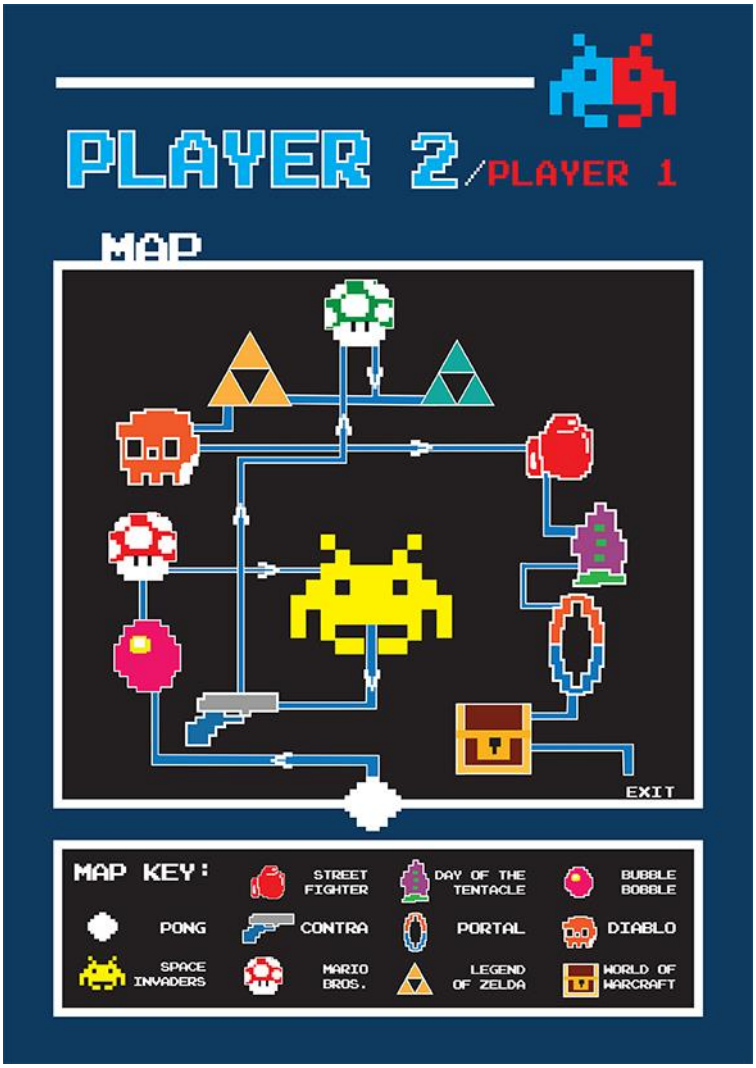


Figure 35 Caitlin McGowan *Player Two Map* 2015. Catalogue for *Player One/Player Two* installation at *In Real Life Festival*. Brisbane Powerhouse

The concept behind having two different routes is to reinforce that player one and player two take two different journeys; the player one route is more direct and simple whereas the player two map is convoluted and does not follow the ideal story order. It was also a practical way to control the flow of traffic on opening night so that people were not waiting to access certain stations. Unfortunately, the two map options could not be implemented at the exhibition due to the logistical restrictions of the space.

Pong was identified as the first station everyone would pass through therefore the story premise was established at this point. The sheer size and central positioning of *Space Invaders* would ensure audience members would gravitate towards it. Therefore, we used

this station to reveal the climax when player one and player two realise that they have no free will. From the beginning, we knew that *World of Warcraft* would be the final station to resolve the story. As such, we designed the exhibit to encourage the audience to exit via this route. At this station, Player One and Player Two realise that MMOGs have eliminated the concept of individual players and that everyone is ultimately player one. Appendix 5 contains the full list of credits of people involved in the *Player One/Player Two* project.

Findings from the Player One/Player Two Project

At the *In Real Life* festival, I spent four sessions observing the way that people interacted with this exhibition during various times. I was struck by the parallel between people's movements in a physical installation and their navigational path in a virtual space. Some people are direct in their movements, driven by either story or simply the goal of getting through the maze. Others will amble and explore the space in no particular order. I created a table of my observations over various times, which can be viewed in Appendix 6.

Overall, people showed a lot of interest in the visual and interactive elements but there was not as much engagement with the audio story. We anticipated that this would happen and took care to limit each audio segment to less than one minute. We made a conscious decision not to use headphones as we felt this would isolate individual audience members. As a result, the sound quality wasn't ideal on the opening night in the crowded part atmosphere. In order to engage with the story, one needs a certain understanding of games and gaming culture. As detailed in Chapter 4, many new media works have been designed based on the assumption that audience members have knowledge of a pre-existing text to make meanings from the work. This illustrative mode allows writers and designers to work in an abbreviated format, using pre-existing codes, and relying on the audience to fill in larger gaps of knowledge. *Player One/Player Two* is a work of meta-fiction. It is a cloying commentary about the changing nature of gaming culture. In the family home setting, the elder sibling usually assumed the role of player one while the

younger, less experienced sibling was reduced to player two. *Pong* sets up this Cain-and-Abel style rivalry in the first station. As games evolved from arcades and home entertainment systems to MMOGs, the boundary between player one and player two blur; the script reflects the two players' loss of identity as they merge into the anonymous player one. This installation relies on a degree of nostalgia to understand how gaming culture has evolved. This was evidenced by the fact that young people preferred the gaming stations over listening to the audio story and reading the didactics, as they did not fully appreciate the historical context of the content.

The *Player One/Player Two* project revealed insights into how influential space is in setting up audience expectations for the types of activities to be performed. The party-like atmosphere in the evenings made people want to be social; hence games and game-like interactivity were preferred over audio stories. By contrast, daytime visitors spent significantly more time examining the artworks, reading the didactics, and listening to the stories. This highlighted the importance of timing when designing activities in specific spaces. In a party or social situation, people demand instant gratification with their interactivity. I observed many people mashing keyboards, pressing buttons, and taking photos with the *Space Invader* model. Although the portal exhibit drew a lot of interest, people were more engaged with mashing the potato than actually performing the quiz. However, I am not advocating that reading type interactivity should be confined to a quiet library setting. GPS technology has enabled stories to be narrated in various locations from a treasure hunt though a museum, to a tourist trail through a city's key attractions. Participants can draw profound meaning from listening to a story while immersed in the referred space. Eli Horowitz's *Silent Histories* (2014) is a mobile story application based on the premise that in the early 2010s, parents and doctors identified a condition among some children rendering the children incapable of using or understanding language. The narrative unfolds through testimonials from those directly affected by these children as well as field reports, which can only be unlocked at site-specific locations. Reading these field reports within the curated environments add an extra layer of meaning to the stories. When designing for readerly interactivity, designers need to be mindful of competing activities occurring in the same space. In the case of audio stories where the audience

cannot control the speed at which stories are revealed (as opposed to reading a book where one can skim read and still understand the main narrative points), designers need to consider the audience member's physical position while listening to the story. Should they just be standing still? If the audio track runs for several minutes, it may be more comfortable to provide them with a seating option. Alternatively, the audience member may have a more fulfilling experience by walking around the space while listening to the track. In that case, headphones need to be provided.

The curation of the physical space in the *Player One/Player Two* project enabled me to visualise how narrative can be spread through space in virtual environments. In terms of physical space, I needed to consider when and how people use a tablet. Some use the device to browse the Internet while lounging on the couch as a way of relaxation. Others restrict the use of tablets to browse intermittently at work or while commuting. For the *Limerence* project, I established that the experience needed to take place in a quiet space where one could focus on the task of reading for twenty- to thirty-minute blocks. It is not intended to be a byte-sized experience dispersed between the grind of daily activities. In terms of story world, *Player One/Player Two* was designed to be a branching narrative but, due to the imposed environment, it worked more like an open-world structure. From my observations, people chose their own goals: some moved between stations, driven by the direction markings on the floor, and listened to the stories; others took the shortest route to the game they wished to play or the artwork they wished to observe. A third group ambled in the space in no particular order, driven by the pleasure of exploration. It struck me that if I tracked a user's daily path through the Internet, I might find they would start by checking their emails, updating their social media pages, and looking at the news headlines. However, on their way to reading the news, something might catch their attention on their social media page. They follow the link, which leads them to news about their friends, and they spend some time participating in an online conversation. Thus, our daily movement through online space is organic, much like the exploratory mode of the open-world sandbox structure. These concepts surrounding spatial–temporal narratives became the building block for the interface design of my main studio project, *Limerence*.

Chapter 7: Major Studio Work, *Limerence*

7.1 The *Limerence* Project

Limerence is a story application that follows the online life of Clarice Mahon—a young, single woman who appears, on the surface, to be successful and happy. The superficial story that comes across on her social media 'Chapbook' page supports this delusion. Her photography career is on the rise after securing an enviable position as a photographic assistant in a prestigious studio, and while all her friends are setting up homes with husbands and babies, she's enjoying life as an independent woman in her new apartment with city views. However, her personal journal reveals a different set of events. Here, the self-deluded Clarice is unemployed, having lost her job as a security guard. To counteract her mother's constant negativity over her looming status as an 'old maid', she's employed the help of life coach Richard Wiley. Unable to pay rent (and the cost of life coaching), she is living in the art studio of her friend Judy. Clarice's time is divided between seducing her married friend 'Joe the Bro' and spying on her next-door neighbours, the Moyes Boys, whom she accuses of running a meth lab. When she reports their activities to Neighbourhood Smart, she attracts unwanted attention from the policeman 'Rube the Dude'. While he creepily tries to win her over, she transfers her affections from Joe the Bro to Richard Wiley. Unfortunately, she finds out that Richard has been deceiving her with regards to his marital status. While he purports to be single, Clarice discovers that his wife is Sheree Wiley, a smug mummy blogger who offers marital and domestic advice through her blog *Mummy Musings*. Clarice seeks revenge by uploading a sordid video of her life coach cheating on his wife. She blames her dissatisfaction with her life on her Internet addiction and vows to go offline. There are no good outcomes in this story. The only way to escape these flawed characters is to follow Clarice's supposed footsteps and go offline.

7.1.1 Themes

Limerence explores themes of voyeurism, the evolving nature of human connections, and the curation of social realities in online spaces. The rose-tinted story of Clarice Mahon appears on her Chapbook page but a conflicting tale arises from her personal journal. Even there, Clarice's insights do not tell the whole story. Other points of view are offered

as the reader browses through various websites. The audience gets a sense that Richard Wiley's professional persona through his business website *Rich and Wired* contradicts his interactions on *Tenderlinks*. His Instant Messages (IMs) with his wife also show that business is not as successful as he portrays, and that, for a life coach, he makes dubious choices. Clarice's pushy mother Anna Mahon appears in a more sympathetic light when she shows up on *CheepCheap*, a 'deal-of-the-day' style website, and *I-Will*, an online legal service.

As I was writing the project, I considered how older generations consume digital information. With baby boomers reaching retirement age en masse, I played with the idea that the technology-resistant generation would emotionally blackmail their family by using a fictional social media service *I-Will* to send out instant alerts informing families of changes to wills and inheritance. Other web pages in the project parody popular online culture and communities; Sheree Wiley's *Mummy Musings* is a self-congratulatory airing of her supposedly perfect life disguised as a blog to help smart mothers connect. *Tenderlinks* is a fictional networking website that combines the concept of real life sites *Tinder* and *LinkedIn*. This inclusion is a playful commentary on how dating culture has evolved over time, morphing through different forms of social etiquette to the anonymity of contemporary online dating where 'sexting' has replaced flirting and 'hooking up' has to some degree replaced courtship. Current dating websites carve out markets by either discriminating between social economic groups, such as *eHarmony* and *Elite Singles*, or catering to freedom from traditional monogamous or marriage structures by formalising hook-up culture such as *Tinder* and *Ashley Maddison*. When *Tinder* was launched in 2012, it provoked a degree of ire among conservative groups anxious at society's moral collapse while others refused to take it seriously (Bloomberg 2013; Bilton 2014). Writing in *The New York Times*, Bilton claimed that in the two years since Tinder's release, the application was registering a billion 'swipes' (activity) per day. He attributed the developers' success to tapping into a pre-digital social behavior, that is, searching for a mate, rather than discovering a new type of courtship. While my combination of online dating and professional networking in *Limerence* may be a parody, it also speaks to the nature of our cultural consumption of digital media to re-model existent behavioural

trends. On the outset, *The Adventures of the Moyes Boys* is a web comic following the mindless musings of two brothers on an endless road trip. However, the work has a meta-commentary role, explaining the concept of limerence and likening the excessive information uploaded on the web to our cultural, digital palimpsest. It also acknowledges the way society's consumption of media entertainment has changed pre- and post- digital from a gatekeeper to a consume-on-demand mentality (Deloitte 2015). No longer do we linger over the kitchen table on a Sunday morning reading the 'Sunday funnies' published in newspapers. Instead, the cultural past-time of reading comics has shifted to suit reader lifestyle; the accessibility of the Internet has enabled webcomics to be consumed while commuting, during break times at work, or at the readers' leisure.

As the reader browses through the websites, they assume they are looking at Clarice's computer. However, she has sworn to stay offline despite her friend Judy accusing her on several occasions of lying about her Internet usage. This raises the question of whose browser history the reader is following. The browser history is an important part of the story as it shows the secret life of the character as opposed to their curated existence. Why would Clarice be on *Tenderlinks* if she purports to be happily single and independent on her Chapbook page? Tracking the browser history is akin to following a person as they go about their daily activities to get a sense of their real lives. Towards the end of the story, the reader suspects that they are seeing the browser history from Clarice's computer but it is being navigated by Rube the Dude, who has hacked her computer, hence fulfilling the cycle of online/offline voyeurism. This is suggested through Clarice's final blog entries but also through the online advertisements and 'click baits' (figures 36 and 37).

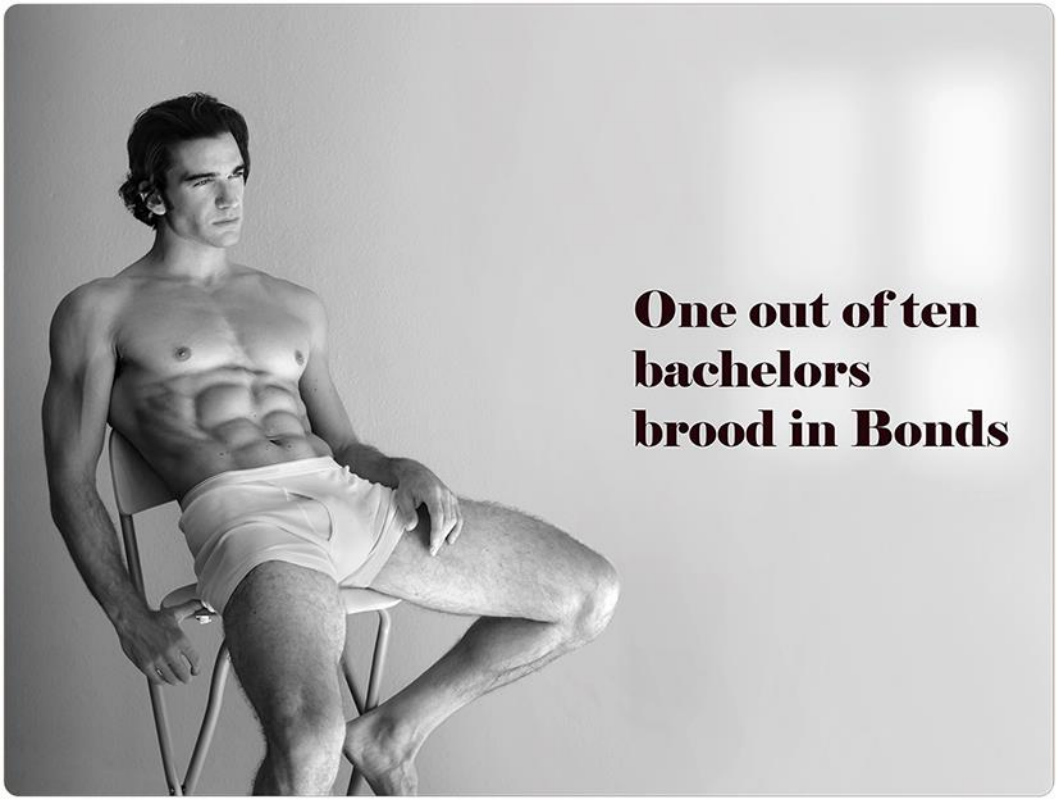


Figure 36 *Bachelors Brood in Bonds* 2016. Digital image from *Limerence* story application.

Figure 37 *You Are a Retriever* 2016, digital image from *Limerence* story application

Click baits are eye-catching thumbnail advertisements aimed at generating advertising revenue by luring users to click through to the hyperlinked site—the online equivalent of side-column advertising in newspapers. They tend to have sensationalised headlines such as 'You'll never guess what happened next!' to bait curious readers into clicking through to content which tends to be of dubious quality (Lu 2014). I use click baits in *Limerence* as a playful commentary on how people browse the internet as well as a device to give insight into Clarice's character. Click baits can form a picture of the user's browser habits. For example, if a user continually clicked onto beauty websites, this data can be collected via a cookie text file by third party advertisers. The advertiser could then send specific advertisements on beauty products to target that user. At the beginning of *Limerence*, there are advertisements about weight loss, red hair dye, and intelligence tests

that appear to reveal Clarice's insecurities. However, as the story progresses, the tone significantly changes. The advertisements switch to penis enlargement and spying equipment, as well as memes promoting women who cheat. This hints that as the story progresses, someone else has commandeered Clarice's laptop and the advertisements have changed according to the new user's browsing history. As more people visit click baits, the post will show up more often on social media newsfeeds and search engines until it goes viral and drowns out legitimate content that the user actually cares about. *Limerence* ends when the reader gets trapped in 'click bait land' and navigational control of the application is relinquished. The 'moral' of this story is explained in the final *Moyes Boys* comic. Our online interactions have an effect. They are not just numbers spinning in space; our online behaviour offer insights into our desires and insecurities. Despite the connective power of the Internet, ultimately people are lonely, and send out meaningless messages into cyberspace seeking to abate their insecurities.

7.1.2 Visual Design

The visual aspect of *Limerence* developed over several iterations as I delved deeper into the concept of spatial–temporal storytelling. The use of spatial metaphors to describe computers has been present since William Gibson popularised the term 'cyberspace' in his novel *Neuromancer* (1984). In cyberspace, physical geography such as roads has been replaced with web pages and links. However, the physical connections between these landmarks are not realistically represented as all web links are equidistant or at least dependant on factors outside of physical parameters such as download speed. Regardless, visualisation of cyberspace has taken the form of a map filled with interconnected planetary systems (Ryan 2004b) (figures 38 and 39).

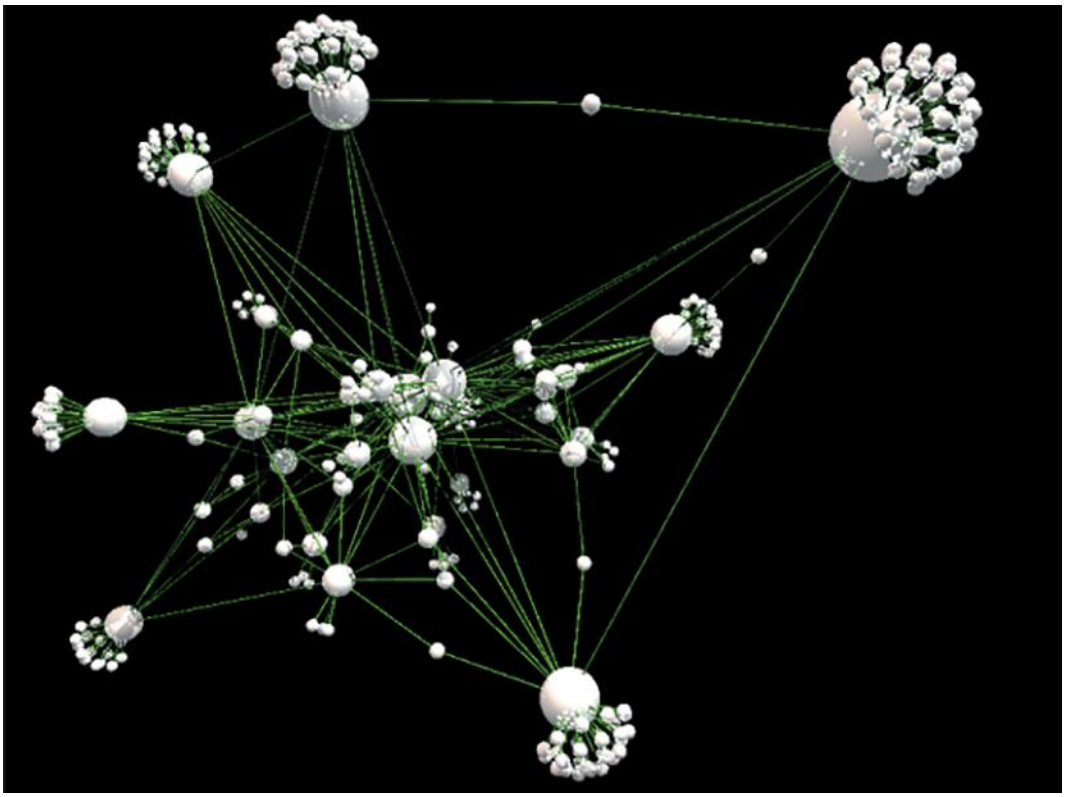


Figure 38 Andrew Wood et al. *Hyperspace Visualiser* 1995. University of Birmingham. CC BY-NC-ND 2.0 UK license.

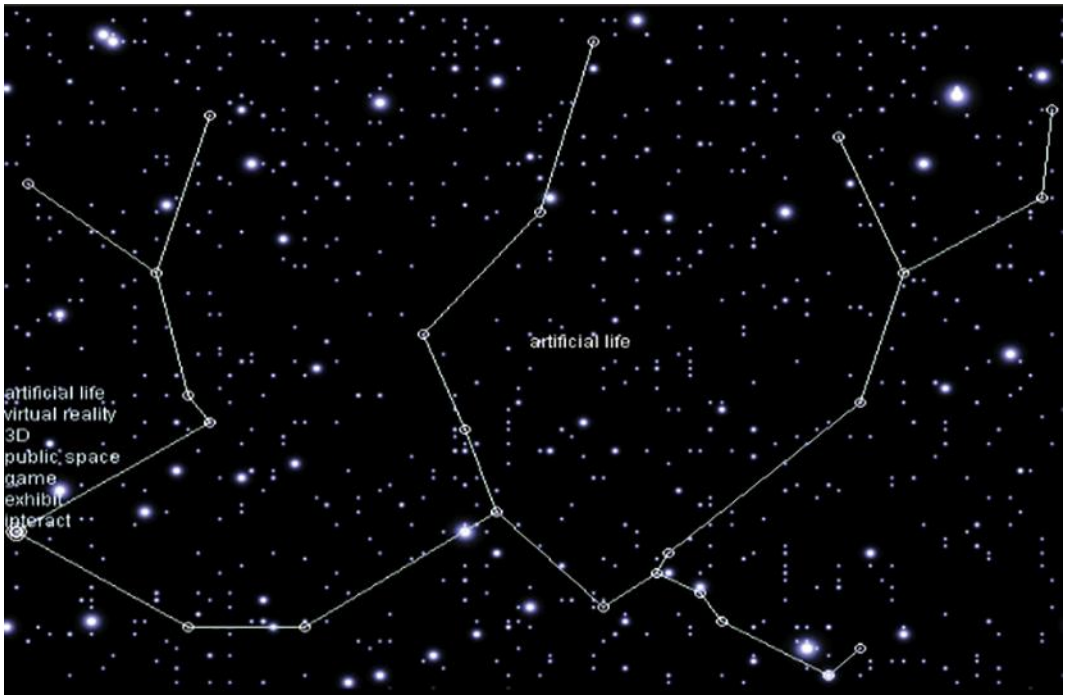


Figure 39 Alex Galloway et al. *Starrynight* 1999, Screen shot of interactive browsing interface. CC BY-NC-ND 2.0 UK license.

.

These galactic representations of cyberspace became the starting point for my visual design of *Limerence*. However, the first prototype felt contrived as this aesthetic was reminiscent of the early 1990s science fiction style. Since the early 2000s, web design has focused on clean graphic user interface.

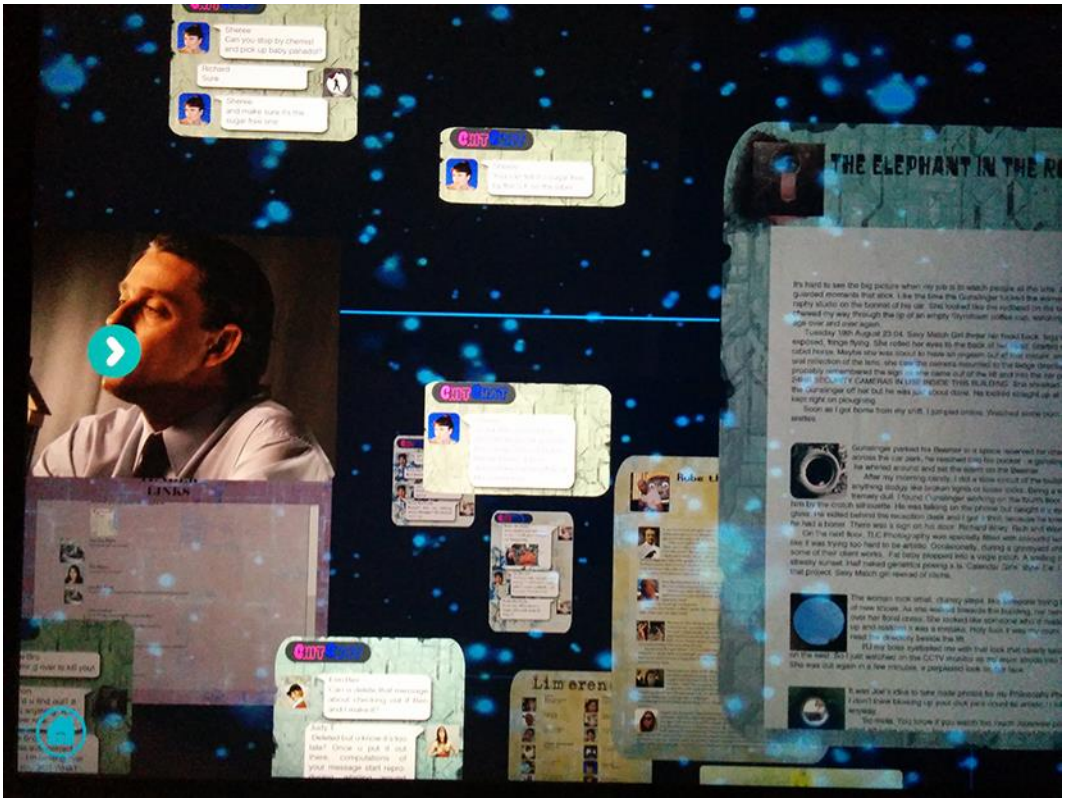


Figure 40 *Limerence* (Screenshot from the story application, 2nd iteration) 2015.

In the second prototype, I moved away from the galaxy visualisation towards a more real world graphic user interface with websites, blogs, and social media platforms

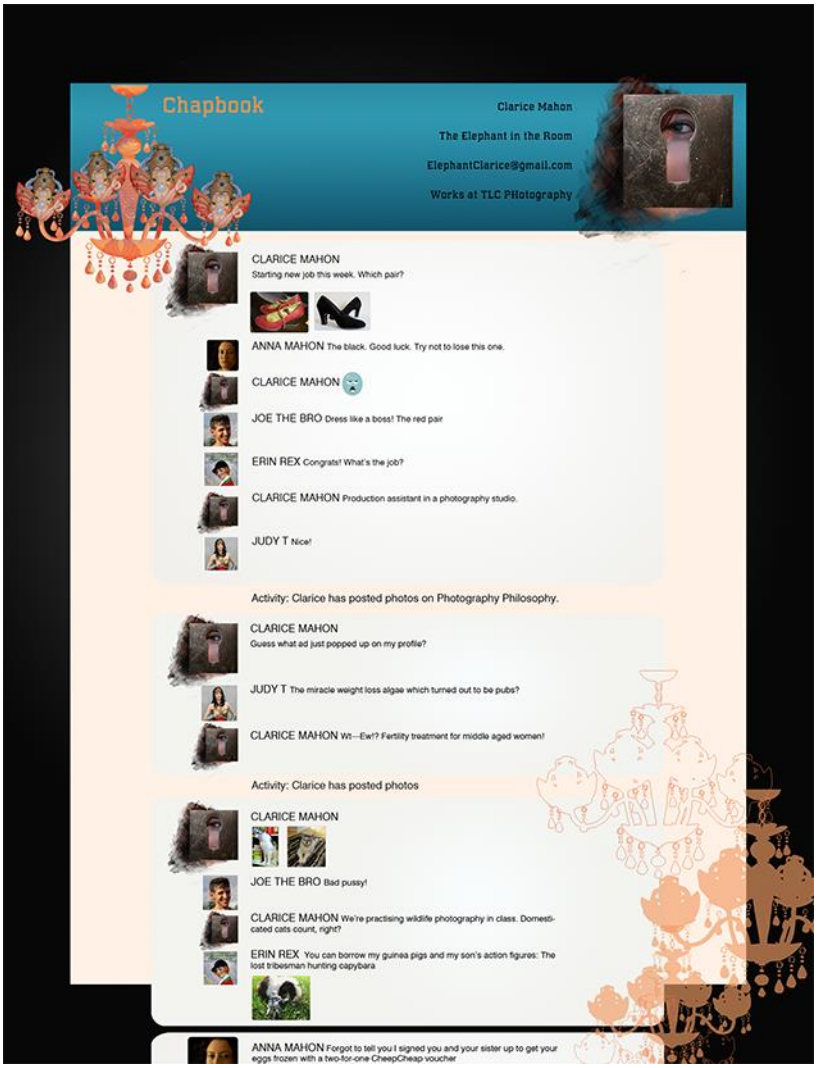


Figure 41 *Clarice Mahon's Chapbook Page* 2015, digital image from *Limerence* 2nd iteration

To create the layout for Chapbook, I compared various social media platforms such as Facebook, Ello, and Bebo and evaluated their visual design and user interface. All three platforms use 'floating panels' as the main communication window that stands out from the background. The webpage is divided into different sections; for Facebook, the left hand side of the screen contains information on user profile and navigational links such as the user's favourite music, groups, pages, and friends. Bebo is more flexible in that it allows users to customise their profile by applying different skins, which can change the colour scheme and layout of the homepage. This freedom caters to individual expression but, depending on taste, the platform can sacrifice readability for aesthetic appearance.

Ello has a cleaner interface, with its grey tonal colour palette. The panels stand out subtly from the background and the avatars are cookie-cut into neat, round circles. Based on the analysis of these platforms, Chapbook was designed to carefully balance legibility with visual appeal. The header for Chapbook contains the user avatar image, the Chapbook logo, as well as personal information about the user. The page consists of grey-white panels for the scrollable communication area against a white background (figure 42).

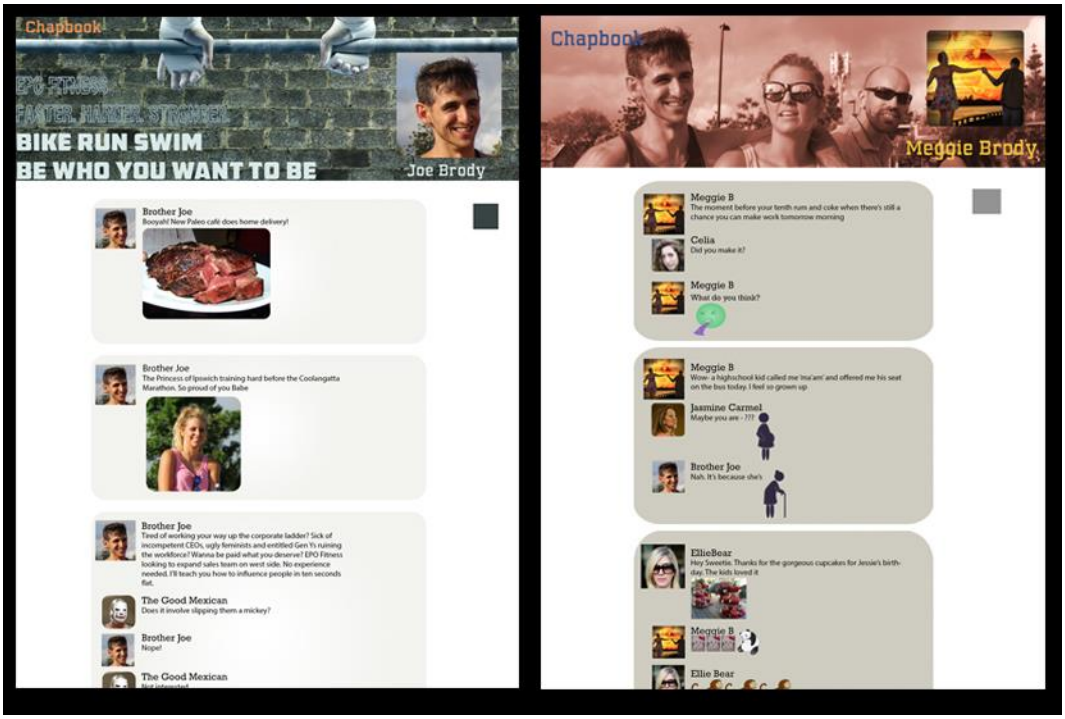


Figure 42 Meggie Brody's and Joe the Bro's Chapbook Pages 2016, digital image from *Limerence.*

I decided on a wider header in order to maximise the canvas for multimodal storytelling. For instance, the image chosen by Joe Brody (Joe the Bro) on his profile page reveals he is a sportsman. His maxim "Bike, Run, Swim. Be Who You Want To Be" rings like an empty philsophy peddled by a fitness fanatic. Clarice mentions in her blog that he is her personal trainer but it is not until the reader sees his Chapbook page that they get insight into the nature of their relationship. The fact that Clarice flits from fitness coaching to life coaching reveals her dependency to buy into dispensible life-hacks. Meggie Brody's Chapbook is set up to reveal the nature of her relationship with her husband. On the surface, her self-assured, energetic personality seems to suit her partner. However, the

header photo subliminally reveals the cracks in their marriage; a photo of her, Joe Brody, their new friend Rube the Dude, and Clarice. However, Clarice's image has been covered up by Meggie's avatar picture. Coupled with the fact that Meggie does not befriend Clarice on Chapbook suggests that Meggie is suspicious of her husband's infidelity.

In *Limerence*, readers move between the websites (pages) as if they are separate scenes in different locations. Each website has customised logos, colour palettes, and graphics that pertain to specific characters.

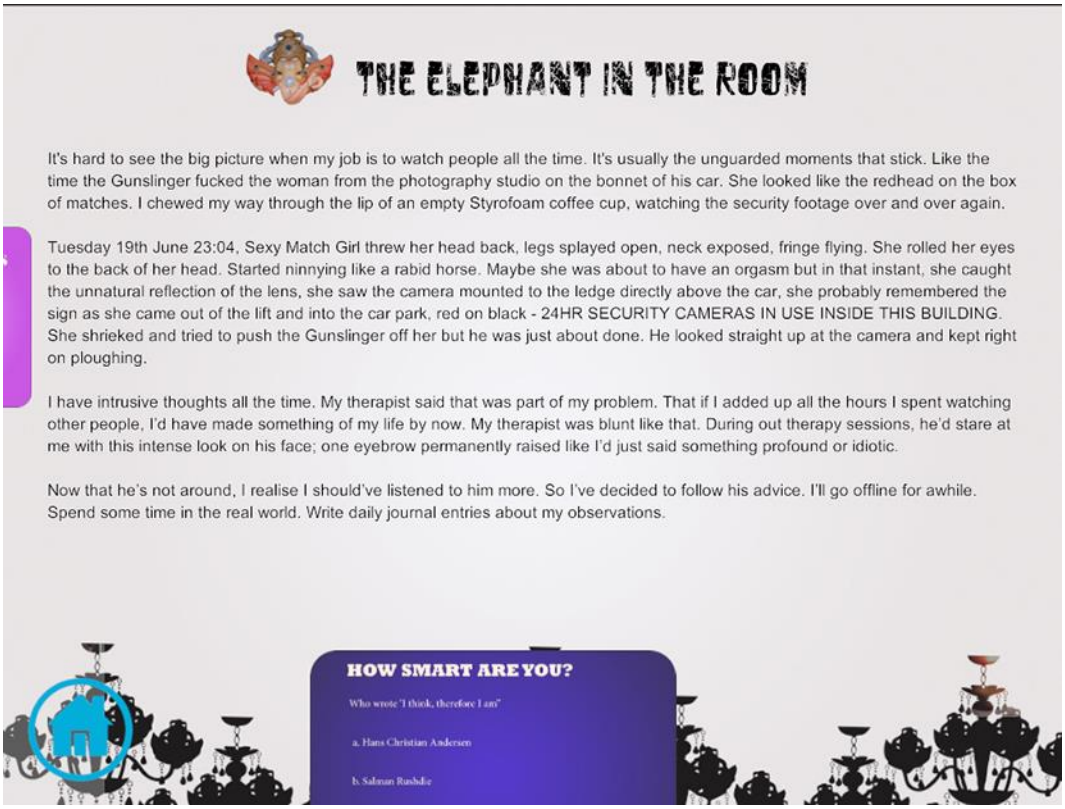


Figure 43 *The Elephant in the Room* 2016, Screenshot from *Limerence* story application

For instance, websites that are narrated by Clarice always have an image of the elephant-god Ganesh, the remover of obstacles, on a chandelier. The symbolism is two-fold; she is the self-styled 'Elephant in the Room' who is uncomfortable with her identity. She subscribes to a quick-fix spirituality freeing her from taking responsibility for her behaviour and life decisions.

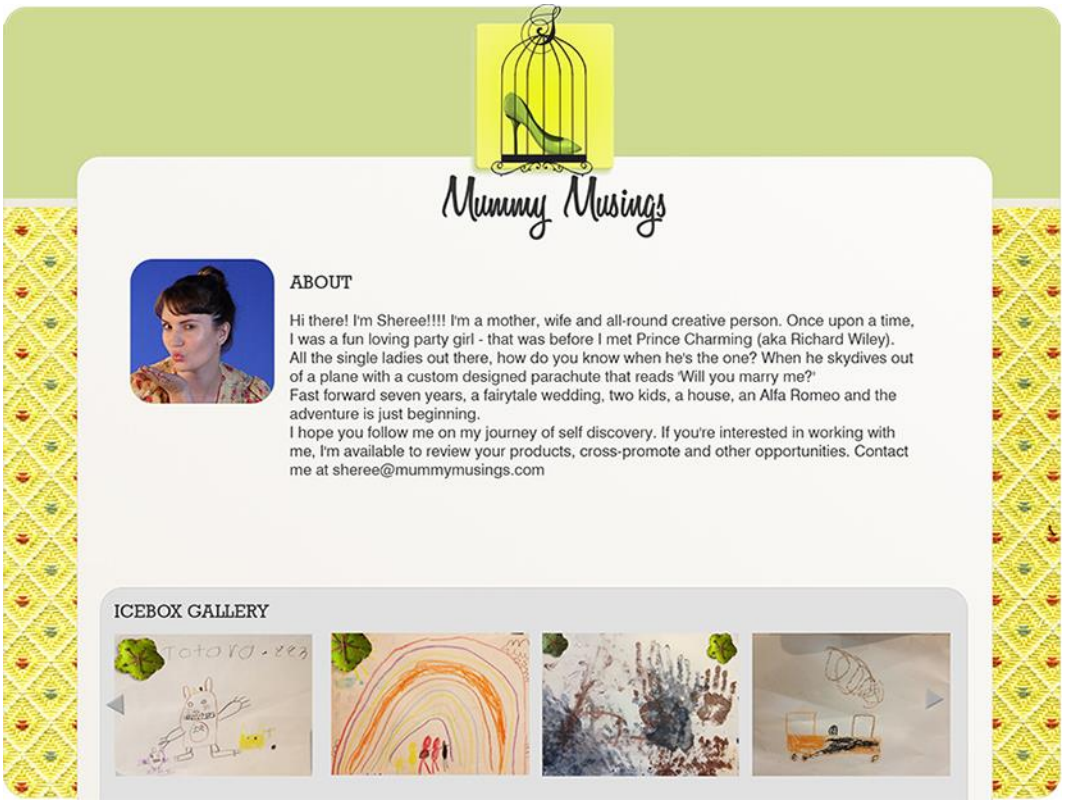


Figure 44 *The Mummy Musings* 2016, digital image from *Limerence* story application

Sheree Wiley has lemon-yellow-and-green wallpaper with a logo of a high heel in a birdcage. The colour scheme is chosen to suggest a fun-loving, 'chick lit' book cover. The green stiletto represents the high-powered yet sexy business woman. The birdcage refers to the bonds of motherhood. The elegance of the stiletto nestled inside the birdcage encapsulates Sheree's philosophy that women can have it all—the successful career and the congenial family life. This façade quickly unravels when readers find text messages from her husband Richard Wiley.

Figure 45 *Rich and Wired Consultancy* website 2015, digital image from *Limerence* story application

Richard Wiley's *Rich and Wired* website is designed to appear as a go-getter professional in sharp contrast to his downbeat IMs to his wife where he is distressed for money or his flirtatious conversations on *Tenderlinks*. Other websites parody how contemporary Western culture interacts in online communities.

Figure 46 *Tenderlinks* website 2016, digital image from *Limerence* Story Application

The image of the businesswoman climbing up the ladder exaggerates how dating and networking cultures have evolved with the confluence of online dating and professional networking sites. The *Cheep Cheap* website attempts to hook the retiree generation into the Internet by preying on a stereotypical love of bargains. The vernacular of a poker machine as the visual interface is a tongue-in-cheek play on the RSL club to bait babyboomers.

Figure 47 *Cheep Cheap* website 2016, digital image from *Limerence* story application

During the first iteration of the project, I received funding from the Northern Territory Writers Centre as part of their Digital Writers in Residence programme. This support was of invaluable assistance in completing the principal photography and film production for the *Limerence* project. As a result, I was able to cast actors to play each of the characters to create customised avatars as well as photographic 'evidence' to document story events.

Figure 48 Avatars 2016, digital images from *Limerence* story application

These avatars were carefully designed to reveal the personalities of the main characters. For instance, Clarice's face is distorted by the keyhole, indicating her obsession to spy on people. Meggie Brody's fixation with her relationship is clear from the tackily Photoshopped image of her and Joe Brody together. Richard Wiley attempts a cringe worthy homage to James Bond, while Sheree Wiley's poised portrait is crafted to show a woman of confidence and success. Throughout the characters' blogs, photographic evidence also contradicts their alleged stories.

Figure 49 Richard and Sheree Wiley Photo Shoot 2016, digital image from *limerence* story application

Sheree's final post on her *Mummy Musings* blog assures her followers that her marriage is back on track, yet photos reveal her tight-lipped smile indicating the strain present in her relationship with her husband. In addition to playing with blogs and click baits, I introduced another element that has cultural currency in the online space. The meme is described as "an element of a culture or system of behavior passed from one individual to another by imitation or other non-genetic means" (Oxford dictionary 1989). The concept of the meme was originally explored by Richard Dawkins (2006) in his book *The Selfish Gene* to explain the spread of behaviour through genes. However, "An internet meme is a hijacking of the original idea. Instead of mutating by random chance before spreading by a form of Darwinian selection, internet memes are altered deliberately by human creativity. In the hijack version mutation is designed, not random" (Dawkins 2013).

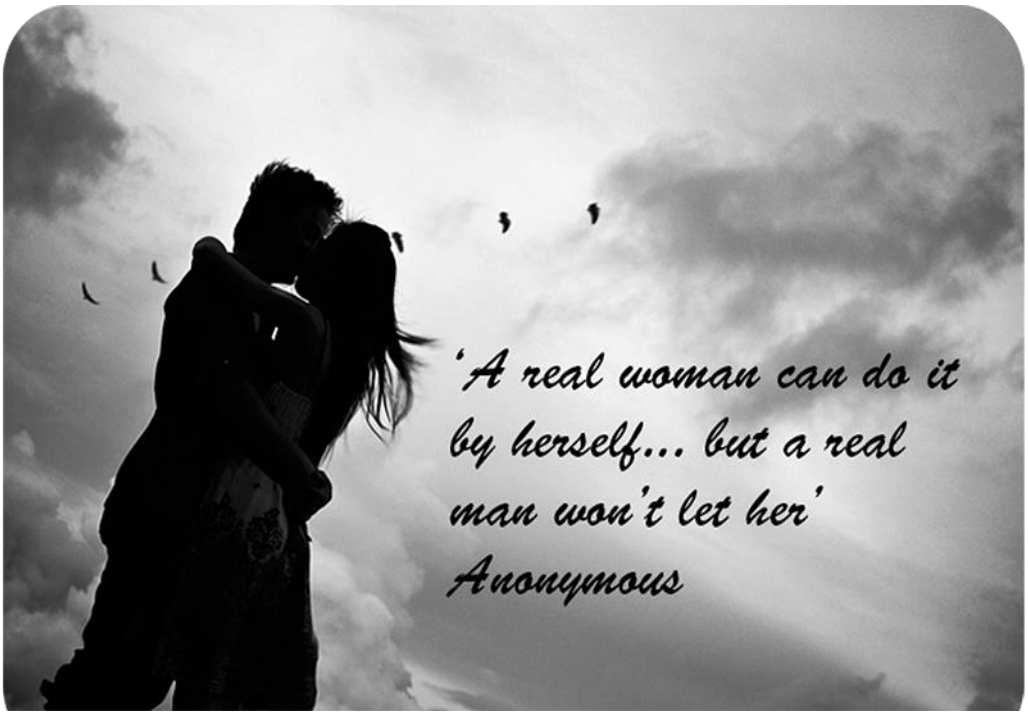


Figure 50 *A Real Woman Meme* 2016, digital image from *Limerence* story application

Figure 51 *If You Want To Lift Yourself Up Meme* 2016, digital image from *Limerence* Story Application

Clarice frequently uses inspirational memes on her Chapbook as an indirect way to show her friends what is happening in her life, usually in regard to her relationship with men (figure 51). For example, after her meeting with Richard Wiley, she posts 'If you want to lift yourself up, lift up someone else.' to show how her life coach has inspired her to take control of her life. Her use of memes reflects our social motivation for sharing or implying information about ourselves online. She uses these memes to curate and cultivate her online personality. Through these pseudo-insightful memes, she hopes to be seen as an independent, free-thinking woman, but these hollow aphorisms actually reveal her underlying dissatisfaction with her life in which she buys in to these quick-fix solutions. Her last Chapbook post ends on another motivational meme 'A real woman can do it by herself… but a real man won't let her' (figure 50). This is posted by Rube the Dude who has studied her profile and is trying to win her affections by copying her tastes.

7.1.3 Limerence as a Map

The notion of maps underlies the entire project from the developmental phase through to the final execution. In response to the first sub-question that investigated spatial–temporal framing of digital narratives, I experimented with the idea of hyperlinks to jump between web pages. However, I eventually dispelled this idea as counter-intuitive to the digital reading experience. As noted in chapter 2, clicking on a hyperlink is tantamount to jumping blindly; readers have no sense of connection between where they were and where they are going. This disrupts the flow of reading that is essential to maintaining readerly pleasure. It is much more connective to scroll along a screen than to click on a link. I used Prezi software as a story layout tool to facilitate open communication about the overall project for the production team. Prezi is a form of presentation software, but its user-friendly interface made it an invaluable tool for story mapping (figures 52 and 53).

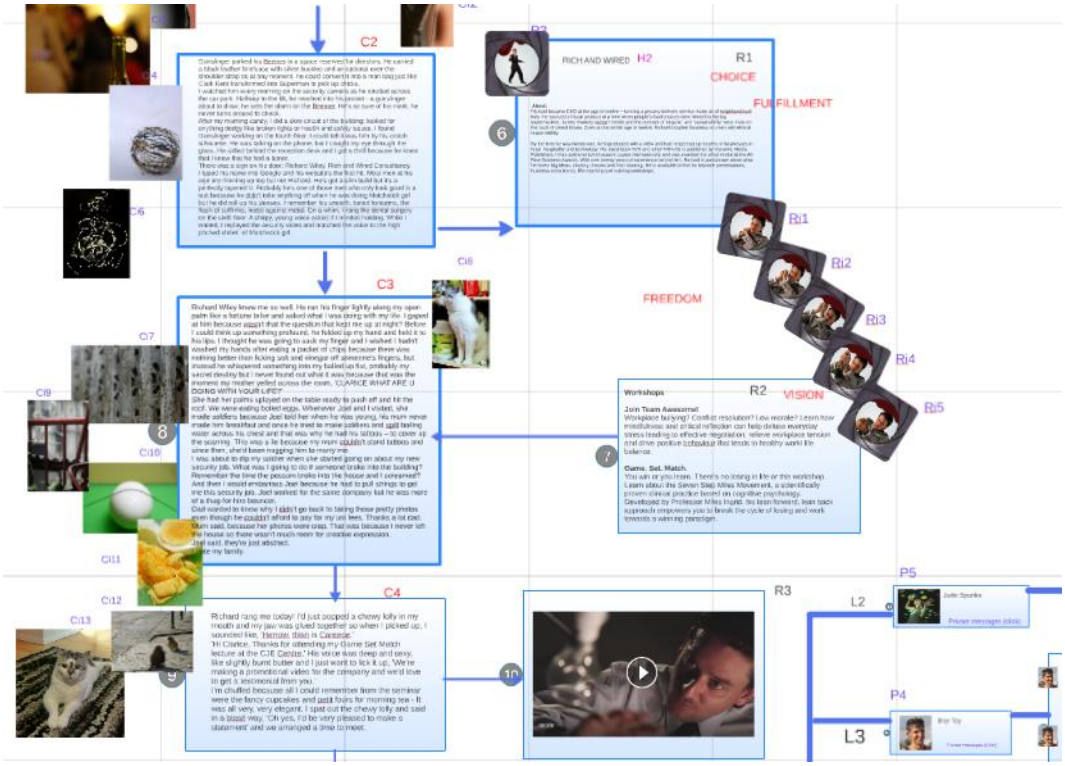


Figure 52 *Close Up of Prezi Map* 2015, from *Limerence 1st Iteration*.

Figure 53 *Complete Prezi Map* 2015, from *Limerence 1st iteration*

Even though this was originally meant to be a map showing the main story points, I realised the production team was easily engaged with this layout as it enabled a friendly reading experience. Following my narrative analysis and studio experiments, I became interested in exploring how McCloud's infinite canvas metaphor could be applied to story applications on mobile devices. He suggested that designers use the tablet as a framing device to seek out the story, which is spread out in its entirety on an endless canvas. Hyperlinks provide a warp-zone style of transportation between websites that disguises the infinite canvas layout. It moves the user from one location to the next without experiencing the journey. A walker of a physical path gains a direct relationship with their environment but this is not fully translated into how players navigate a virtual path in a video game (Gazzard 2013, 42). In cyberspace, all routes are equidistant; therefore, they cannot truly represent the geography of real landscape. However, these routes are still important as they form the textual architecture—that is, the internal organisation of the text—that describes the system of relations connecting the individual elements (Ryan 2004b). The visual representation of these routes provides the reader with a sense of the location similar to reading a scenic description in a book of a geographical place populated with mountains, roads, valleys, fields, and trees.

Limerence centres on the path taken between destination points. The way we traverse these in-between places speak as much about our online culture as our engagement once we arrive at a website. Users arrive at (and engage with) websites with no previous history and can remain anonymous through created avatars. The notion that these websites are far-reaching satellites existing in a barren universe with no connection to any other websites removes the individual sense of accountability. As we do not know how we arrived or where we will go next, we are able to behave in any matter of our choosing. This online disinhibition effect—where people behave in cyberspace in a way that they would not ordinarily behave in a face-to-face situation—is due to multiple factors (Suler 2004). As people move around the Internet, there is a sense of dissociative anonymity, invisibility, asynchronicity (that is, the interaction is not occurring in real time therefore can be more calculated), solipsistic introjections (merging your voice to that of your online companions), dissociative imagination (the online space is not a real world but part

of a make-believe game) and lack of authority. It is this disinhibited behaviour that leads to Clarice's downfall after she posts the Mooview video exposing Wiley's affair.

The initial plot map was based on events occurring in (mostly) chronological order. During the second iteration of *Limerence*, I created several other maps that explored how the characters and events connected in (cyber)space. (See Figure 54, 55 and 56)

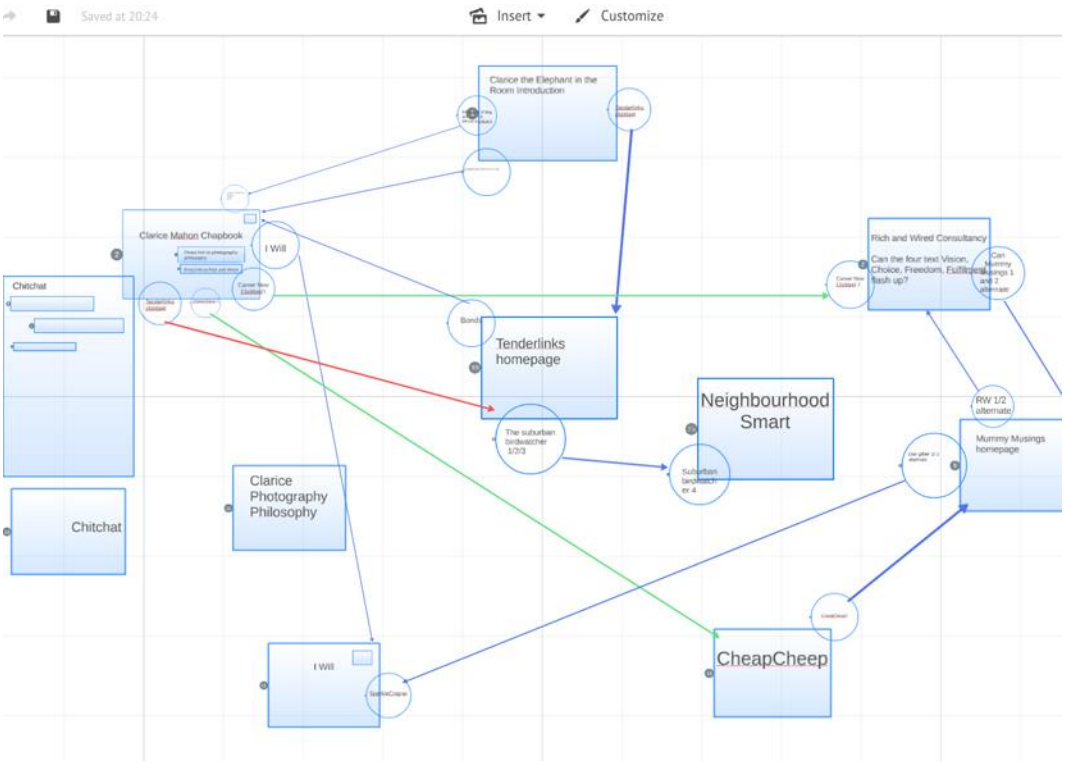


Figure 54 *Redesigned Level 1 Map* 2015, from *Limerence Project*

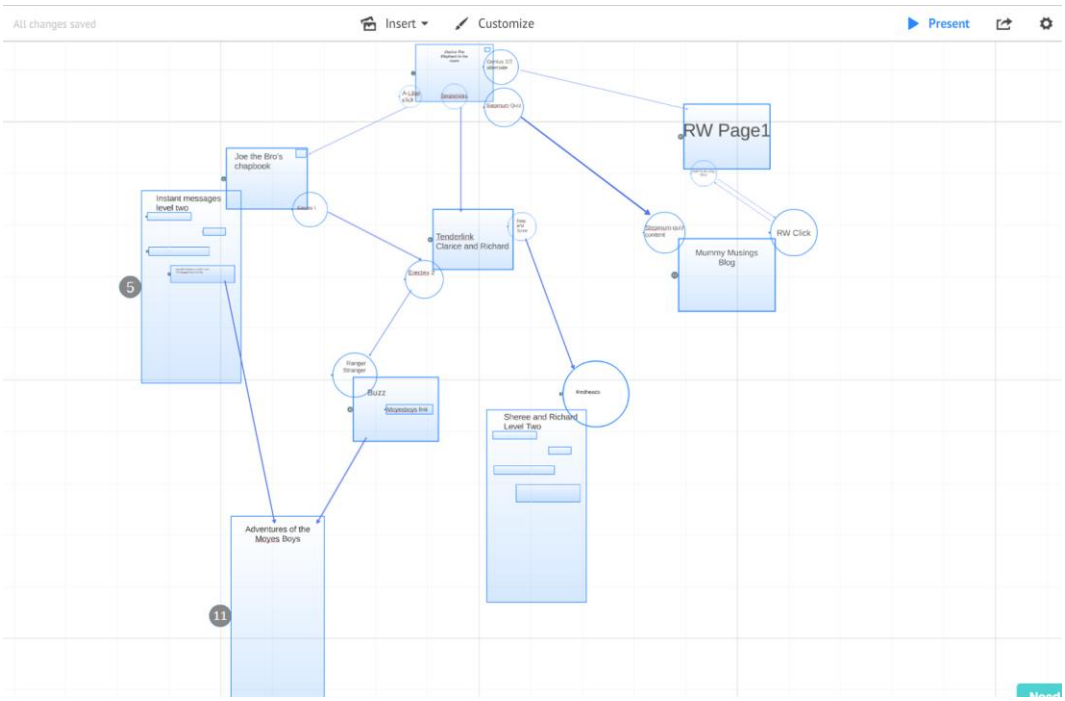


Figure 55 *Redesigned Level 2 Map* 2015, from *Limerence Project*

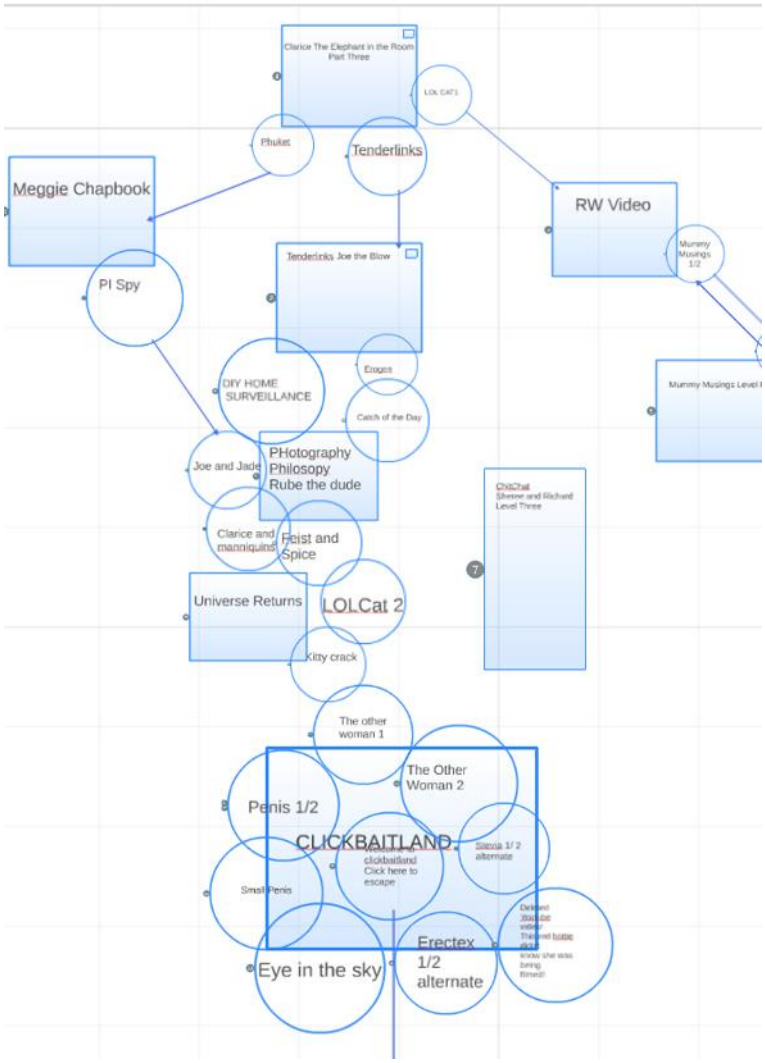


Figure 56 *Redesigned Level 3 Map* 2015, from *Limerence Project*

The rectangles in the map represent separate environments where events occurred, such as websites, blogs, and instant messages. In the tablet application, readers freely navigate between each rectangle by tapping the screen and dragging in any direction. However, just as the case study *Device 6* used the tablet like a framing device to tease out the story, I lock the camera so that the reader cannot see the map in its entirety. At any specific time, they can only see portions of the webpage and must swipe the screen to bring up new web pages. The effort required to navigate in this fashion mimics the sense of voyeurism and spying explored in the story. By treating the screen as a window of variable height and width rather than a page, I apply McCloud's infinite canvas concept to a tablet form. The circles represent the click baits. These are hyperlinks, which take

control away from the reader and force their movement in a pre-determined order. Despite my opinion that hyperlink navigation undermines McCloud's infinite canvas, I used this function in my design because I felt that the dynamic between rectangles and circles in the map highlighted the contrast between the free navigation of the book form and the rigid navigation of hyperlinked media. It also reinforces the idea that although the Internet appears to be an open forum to search for information, there are external factors that attempt to curtail our experience such as click baits, advertisements, search engine optimisations, newsfeeds, and organisational censorship.

The concept of using the Z-plane to take people deeper into the story is a new way of presenting the physical book by exploiting the spatial affordance of the tablet medium. In a physical book, the middle of the story sits behind the beginning. Likewise, in *Limerence*, level two of the story sits behind level one just as level three is recessed behind level two along the z-plane. Instead of turning pages, the reader travels through the screen using a pinch and zoom hand movement to traverse through the z-plane. The first level contains a superficial story overview through Clarice's Chapbook, instant messages between Clarice and her friends, the *Rich and Wired* website as well as the web comic *The Adventures of the Moyes Boys*. When readers reach the second level, some of the loose relationships in level one are clarified. There are more diary entries that explain Clarice's break up with Joe the Bro and her subsequent seduction of Richard Wiley. The *Moyes Boys* are comics drawn by Clarice's best friend Judy and are based on her drug-addled next-door neighbours. As the reader delves deeper into the z-plane, different versions of the story start to emerge. There are text messages between the life coach Richard Wiley and his wife Sheree—arguments over finances which reveal his perfect life is a façade. Joe the Bro shows up on *Tenderlinks*. The reason Clarice vows to stay offline becomes clear when it is revealed that she posted the sex video of Richard Wiley out of revenge.

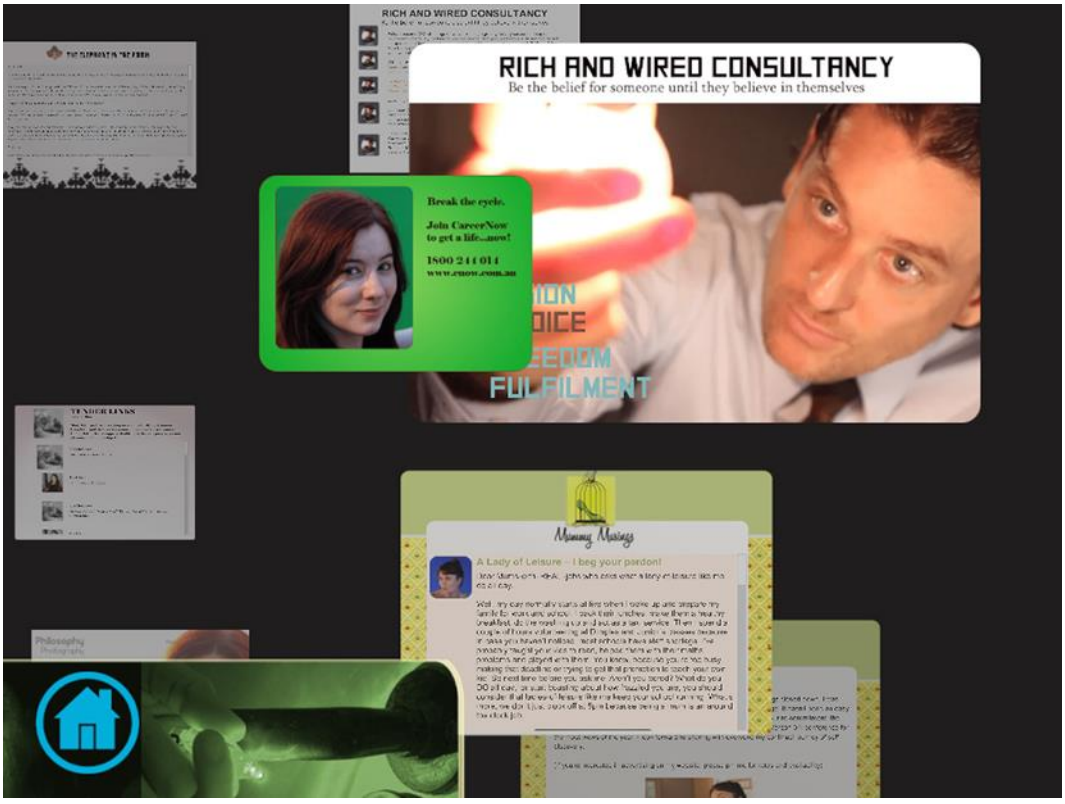


Figure 57 *Limerence* (Screenshot from the story application) 2016.

The final design of *Limerence* moves away from the earlier 'cyberspace' background and focuses on clean web pages that float on a black backdrop. Although the metaphor of content floating like satellite planets in an endless online galaxy remains, the aesthetic sensibility felt outdated. I added transparency layers to partially conceal the hidden text levels in the z-plane although, at the same time, giving readers the ability to see the depth of the story in order to navigate to these sections.

7.2 Critical Analysis of *Limerence*

In studying maps and pathways, I return to Ryan's interactive onion framework to assess how the narrative structure of *Limerence* has been shaped by the affordances of the tablet medium. In Chapter 3, I discussed Ryan's taxonomy of digital texts based on layers of interactivity. In the first layer, the medium echoes themes of the narrative. In *Limerence*, the tablet frame acts as a window that conceals the full story. The reader has to tap and drag the screen or pinch and zoom to change the framing. The navigational mechanism is

intended to make the reader feel like they are peeking through a window, mimicking the themes of online voyeurism presented in the text. The second layer of the onion refers to variations in content presentation. In this layer, the reader cannot change the story content but can change the order with which they receive story, hence creating new meaning and variable story experiences. *Limerence* does not adhere to a strict branching narrative but shares similarities with the network structure in that all nodes are interconnected and the readers have the option of looping back. However, as the main navigational mechanic is not the hyperlink, I would not describe it as a network structure. Instead, it shares more similarity to Jenkins' embedded narrative structure described in the third layer of Ryan's interactive onion model.

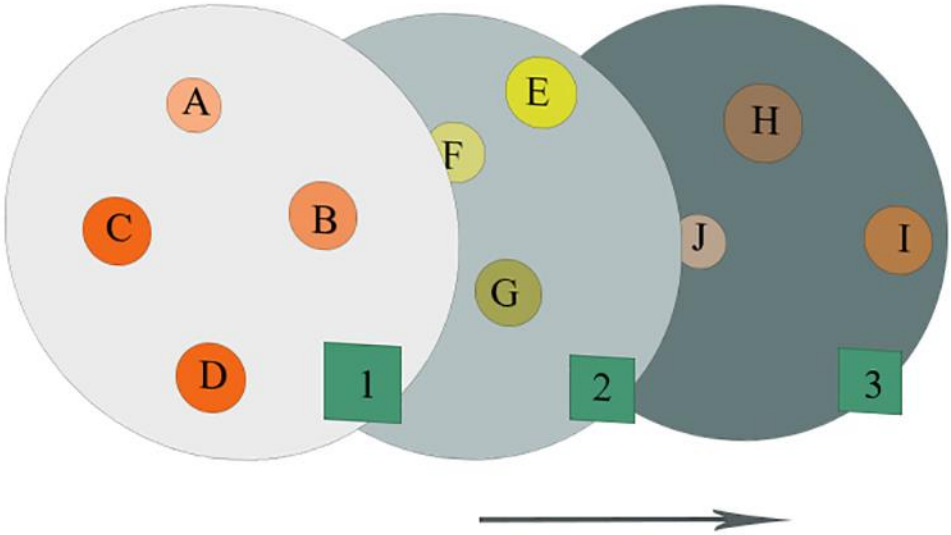


Figure 58 *Diagram of the Narrative Structure of Limerence* 2016

The content of *Limerence* is spread out across several levels, but readers have the freedom to navigate between levels. No parts of the story are gated or dependent on the completion of another section. As a reader, I could start at sub-story A (see figure 58), pinch and zoom to level two and read sub-story F, and then return to level one to read sub-story D and C. The text messages are the only components that behave idiosyncratically. These messages pop up seemingly at random on the bottom right hand corner of the screen. They are independent of the tablet frame and will always appear on

the screen surface level. The messages operate on a timer based on the user's speed or progress of navigation. For instance, messages on level three will not pop up until the reader navigates to that location. Once the user leaves the level, the timer on the instant messages will pause until the user returns. This is designed to mimic the way that IMs operate in real life. They often interrupt our routine by popping up at random times and demanding instant attention. The overall narrative structure resembles Jenkins' 'embedded narrative' in that it has been designed as if the pages of the book have been removed and laid out strategically on an infinite canvas for the reader to reconstruct the events. The instant messages are like post-it notes stuck onto these scattered pages. Despite its open-world layout, *Limerence* can be read in a semi-chronological order. As the websites are laid out behind each other along the z-axis, it is inevitable that, at least for the first reading, readers will encounter sub-story A before sub-story E and will therefore assume that the events of A happened before E.

Limerence does not utilise Ryan's story generation or meta-interactivity. In the early developmental phase of *Limerence*, I attempted to penetrate layer four and five of Ryan's interactive onion. I considered the possibility for writer-readers to contribute to the content. In one version, the story was to be embedded in an actual Facebook account. Clarice stalks the reader and weaves their personal information into the story. My programmer experimented with extracting details from the reader through Facebook to embed into a real profile for every reader. The iPad camera could be used to take a photo of the reader to embed into the story. I did not follow any of these leads as it felt like a gamification strategy and counter-productive to my quest for 'readerly' interactions.

Delving further into user participation, *Limerence* is designed to position the reader in an exploratory/external mode. In Chapter 3, I explored Ryan's binary system in relation to how each mode affects reader immersion into the story world. The open-world architecture of *Limerence* allows for a free exploration of space without altering the plot; therefore, it is classified as an exploratory system. As readers do not play as an active member of the story world and the interaction is restricted to moving around the textual space, it is, strictly speaking, in external mode. To recapitulate, an external position takes

a god-like, omniscient perspective. Readers of hypertext fiction tend to be positioned externally as they search the text like a database to appreciate the system design which is like a jigsaw puzzle to be pieced together making it difficult to be immersed in a compelling plot (Ryan 2004, 342; Ryan 2006, 108). In the internal mode, the player is positioned either in first person or third person to provide greater immersion into the story world. Ryan's description of internal mode has specific relevance for narrative games as it concerns player projection onto an avatar but the same principle can be applied to digital literature whereby readers identify with the characters in a story. In narrative games, there is a performative aspect to how story is told. Gamers act through their avatars to gain narrative resonance (Laurel 1993, 146–47). In a novel, the reader can be equally immersed in the story world and will project onto the protagonist to make these experiences as 'real' as controlling an avatar.

Just as a player may feel more immersed in the story world when playing a character in first-person mode, so can a story written in first person feel more personal than one written in third person. First-person mode can give privileged insight into the emotions of the character. In the third-person perspective, the writer can craft more psychic distance between the reader and the story by using an omniscient narrator to give a broad perspective on an event (Fludernik 2009, 92; Abbott 2008, 73–74). The opening sentence from Charles Dickens' *Oliver Twist* (1859) is an example of an omniscient, third person narration:

"Among other public buildings in a certain town, which for many reasons it will be prudent to refrain from mentioning, and to which I will assign no fictitious name, there is one anciently common to most towns, great or small: to wit, a workhouse; and in this workhouse was born; on a day and date which I need not trouble myself to repeat, inasmuch as it can be of no possible consequence to the reader, in this stage of the business at all events; the item of mortality whose name is prefixed to the head of this chapter."

In this example, the narrator sets up the scene. The reader can picture the workhouse but is positioned at a distance so they do not empathise with the inmates of the institution. Translating the text into filmic language, one can visualise a long,

establishing shot looking down onto the workhouse from a superior position. Second person narration is rarely used in literary works but is ubiquitous in interactive fiction. In conventional novels, the use of second person narration often refers to 'you' as the addressee, that is, the person receiving the story. In contrast, in interactive fiction, 'you' are the protagonist that can influence the story outcome. This distinction is important as the first example may only be operating at the level of a rhetorical literary device, while the second actively forces the reader/player to project onto the character by having more agency (Nestvold 1997).

In summary, using first and second person narration can immerse the readers into the character's actions with more ease, akin to internal mode in narrative games. Third person narration (of which there are several forms but I only discuss third-person omniscience for relevance) share similarities with external mode by its ability to describe the scene as witnessed by a far-away observer to provide a more sterile, distant narrative experience.

During the first iteration of the project, I was unfamiliar with the epistolary form of writing and had to develop techniques to help give substance to the characters. I handwrote Clarice's blog entries on index cards as this placed a physical restriction on the size of each entry. It also enabled a loose stream-of-consciousness style of writing, transporting me into the role of a character writing diary entries. I wrote short stories to flesh out the characters. I wrote the 'first meeting' of these characters from different perspectives so that each character had a history that existed outside the *Limerence* world. I found that when I returned to write their social media entries and text messages, I was able to imbue the characters with more personality. Although I use both first- and third-person narration in *Limerence,* it does not break narrative immersion.

Furthermore, I believe that most digital literature sits somewhere on the spectrum of Ryan's internal/external division just as narrative games are neither purely external nor internal but switch between modes for game play and cut scenes. By analysing *Limerence* using Ryan's interactive onion and participation dichotomy, I realised that her frameworks lacked the ability to shift between digital artistic forms. The development of my transmedia triangle attempts to address interactive shifts in hybrid works that share

elements from forms such as games, literature and film. I also received practical user feedback from exhibiting the advance prototype of *Limerence* at the *Mix Digital* exhibition and conference at Bath Spa University.

The *Mix Digital* exhibition displayed the work on a high plinth. The tablet was also locked to the plinth, making it difficult for people to have an intimate reading experience. Similar to the *Player One/Player Two* experience, I was reminded that spaces for performance and visual arts exhibitions do not necessarily promote reading experiences.

Figure 59 *Photographs from the Mix Digital Exhibition at Bath Spa University* 2015

Based on this observation, I was able to make changes to the exhibition space for the *TEXTure* exhibit. I arranged for the tablet to be displayed on a low coffee table with comfortable lounge chairs. A length of cord locked it down, but readers were able to pull the tablet into their laps and read comfortably on the chair. Throughout the week of the exhibition, I observed how people interacted with the work and asked them informal questions.

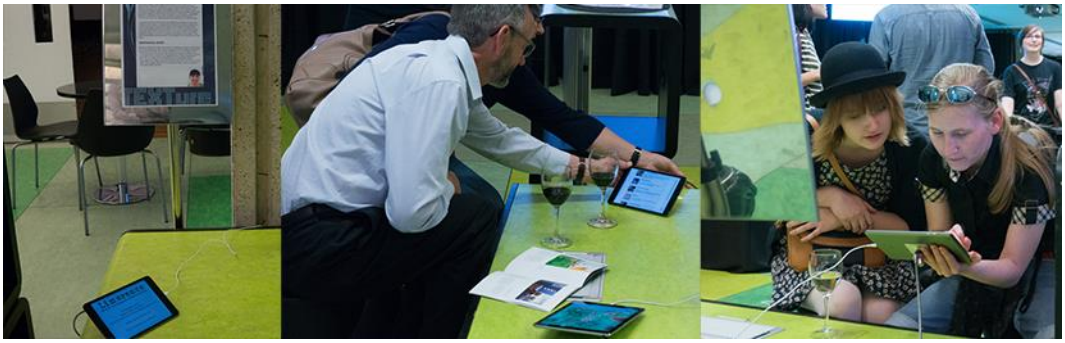


Figure 60 *Photograph from the TEXTure exhibition at The Edge, State Library of Queensland* 2015

People reported that they found the font size too small even though it was set at point 16. People who did not often use touch screen devices (including mobile phones) had difficulty with the pinch and zoom mechanism. Users requested more instructions on navigation, suggesting that a 'training' section should be available, as in a game tutorial. From the feedback, I was able to make final adjustments to the application. For the published application, I split the first level into two, reducing the number of web pages. This first level acts like a tutorial, teaching users how to drag across the screen and pinch and zoom. Readers required more interactive cues to confirm their navigational choices as excessive freedom confused the reader. My programmer James Warr set up sound files for the click baits so that when users clicked on these images, it would emit a clicking sound as the camera moved across the screen.

The TEXTure exhibition displayed *Limerence* on an Ipad Mini 4. Based on user observations, my programmer and I decided to release *Limerence* for larger screens. Even though the Ipad Mini 4 was released in 2015, the screen size was too small for an enjoyable reading experience. Furthermore, the application has high memory and processing requirements due to the volume of high resolution images. This could only be handled smoothly on the new ipad models. We used an Ipad Air 2 for testing but it can run on all IPad Air and Pro models as well as IPad mini above model three. It cannot run on the original IPad 1 to 4. The decision to exclude the original series of tablets limits its user base. However, given the speed of progress in tablet technology (the Ipad Air 2 is the sixth generation following the release of the original ipad in 2010), it is impossible to programme an application that caters for a wider range of tablets. Furthermore, this project is designed to reflect the technological tools at this specific point in time (2015). There will be no updates as the experience of *Limerence* is to be read in context to this technological space. The exhibitions proved to be an excellent testing ground for identifying issues with usability, including elements of navigation, readability, and readerly interactions. By engaging both traditional and digital readers, I gained a more rounded sense of the skills and sensibilities of a 'transliterate' reader. However, in order to thoroughly probe readerly interactions, I needed to expand my enquiry to the

production process. Therefore, as part of my studio work, I conducted a series of practitioner interviews to seek out tools and strategies for writerly designs.

7.3 The Digital Writer's Toolkit

From November 2014 to January 2015, I was the digital writer in residence at the Northern Territory Writers' Centre. As part of my residency, I created the first iteration of *Limerence*, documenting the development of the project through a series of vlogs and blog entries. This would form an online resource called The Digital Writer's Toolkit. My earlier studio experiments highlighted that most writers lack the skills to create multimodal digital works as individuals. However, instead of embracing a studio setting, many digital writers work alone, diversifying their skill sets to embrace programming or graphic design as required. I took on several roles in the production of *Limerence* but chose to hire a programmer as it was unfeasible to learn coding given the complexity of the project. The programmer James Warr became a key crew member throughout the process. The pre-production stage required lengthy discussions to work out how my design for the infinite canvas and z-plan navigation could be implemented. He discusses part of the process in a vlog:
https://writersinresidence.wordpress.com/2014/12/03/limerence-update/ (Appendix 7).
He was able to prototype the interaction based on the Prezi map before the content had been developed. This streamlined the process and gave much more creative flexibility.
As part of the toolkit, I decided to conduct a series of interviews with industry professionals in an attempt to reconcile how readerly, gaming and viewing interactions can be built into the same entertainment experience. My interviews would illuminate how artists from different creative fields develop interactive works, finding out whether they take on a jack-of-all-trades approach or work in a team.
I was fortunate to arrange interviews with transmedia director Anthony Mullins, game producer Gordon Moyes, electronic poet Jason Nelson, transmedia producer Sue Swinburne, and script editor Hugh Burton. I was deliberate in choosing practitioners from games, film, and writing backgrounds as I wanted to gauge how each practitioner valued the narrative ability of other artistic forms and how they combine these skills into their workflow.

I devised interview questions based on the practitioner's professional background, their views on media convergence, the relationship between story and media, and tools for emerging artists working in the digital space. Below are the questions I asked Sue Swinburne:

- How did you get into working in the transmedia space?
- What comes first: the story or the media?
- Even though transmedia talks about equally distributing story between different platforms, do you think this is reflective in current practice? (Or do we still rely on one media such as film or game to carry the bulk of the narrative?)
- Writers often talk about having an ideal reader—someone who is the perfect receiver of their work. Do you think there is an ideal 'digital' reader we need to keep in mind when creating digital stories?
- It has been argued that readers approach story like an external voyeur. They like to be told the story but not participate in it. But the beauty of technology is that it enables user agency and co-creation. How can transmedia designers design stories to engage readers?
- Transmedia is ideal for non-linear storytelling. But if a reader is already unfamiliar with how to navigate the platform, a non-linear story will make it more challenging to follow. Do you have to think about the level of engagement or immersion of your audience when you design your work?
- You started out in print journalism. How do these tools apply when you work in transmedia? Are there some new tools you've picked up along the way?
- Can you talk about some of the design process you've gone through for your PhD project?
- Working in the digital space clearly requires collaboration. Can you discuss the skillsets of the people you work with, when you engage them and what they bring to the project?
- At what point along a project do you design for interactivity?

The questions for Nelson, Moyes, and Burton followed a similar vein, but were contextualised for their professional practice. The list of questions can be viewed in Appendix 8. Cinematographer Sen Wong and editor Judy Yeh filmed and edited these interviews into two vlogs that can be viewed at the following addresses: https://writersinresidence.wordpress.com/2014/11/28/what-comes-first-story-or-media/ https://writersinresidence.wordpress.com/2014/12/01/interactive-narrative/. Appendix 9 contains a transcript of these interviews. Anthony Mullins was unable to attend a recorded interview. Instead, I conducted his interview through email exchange. His interview is published online: https://writersinresidence.wordpress.com/2014/12/09/interview-with-anthony-mullins/ There is also a transcript of the interview in appendix 10. The interviews were illuminating in that each practitioner had a different approach to developing digital narratives; there appeared to be no fixed rule whether story or media should have precedence. As a filmmaker, Swinburne feels that she is more comfortable putting the story before the delivery mechanism; however, she has had ideas that emerged from observing something in a physical environment and then developed as a story as a secondary consideration. Mullins feels that if story and technology are thought about in equal measure, they can only amplify each other. Otherwise, the technology or the story usually feels intrusive to the other element. Similarly, Nelson asserted that writing cannot always come first; all the elements need to be developed simultaneously. The process is organic and varied, depending on the project.

My interviewees offered interesting insights into how digital narratives can be designed to engage readers. Game designer Gordon Moyes feels that not all stories suit a gaming platform; sometimes, a game mechanic could be the impetus for a strong story premise. If a story suits another delivery, then it would need substantial reworking to fit it into a game. In these instances, it may be best to leave it as a movie or a book. He stressed the importance of game play as not all gamers are looking for in-depth stories. In games, what can be more important is developing a rich story world with back stories where gamers can imprint their own narratives. Mullins (2014) pointed to an opinion piece he wrote for *The Writing Platform* discussing *The End Game*, an ARG tied in to a book

series. The premise surrounds twelve young players chosen by extraterrestrials to train and recover three keys that will decide humankind's fate. Google Niantic Labs built a location-based game that allows real-life players to decipher clues from the books and participate in a real-world treasure hunt for prize money. Mullins asserted that the problem with interactive story telling is that there is an impetus to push writers/designers towards action. This result in one type of genre being produced (mysteries, murders, and treasures hunts) and the same tropes being peddled (damsel in distress, the chosen one, amnesiac teenager). These types of action genres that promote exploration and suspense are a natural fit for games, as Ryan (2008) pointed out when describing the pleasures of narrative games. As for readerly interactions, while *The Endgame* demonstrates that large book publishers are moving into the transmedia space, it is repeating the same gamification techniques of its predecessors.

In our email exchange, Mullins expressed his feeling that not all stories are right for transmedia execution:

> (the) first stop would be how to recognise if your story has this potential. If not, then best concentrate on making the story in your book, film, whatever, the best it can be. A standard novel can make an average reader buy the book, attend a book club, pay for a literary festival to hear the author speak, and probably even see the movie/DVD/etc…

While none of my interviewees had any concrete solutions into ensuring readerly designing, they were universally agreed in that story cannot be fitted into any medium. The most reiterated point from all interviewees was that, regardless of the inspiration that forms the seed of a story, media interactivity and narrative must be developed simultaneously. The complete list of blog entries that formed the Digital Writer's Toolkit can be found in Appendix 10. This online information resource was not only a record of do's and don'ts from my own process but also illuminated tools, strategies, and issues surrounding digital writing. By seeking perspectives from filmmaking, gaming and writing, I devised a new approach to digital writing. What I term the 'transmedia triangle model' moves away from gaming types of interactive design to consider how readerly

interactions can be framed for the tablet device. The next chapter discusses my key insights from the *Limerence* project.

Chapter 8: Insights from the *Limerence* Project

Tom Uglow from Google Creative Lab sums up the vision for their collaboration with innovative publisher Visual Editions to create a non-platform specific future for books. "There is the battle to make space for coherent narrative within novel formats and to avoid ergodic trajectories… I am optimistic that it is a sign of a coming generation of literature that is bound to the cloud, not the page, nor the pixel…" (Uglow 2014). Their brainchild *Editions at Play* is an online bookshop that specialises in digital books that cannot be printed. Uglow discusses the cultural forces driving the development of this concept in article titled "pBooks, eBooks and dBooks: Why We Are Hooked on Books and Bookness". The electronic book (ebook) has changed the landscape of distribution: ebooks are affordable, transferrable, and searchable. Digitalisation allow information to be shared instantaneously and foster a spirit of creation unhindered by gatekeepers. Yet, for all their merits, digital books lack tactility—an endurability of the form that preserves the experience—the cultural caché attached to the physical book. Uglow argues that we are only starting to appreciate this physical dimension, as evidenced by the return to analogue forms. *Editions at Play* is designed to be the best of both worlds; an experimentation in digital forms but without losing the 'bookishness' of the past. This philosophy became a driving force throughout my research enquiry:

How can writers utilise the affordances of digital media to shape narrative experiences for readerly interactions?

In my narrative analysis, studio experiments, practitioner interviews, and development of the *Limerence* project, I identified three types of readerly interactions: digital tmesis, multimodal riddles, and the infinite canvas metaphor. Digital writers can use the affordances of digital media to write for these readerly interactions by approaching design from what I term a transmedia triangle model.

8.1 Digital Tmesis: Flow and Turbulence

In March 2015, the Queensland Art Gallery | Gallery of Modern Art (QAGOMA) held an exhibition of David Lynch's works in film, music, sculpture, and paintings. During a masterclass, a member of the audience pointed out the deliberate slow pacing of Lynch's films. The audience member asked Lynch how he pictures time. He wanted to know if he sees time as a particular shape, such as a spiral, as circular or linear. He wanted to know how tempo, pacing, and rhythm play into his films. These questions resonated with me as I walked through the exhibition of Lynch's artworks and listened to his music. The slow burn associated with Lynch's films exists across every medium. I was struck with the realisation that every medium has its own rhythm that controls the flow of storytelling.

According to Genette (1980, 30–35), each novel has story time (the sequence of events and the length of time that passes in the story) and discourse time (the length of time that is taken up by the telling or presentation of the story). The discourse time can be considered in terms of ordering, duration, and frequency. In Chapter 3, I discussed the capacity of the novelist to be able to change the ordering of events in a story which still make sense to the reader. Unlike the oral storytelling tradition, which usually starts at the beginning, progresses to the climax, and reveals the denouement, novels can start media res (in the middle of things), jump backwards to an earlier event, before leapfrogging to a forward date. Novels can also compress time; ten years and a civil war passed in *Gone with the Wind* but it does not take ten years to read. If every event unfolded at the same pace as real life, the reader would lose interest. Inciting incidences and catalyzers are necessary to contract time and build suspense. Writers can summarise plots to reduce narrative duration, extend dramatic scenes so that story and discourse time unfold equally, or use an ellipsis to bypass a large chunk of time in one or two sentences (Fludernik 2009, 32–35; Genette 1980, 40–50). These techniques are used by the writer to control the rhythm of the narrative. Every medium has its own tools and techniques for shaping rhythm.

Adaptation theorist George Bluestone (1957, 48) claims that "The novel has three tenses (past, present, future) while the film has only one (the present tense)". While this exegesis does not delve deeply into adaptation theories, this field of study raises valid questions

about temporal specificity between media. If the temporal differences between literature and film are true, then surely the film's 'presentness' prevents successful cross-media adaptation? Despite this, the emergence of franchise transmedia within the entertainment industry has created a modernised audience who is well-versed in novel-to-screen adaptations. In 2016, the Academy of Motion Picture Arts and Sciences awards for best picture, director, actor, actress, supporting actor, and supporting actress all went to works of adaptations (Marlow 2016). Forty years after Bluestone's assessment on film/literature adaptation, writer Brian McFarlane (1996, 29) adopted a narratological approach by formally applying Barthes' (1977) classic essay "The Structural Analysis of Narrative" to adaptation. He concedes that although films cannot present action in the past as novels do, there are certain narrative features that are readily transferrable between media. For example, dialogue could be easily translated between the two media, but a literary description of a scene needs to become a series of moving images that provide the same atmosphere. Media theorist Sarah Cardwell (2003) adds that although what we see on the screen always appears to be in the process of happening, the audience understands that a flashback is presenting a narrative past or that a historical drama infers a 'real-time past' setting the story in a different era. Film image may be inherently tenseless compared to the flexibility of literature, but the medium of film can represent a range of tenses through manipulation of images, words, and sounds (Cardwell 2003).

In my practical work, I began exploring these temporal differences between the experience of reading and viewing. A novel may take twenty-four hours to read, but a film adaptation of that same work may convey the general plot in ninety minutes. Extending the experiences to other media, games unfold the story in terms of spatial rather than temporal progression (Bembeneck 2012), while comics measure time in terms of spacing between the panels, the panel sequence, and the overall page layout (McCloud 2000, 206–15). Rhythm can be imagined as a physical shape that organises the narrative events, music, tonality, texture, and harmony into an expressive whole (Biro 2008, 33–34). The relationship between the story time and the discourse time influences how the audience perceives the tempo. In observing the reception of the *Player One/Player Two* project, I was aware of how each medium has its own affordances to enable the creator to

control flow and turbulence to influence the audience's perception of the unfolding narrative. The overall order of events was controlled by the audience as they walked back and forth between the exhibits. However, some exhibits required the audience member to relinquish control, such as with the *Diablo* machinima video, which required the audience to watch the unfolding story. This is distinctly different from the game stations where audience members could complete goals but then had to relinquish control to watch cut scenes that give story exposition. When it came to reading the didactics, audiences regained control of rhythm. If games, films, comics, and novels have their own time signatures, how can this be reconciled when forms converge as in the case of digital literature? I posited that digital writers were merging gaming interactivity without consideration of the pleasures of reading. Part of this disruption of flow is derived from forcing an unnatural rhythm onto readers. As a potential solution, I re-examine reader-response theory, specifically the concept of 'tmesis'.

Narratologist Roland Barthes coined the term 'tmesis' to explain the phenomenon of the reader skimming passages, curating their own experience of the story laid down by the author. He claims that most classical narratives bear a sort of diluted tmesis: "We do not read everything with the same intensity of reading; a rhythm is established… our very avidity for knowledge impels us to skim or to skip certain passages in order to get more quickly to the warmer parts of the anecdotes" (Barthes 1990, 10). In the *Player One/Player Two* project, the audio narratives force players to be active listeners rather than skimming readers as they cannot control the tempo. I felt that some audience members were disengaged with this hybrid rhythm of storytelling. This led to the realisation that in order to create a readerly experience, the *Limerence* project needed to emulate a digital version of tmesis so the readers can have full control of the rhythm. Musicians may be able to change the tempo of the piece they are playing and influence the audience impressions of it; however, their interpretation cannot change the organisational structure of the composer's score composed of beats, instrumentations, and melodies that form the rhythm (Biro 2008, 232). Likewise, the filmmaker acts as a conductor who has pre-orchestrated the ebbs and flow of the piece using framing, cinematography, and editing techniques. The audience may be able to fast-forward or

rewind the narrative but they cannot control the pace and rhythm when played in real-time. Gamers fluctuate between being in total control during game play and relinquishing control in the cut scenes that emulate cinema. Readers are unique in that only the writer lay down the code to be deciphered; it is the readers who control the rhythm through tmesis. Biro (2008, 10–11) describes two concepts of time: *chronos* is physical time as measured by a clock; *tempus* is the perception of time in a person's mind and is subjective to their experiences and impressions. When a person is working on a task that puts them in a state of flow (Csikszentmihalyi 2014), time passes without their realisation.

The navigation mechanism in *Limerence* is intended to facilitate a digital tmesis. Readers can swipe in any direction to read the story. Instead of flipping the pages, the reader can pinch and zoom to move into the z plane to access deeper story levels. Swiping through the web pages within the same level is the same as skipping over a few pages, but zooming into another level is like jumping to the middle of the book. Barthes (1990, 11) likens tmesis to a striptease. A reader may skip boring passages just like the spectator in a nightclub who climbs on to the stage and tears off the dancer's clothing but in the same order, as she or he would have done. Likewise, a reader will often skim ahead a few pages of a physical book but rarely will they jump straight to the end.

Readers apply their unique rhythm to every text. Literacy is taught at such a young age that by the time we reach adulthood, reading has become intuitive, with the result that most people are unaware of the processes in the brain that are deciphering the codes laid down by the author. I recall having to take turns reading aloud in class as part of my primary school curriculum and, becoming frustrated by the slow readers I would silently skim ahead, keeping one ear on the reader in case the teacher called on me but entering the narrative at my own pace. I couldn't understand the difference between fast and slow readers. What I didn't fully appreciate at the time is that reading aloud is an important technique to improve literacy, and cognitive and linguistic development. As Anderson et al. note:

> In reading, being able to say the words (decoding) gives access to their meaning. Understanding what is read requires a very substantial knowledge base to construct viable interpretations of text. Because people differ in their knowledge bases, different interpretations of text often occur…Second graders with the best comprehension scores are the ones who decode fast and accurately. When decoding skills are weak, the time spent in trying to decode interferes with the interpretation processes. (1988, 389–99)

Barthes (1974, 12) articulates a set of codes that sum up the complexity of the reader–text relationship that drives the desire to read a story:

- Hermeneutic code: Unexplained elements that raise questions in the reader. For example, who put the poison in the drink? Which of the hotel guests are colluding with the robber? This technique creates suspense by withholding information until the end
- Proairetic code: A plot action caused by an event that leads to another event. It causes anticipation by driving the plot action forward. For example, the hotel guests hear a brusque knock on the door. The next moment, the door flies open revealing the half-frozen carriage driver
- Semantic code: Any element in the text that connotes additional meaning
- Symbolic code: The structure that organises semantic meanings into broader sets of meaning
- Cultural code: Any element that relies on a shared body of knowledge belonging to a group of people

The hermeneutic and proairetic codes are temporal structures designed to orchestrate the rhythm of narrative. The former "creates a temporary blockage, a dilatory space" to build suspense (Biro 2008, 27). The latter imparts a logical sequence of action. Between them, they drive the action forward by mixing tension with attenuated moments of rest. The variations at which individuals decipher these codes determine their rhythm in reading. For this reason, not all readers enjoy audio stories as they remove the agency of rhythm. My first recommendation for creating pleasurable readerly experiences across digital

media returns the control of rhythm to the reader. Shifting between gaming, film, and reading interrupts this flow, producing an unnatural reading experience.

8.2 Multimodal Riddles

I was deeply influenced by Naomi Alderman's assertion that games are the first great works of digital literature. It opened up a line of questioning as to my role, firstly as a reader and secondly as a writer. I enjoyed casual gaming but certainly not to the same extent as reading. It made me question the place for readerly interactions in the digital space. Is it inevitable that transliteracy involves readers transmuting to a hybrid reader-gamer? Literary theorist Wolfgang Iser (1978, 35) asserts that the role of the author is to craft a unique view of the world. The role of the reader is to find a vantage point that enables them to actualise the meaning of the text. The relationship between the author and the reader approximates the concept of anamorphosis.

Figure 61 Hans Holbein the Younger *The Ambassadors* 1533, oil on oak, 209.5cm x 207cm. Courtesy of Wikicommons.

The Ambassadors (figure 61) is a famous example of anamorphosis; the image appears distorted until the viewer occupies a specific vantage point to reconstitute the picture. Viewed straight on, it appears to possess a blurred, foreign object in the foreground. However, if viewed at an oblique angle, the foreign object resolves into a skull. Similar to the viewer of the painting, the reader derives pleasure from filling in the gaps between the texts to actualise the story. However, not every reader will be able to do this to the same extent.

Iser (1978, 30) asserts that the reader needs to be 'informed', meaning that they are competent with the language used, including knowledge of lexical sets, collocation probabilities, idioms, and cultural references. This is similar to Umberto Eco's concept of the model reader. The author can only assemble codes to communicate their text but must assume that the reader will be able to interpret his/her expressions to make sense of the story (Eco 1979, 7). In a sense, reading is a form of puzzle-solving that involves interpreting semiotics of language. Caillois (1961, 30) recognised that games such as crossword puzzles, anagrams, obscure poetry, and addiction to detective stories where the player tries to identify the culprit were a variation of the pure ludus form. Throughout history, there have been literary games that borrow gaming techniques. One style of literary games adds obstructions to the message formation for the reader to solve (Ryan 2003b, 179). These games can be literal, relying on the rules that govern language, such as rearranging the letters in an anagram to form a new word or filling in the missing letters in a crossword. Text-based computer games operate similarly in that readers/players follow textual directions. Interactive fiction involves reader/players parsing the correct phrase to unlock the next story section. Literary games can be metonymical or metaphorical. Riddles and mystery novels work because the author and reader are implicit players in a game consisting of one move. The author asks the questions and the reader gives the solution.

As Ryan notes, "Wolfgang Iser likens the act of reading to playing a game in which the reader can either win by 'achieving meaning' or 'maintain freeplay' (a state akin to a tie) by 'keeping meaning open-ended but the text certainly does not lose when the reader wins'" (Ryan 2003b, 183). In such cases, readers do not solve problems by literally applying semantic or syntactical rules of language. They are applying Barthes' codes to understand the deeper meaning in a story. The reader may not necessarily be interested in beating the author (by solving the mystery); they become more interested in the fate of the characters and the natural story denouement. Barthes (Howard 1990, v–vi) applies the terms *jouissance* and *plaisir* to the reading experience. The first translates to 'bliss' or 'orgasmic', the second is simply 'pleasure'. The pleasure of reading does not only come from narrative suspense. Barthes likens this part of reading to the corporeal striptease in

that there is also pleasure in filling in the gaps between the text; the most erotic part of the body during a striptease is where the folds of fabric gape open (Barthes 1975, 9–10). A readerly text may provide pleasure to the reader, but the writerly text is one that extends beyond the hermeneutic and proairetic codes. It layers code upon code to play with language for the readers to winnow out truths, make connections, and construct images between the text.

Nick Montfort's *Through The Park* is a playful story that emanates the process of tmesis. It is a short story generator that links fragmented sentences using the ellipsis as a contextual cue. The breaks between the text forces the eyes the skim over the words like jumping between stepping stones across a stream. The premise is a clandestine meeting between a man and a girl in a park. In one version, the girl seems to be the aggressor whereas in another reading, she could be the victim being stalked. In a third variation, the couple seem to be working together in a heist. Each story variation is heavily reliant on the placement of the ellipsis emphasising key words, suggesting the passage of time and the order of events. The ellipsis requires the reader to fill in significant gaps between the texts, emphasising the importance of reader interpretation.

This readerly text reminds me of the type of puzzle-solving in games such as *Gone Home* and *Journey*. How can these games be lauded by Alderman as great works of digital literature yet contain simplistic or (in the case of *Journey*) no written text? I concluded that games can be designed to emulate the same style of metonymic and metaphorical puzzle-solving as Ryan described in literature. In the narrative analysis, I discussed how narrative games produced temporal and emotional pleasure from the suspense of working out the plot as well as empathy for the characters involved (Ryan 2008). Epistemic plots work well because the procedural properties of computer media can apply Barthes' hermeneutic and proairetic codes. These codes are not confined to written language. Players decipher plot meaning through cut scenes and engaging with non-playable characters. Hermeneutic and proairetic codes particularly suit game genres such as action, mystery, adventure, and fantasy. However, real-life dramas do not require the player to suspend their disbelief to the same extent that is required to go on a quest, solve a murder, or foil a kidnapping. Dramas centre on resolving a dramatic question that

usually revolves around relationships, either between a protagonist and their lover, a parent, a friend, an enemy or themselves. They rely on subtler interactions by applying Barthes' semantic, symbolic and cultural codes as well to mimic real life situations. Deciphering the nuances of these codes require much more work on the part of the audience. For example, the *Journey* experience is a metaphor for the journey of life. It is presented in such a way that players empathise with the robed character to the extent that they transfer the avatar as a representation of their life despite the fact the figure is non-specific in gender and has no distinguishable facial features. The player has to draw on the parallel between wandering through a landscape to collect pieces of cloth and meandering through life towards milestones. As the scarf gets longer, the player understands they have gained more experience perhaps from conflict or reward through work or family. *Journey* has symbolic resonance created through player interaction and the layering of multimodal elements. The interpretive elements of this game—the way in which players need to work through Barthes' codes to decipher meaning—are what draw readerly parallels.

I did not attempt to design *Limerence* towards real-time story generation, playing through an avatar, or co-authorship, like the higher levels of interactivity associated with games in Ryan's interactive onion. Instead, I explored how multimodal elements can be used by readers to interpret semantic, symbolic and cultural codes. *Limerence* lends itself to multimodality being an epistolary form within a digital realm. I experimented with various modes of online writing from blogs and websites to instant messages and click baits. The written text and visual images contradict each other, often relying on the readers to pick up these nuances to fully understand Clarice's unreliable narration. Each text system has its own stylistic conventions—text, emoticons, abbreviations, images and sound. Writers often think of transliteracy as being well-versed in different media but must remember that digital readers take pleasure in deciphering a rich set of semantic, cultural and symbolic codes that apply to multimodal texts.

7.3 McCloud's Infinite Canvas: Spatial–Temporal Dimension of Language

Up to this point I had considered rhythm as a function of time but the *Player One/Player Two* project raised my awareness of the relationship between time and space. In Chapter 4, I introduced Bakhtin's chronotrope as a way for readers to make sense of story by anchoring events to the space–time axis. Ryan extends the spatial–temporal dimension of narrative to the virtual world. Maps of virtual spaces can be a navigation aid for readers/gamers to plot a path despite not having the same topological relationships as maps of real places or being unplottable on a Cartesian grid (Ryan 2004b). After several readings of *Limerence*, readers form an internal map of the story world. They will know that Clarice's blog *Elephant in the Room* is on the right hand side of her Chapbook page. They can work out that Joe the Bro's Chapbook page sits directly beneath Clarice's Chapbook page in the second level and that Meggie Brody's Chapbook page is directly underneath in the third level. More important than internal organisation, spatial–temporal mapping also functions as a form of visualisation so that reader/players can project themselves into the story world. It provides a sense of place; Clarice's Elephant in the Room is not just a blog floating in the recesses of the cyber universe. It is her private bedroom where she sits at a desk writing in her journal. *Tenderlinks* is not just an anonymous dating/ chatting forum but simulates an upmarket bar with mood lighting, recliner seats in private alcoves, and a DJ playing live music in the background.

The theories of Bakhtin and Ryan established the significance of the relationship between reader interpretation and spatial–temporal storytelling. McCloud's infinite canvas (see Chapter 4) provided a definitive direction to explore this connection on the tablet platform.

McCloud conjured the notion of continuous text as the natural form in hieroglyphs, tapestries, and scrolls. He posits the book format as the intruder breaking up the sequential text into chapters and pages (2000, 206–15). By designing for the spatial affordance of the tablet platform, digital writers can return to the 'natural' form of sequential text. The advantage of the infinite plane is that the break away from chapters and pages frees up the arrangement of text, providing the flexibility to compose spurts of micro-fiction and short vignettes to scrollable, flowing monologues. *Limerence* is structured as if the pages of a book have been removed and laid out on a canvas. The

camera is set up to give more freedom to the reader. They can zoom out so that the viewport reveals several web pages but they cannot see the whole map. *Limerence* takes about twenty minutes to explore in its entirety; it is designed for bite/byte-sized consumption as opposed to the time commitment required by the average novel. Some web pages carry short text conversations between Clarice and her friends, while longer passages such as Clarice's blog use a scroll bar. The reader may not be able to see the map in its entirety but they can see what is immediately ahead and behind as assurance that their reading order is appropriate. McCloud's vision for the infinite canvas extends to three-dimensional space. He proposes that the z-plane has great potential for layered narratives, tonal variations, and flashbacks. I applied his theory to *Limerence* by using the z-plane to delve deeper into stories and reveal hidden information about the characters. For instance, level two show Richard Wiley's *Rich and Wired* homepage. On the surface, it looks like a professional business website. Level three shows a promotional video that he's made, which ultimately give readers more clues as to his insincerity. Level four shows conversations between him and his wife, revealing that their seemingly perfect online lives are actually fraught with marital difficulties. McCloud's z-plane dimension of the infinite canvas works well for *Limerence* in that the depth of the z-plane mimics digging deeper beneath a surface of a story to find out what lies under the façade.

The physical book is like a folded service station map. The front of the map usually has a photo of a tourist landmark associated with the place. The back gives written summary of the location with a few photos of famous landmarks, but it is not until the map is unfolded that one can see the specific roads, landmarks, and the varying routes along the journey. However, these paper maps are usually too big to unfold in its entirety in the car, so we only ever see the relevant sections of it at any one time. Likewise, by locking the camera, I prevent readers from seeing the entire map of *Limerence*, showing them only what lie directly ahead or behind in the narrative. Ryan (2008) and Gazzard (2013) both discuss the exploration of space as one of the pleasures of narrative games. They consider the wandering and ritualistic aspects of walking the path as part of the rewards of the game. Eco (1994, 28) writes:

> There are two ways of walking through a wood…The first is to try one or several routes (so as to get out of the wood as fast as possible…); the second is to walk so as to discover what the wood is like and find out why some paths are accessible and others are not.

I want to invoke a certain degree of disorientation by not revealing the map in its entirety, though at the same time, I do not intend for the possible paths to be completely concealed as in hypertext fiction.

When hypertext became popular in the 1990s, many theorists predicted that the indeterminate ordering of events in hypertext would provide agency to the reader, revolutionising the way we tell stories (Bolter 2001, 122). Murray (1997, 133) argues that in fact the opposite is true; unlike a physical book, where readers can skim passages, choose when to turn the page, and gain cues as to the pacing of the story through the physicality of the medium, hypertext provides no way to jump back, mark pathways, or indicate whether the story is at the beginning, middle, or end. The indeterminate structure of hypertext actually confines readers to a predetermined pathway, creating only an illusion of agency. Most hypertext fiction gives readers only a small portion of the inside of a map at any one time without letting them piece together the map in its entirety. One could navigate their way to the destination but they are never able to find the same route again. Early hypertext fiction remains rooted in the academic realm of postmodern criticism where the erratic jumps between points in the story make it difficult to create an engaging narrative for mainstream audiences. Readers were burdened with choice that caused anxiety and broke the immersion of the story (Meyers 2011). The use of click baits in *Limerence* is a reference to hypertext links that cause disorientation as it forces the reader to jump between story segments. However, unlike traditional hyperlinks that move the reader between web pages with no indication of the pathway taken, the camera drags the reader over the landscape so that they can see how many web pages they've skipped over in taking the shortcut. The click baits act less like a warp that seeks to disrupt geography and temporality and more like a GPS tracker that highlight the possible pathways and the connections between various spaces in *Limerence* (Gazzard 2008, 125).

8.4 The Transmedia Triangle

In the process of identifying three types of readerly interactions that take advantage of the tablet platform, I also gained an insight into the mindset of writers designing digital literature. Transmedial narratology is a field that recognises the connection between media and narrative. It frames research in a way that does not privilege language but in doing so it may privilege something else. Interactivity has its roots in the domain of games, and as such it is a gaming style of interaction—real time story creation, player as avatar—that is privileged in digital literature. This assumption colours the choices that designers, writers, and artists make when creating work for the digital space. These creative practitioners are urged to abandon legacy forms in favour for gaming interactivity. An alternative should be to investigate the sort of interactions that result in pleasure from these legacy forms for new directions in design of narrative digital media. The model of current interactive media design can be perceived as a triangle, with a gamer, film viewer, and reader representing the three audience types at each corner (figure 61).

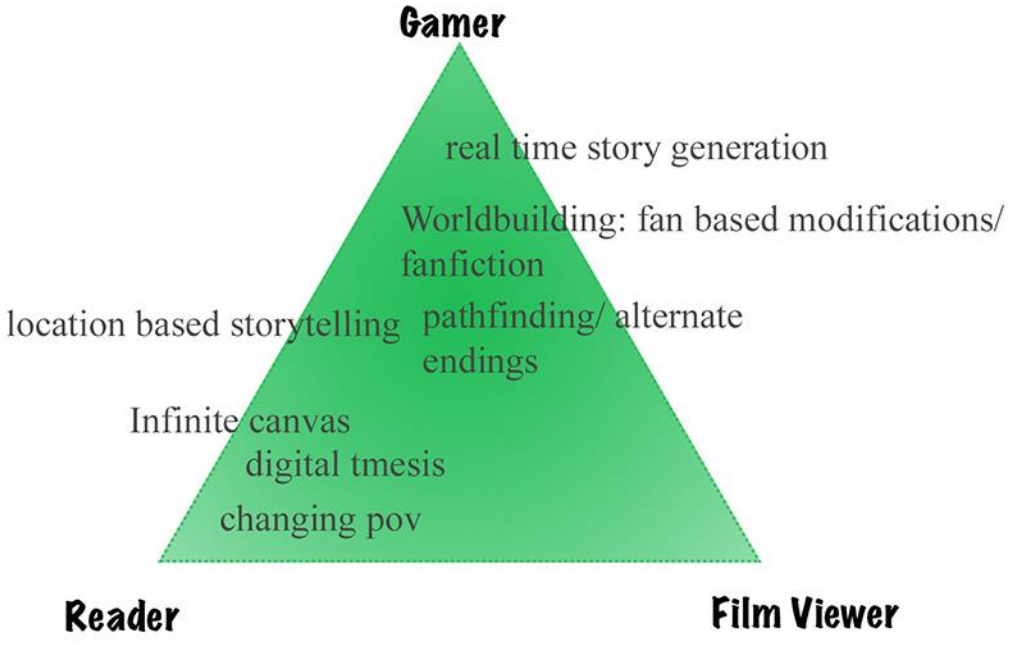


Figure 62 *Diagram of Transmedia Triangle Model* 2016.

Many digital writers today craft stories aimed towards a gamer audience, with some consideration of the film viewer, but with little thought given to the potential pleasures of a traditional reader. Designers, critics, and audiences have imposed a hierarchical order to Ryan's interactive onion, which was only intended as a taxonomical model for interactivity. The transmedia triangle model considers types of interactivity in relation to the pleasure it affords the three audience types for screen media.

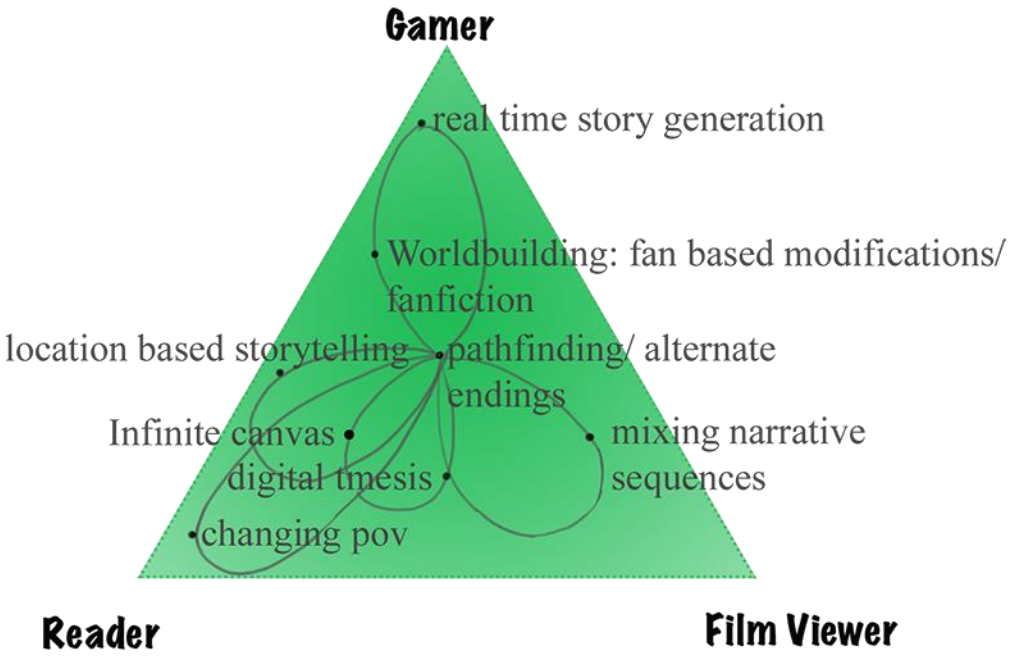


Figure 63 *Diagram of Transmedia Triangle Model with Spirograph* 2016.

This model approximates the process of creation to be like a spirograph within a triangle. The types of interactivity move between the three axes, depending on whether the work is designed towards a gaming, reading, or viewing audience. There are hybrid game-readers (or even game-reader-viewers) who enjoy mixing the experience of games and books such as solving a puzzle to unlock a narrative or choosing pathways to produce story variations. Towards the reader's axis, designers should consider types of interactions that appeal to the pleasure of readers. Works that explore a spatial–temporal dimension, such as the infinite canvas layout or the concept of digital tmesis, are interactions that suit

readers. Likewise, a game such as *Her Story* (2015) leans towards a film audience; its primary mode of interaction plays on mixing narrative sequences. Although it is a game, the pleasure of the viewer comes from their comprehension of film language and their ability to articulate questions to pull out information from the videos to piece together the puzzle.

I began my research using a transmedial narratology paradigm. Through the process of creating *Limerence*, I found that digital literature needs to move towards another framework, one that is not skewed towards gaming interactivity. The triangular model of transmedia design takes into account different notions of interactivity and agency depending on the audience. Instead of focusing on the procedural property of the machine, writers should explore the spatial dimension based on the infinite canvas metaphor, digital tmesis, and the multimodal riddle style of problem-solving.

Conclusion

Transmedia. Interactive narratives. Digital literature. I began my candidature with a somewhat inarticulate desire to identify my writing practice within the convergent field of digital writing, transmedia, and interactive narratives. It was perhaps a selfish desire; a pathway to stop myself from slipping into redundancy, a strategy to move forward without turning into a game writer or scriptwriter. Through my research, I have made a number of valuable discoveries that have ramifications for the practice of creative writing, specifically how writers can incorporate their practice into a digital environment.

By identifying the vocabulary used by digital creatives to situate their practice within this field, I addressed the friction underlying these placeholder terminologies. Some may consider it a matter of semantics whether a work is considered transmedia, digital literature, or an interactive narrative but it nonetheless affects how a work is designed and critiqued. Aarseth (2015) summed up the conundrum by asking which element to privilege in these art forms: the medium, literature, interactivity, or a new aesthetic that combines elements from various fields? I moved away from using the term transmedia in defining my creative works as, strictly speaking, my works did not fit in to Jenkins' definition of crossing multiple platforms, nor its association with franchising and branding. Instead, I chose to use the term 'digital literature' to broaden my examination of these categories. Digital literature is the successor of electronic literature but, as yet, the shape is not fully formed, as evidenced by Alderman's (2015a) assertion that early games were the first wave of digital literature.

I borrowed elements of Manovich's, Ryan's and Murray's defining properties of digital media to propose a hybrid categorisation. For my research, the affordances of digital media were procedural; containing multiple sensory and semiotic channels; it is interactive/ participatory in nature; it is spatial; and can be transcoded. My narrative analysis surveyed games, transmedia, digital literature, as well as books, all of which exploit multiple elements of these affordances. Given the plasticity of the new form and the convergence of media, it was imperative to look to the design and user experiences of

all associated forms in finding out the types of readerly interactions that existed. Ryan's participatory dichotomy and interactive onion provides a framework for my analysis. Works that are considered a readerly text—that is, a text comprising mainly of written language—employs the first two layers of Ryan's interactive onion. They mimic themes and offer a choice of narrative pathways but rarely penetrate deeper layers of the onion. The mode of storytelling is diegetic and external, with the exception of classic choose-your-own-adventure style books which uses a second-person narration. The text often employs multimodality through illustration, sound, comics, and films, but this can cause a jarring dissonance as the reader must step out of reading mode to decode other media forms. Although both linear and non-linear narrative structures exist in digital literature, there is currently much more opportunity for innovation in the non-linear space. The narrative analysis also uncovered works with simple branching systems (*To Be or Not To Be*), networked structures (*Afternoon*, *Highrise: Universe Within*), embedded narratives (*Her Story*, *Myst*) or open-world architecture (*Journey*). Based on my preliminary review, I singled out three case studies that demonstrated various types of 'readerly' interactions: *Device 6*, *Gone Home,* and *Journey*. I chose *Device 6* due to its use of written language as a visual map of the game, and *Gone Home* and *Journey* because Alderman cited these games as "the first great works of digital literature" (2015a).

Device 6 contains written language as instructions, descriptions of places, and sequences of events. It layered text with multimodal elements to create a visual map. *Gone Home* challenges its audience with a different form of puzzle-solving; they need to work out the dynamics of the Greenbriar family by interpreting the gaps between the multimodal elements. Similarly, *Journey* presents a metaphorical riddle in that the player had to work out the symbolism behind the character's tasks and activities. The polarised reviews for *Gone Home* led me to realise that a user's pleasure is reliant on taxonomy, that is, what we classify the work determines our expectations of its function and subsequently our pleasure in the work. We expect all digital media to have some degree of interactivity but the level of agency and how it affects narrative is dependent on what we perceive the final object to be. The critics of *Gone Home* criticised it for not having the interactivity of a game because games are usually meant to have a high degree of user agency. If we

accepted the designers' description of *Gone Home* as an interactive narrative, then the standard for interactivity would be reconfigured and a new system of critique would emerge. My challenge lay in finding how readerly interactions can offer a way forward to critiquing and designing this new form based on the pleasure of the reading experience.

Classifying artefacts into media, genres, and forms is part of how we interpret and make sense of a story. The question "Is a story any good?" has an implicit parenthesis, "Does it do what it is supposed to do?" A game is meant to have a "lean forward" level of engagement but a book has the opposite. A reader would be initially disorientated if they were handed a game and expected to perform the same type of tasks required to read a book. Analysing the pleasure of the reader became a strategy for me to find out the types of readerly interactions that exploit affordances of the media. I considered how Douglas and Hargadon's concept of engagement and immersion, and Csikszentmihalyi's concept of flow, applied to different media experiences. The goal-orientated pleasures of games are applied differently to narrative games where audiences are more immersed in the dramatic question. Gamers derive a sense of empowerment by performing actions that have direct consequences on the game world. In narrative games, there is a performative aspect to how story is told. As Laurel (1993, 32) claims, players are actors and the computer is the theatrical stage. Gamers act through their avatars to gain narrative resonance. They become immersed in the characters in the same way that an actor uses immersion techniques to think, act, and bring a character to life. This is similar to Ryan's (2004, 2006) internal positioning of players in games. Players situated in first-person mode are intimately connected with their avatar and become more invested into their outcome. In external mode, players act from a more god-like position; for example, in a strategy game where players can the direct movement of large armies and do not have any particular connection to individual soldiers.

Books are experienced differently by people because they do not access the story through the action of controlling an avatar. Readers must identify with the characters to gain entry into the story world. This does not necessarily mean readers are external observers incapable of immersion. They experience stories more like the audience who watch the

actors on screen/stage and must interpret every aspect of the performance to make meaning. The tools of language can easily manipulate readers to suspend disbelief and empathise with their characters and stories but there is an absence of performance. It uses a 'show, don't tell' form as opposed to the 'Do, don't show' strategy of games. This has direct consequence on how writers should design for readers to interact with digital stories. Designs that require readers to fight dragons, solve mazes, or defend territories would produce pleasure, regardless of the complexity of the story premise. On the other hand, a simple point-and-click interactivity as employed in *Gone Home* does not disrupt the flow of reading and allows readers to focus on unravelling the narrative. Following the case studies, I uncovered two aspects to readerly interactions that needed to be considered in my studio practice: spatial–temporal framing and riddle-based problem-solving.

At the beginning of my candidature, my research question stood as:

Can the affordances of digital media present non-linear narrative structures for readerly interactions?

After my narrative analysis and case studies, I broke the question into three components:

1. How can spatial–temporal framing of narrative be translated from traditional to digital media to create pleasurable experiences for the digital reader?
2. How can multimodal techniques be applied to riddle-based problem-solving in digital literature?
3. What techniques and strategies can be adopted by digital writers to construct readerly experiences that reflect our cultural digestion of new media?

My first studio work *Choose Your Own Death* was a foundation study that translated the traditional simple branching narrative into a paper prototype for a tablet application. The book structure remained mostly intact as it moved between the page and a scrolling screen. Moving away from skeumorphism was an important consideration. The

familiarity of the page flick mechanism grows audience's confidence in navigating a tablet but it also stifles creativity. I wanted the human–computer interaction to be a natural extension of the tablet; a non-effortful, logical action that allowed readers to immerse in the story and forget about the screen interface. Additional gamification elements eased navigation such as saving a history of the reader's progress so that they could jump back to previous choices. There was a map that rewarded readers for exploring different endings rather than focusing on getting to the end of the story. While this project was useful in exploring how the book format can translate to graphic user interface, innovation was hindered by the simple branching structure. The *Player One/Player Two* project enabled me to visualise how space and time can be framed as a physical experience. The audience had agency in choosing the order in which they received the story and how long they spent interacting with each station. Audience members pursued different objectives in the open-world structure. Some followed the recommended route that presented the ideal passage for navigating the story. Others made their own pathways—the equivalent of taking side quests in a game. A third group meandered between stations, not engaging much with the story but gaining pleasure from exploration of the space. The open-world narrative structure was a much richer playground for digital space. In addition, the application of the audio story in a physical location provided insight into how space and time can be applied to digital narratives. This led to a better understanding of readerly control of rhythm, which was subsequently applied to the *Limerence* project.

The initial prototype of *Limerence* was developed alongside the digital writers' toolkit, a series of interviews I conducted to investigate practical strategies for creating in the digital space. Through compositing the digital writers' toolkit, I gleaned different perspectives from industry practitioners on how to approach interactive writing. Regardless of whether the seed of the idea come from story, media or a significant interaction, all practitioners agreed that these three elements have to be developed simultaneously for an authentic experience. Anthony Mullins concurred with Marie-Laure Ryan's assertion that epistemic storylines are an instinctive fit for games. Problem-solving is a typical part of game mechanics, and the 'whodunit' genre requires players to

decipher clues to work out who, what, and why. The book genre employs the literary equivalent of these techniques in the mystery genre. Readers take great delight in working out the clues presented by the narrator about the characters in the book. They may not perform the same role as the gamer—imputing numbers to unlock a safe, finding hidden passageways, or solving a Sudoku-like puzzle—they exist almost as an impartial jury: finding implausibility in character's story; working out motivation based on interactions between the characters; or identifying the red herring before the denouement. Designers naturally explore this overlap between detective game and book genre, casually establishing the hybrid gamer-reader demographic. However, the pleasure of readers extends beyond solving a mystery. Certainly, there are some readers who enjoy the detective/adventure genre but this neglects a wider audience who read other literary genres and take pleasure from the semantics, syntax, and pragmatics of prose. *Gone Home* and *Journey* provided clues as to what these literary experiences could be with their multimodal layering. The *Player One/Player Two* project confirmed the potential to exploit the spatial affordance of digital media. These concepts were applied to the *Limerence* project and identified three types of readerly interactions that suited non-linear narrative structures:

- Controlling rhythm (digital tmesis)
- Solving multimodal riddles
- Exploration of spatial–temporal framing

I returned to Barthes' tmesis to explain how the reader controls the rhythm of the text. Some readers linger over passages, indulging in the texture of the prose, with its hidden meanings, metaphors and riddles. They may skim over other sections such as a description of a location. Our experience with film has formed so many visual memories of architecture and landscape that we can quickly make visual associations of specific landscapes within certain genres. For instance, a fantasy novel may describe a castle in meticulous detail, but I have ingrained in my memory a castle from the HBO *Game of Thrones* television series. Therefore, all castles in a certain fantasy subgenre resemble this specific castle in my mind. This comes with an implicit understanding of the atmosphere, social conventions, and time frame for the unfolding action, enabling me to skip through certain passages of text to move on to the next interesting passage.

Controlling rhythm is a fundamental part of the pleasure of reading. Audio stories and first-generation hypertext are counterintuitive to the pleasures of reading as they restrict the role of reader to conductor. In designing digital stories, writers should consider creating a form of 'digital tmesis'. I facilitated this through a simple navigational system in *Limerence* that allowed the readers to drag the screen in all directions and penetrate the z-axis for deeper story levels.

The second readerly interaction extends on the reader's pleasure in interpreting story. Agency for computer games involves a conversation between the gamer and machine to create narrative to the point where, in certain games, players become co-creators. For readers, story creation happens in their mind's eye. They do not want to be active writers as the pleasure comes from making meaning from the story. The writer can only lay down the formula but ultimately they require an ideal reader to interpret the nuances (Iser 1978, 27; Eco 1979, 9). This form of puzzle-solving is more like a riddle and is not limited to written language. Pictures that simply illustrate what the written text has expressed are used to teach children literacy but do not present a challenge for adults. However, images, sounds, and other media can be juxtaposed to challenge and enrich the narrative but require readers to interpret their semiotic conventions. Similarly, just because digital literature may contain written text, it cannot pre-suppose that readers will enjoy the experience. The simplest interactive fiction works may have no literary merit but others have the literary complexity of a classic novel requiring considerable interpretative prowess on the part of the reader. I applied the technique of multimodal layering in *Limerence* by experimenting with the conventions of epistolary forms in an online space, such as click baits, instant messages, blogs, and websites.

The spatial affordance of the tablet was ideal to apply McCloud's concept of the infinite canvas; specifically, to test his claim that the z-axis can create new forms of expression in narratives. I used the pinch-and-zoom mechanic to create deeper levels in *Limerence*; each level revealed more information about the character through various points of view or through exposing their interactions on various websites and instant messages. In the virtual world, time and space were intimately connected. The websites in *Limerence*

formed the mental geography for readers. The customisation of each space became more than websites floating in a cyber universe. They were locations to anchor characters' motivations and actions. The open-world layout encouraged readers to find the embedded narrative within the space. At the same time, I incorporated navigational cues such as sound on click baits to assure readers they had picked the correct reading order. By applying McCloud's infinite canvas to the tablet media, I was able to push past the two-dimensional networked and sea-anemone narrative structures associated with hypertext to explore a more open-world, embedded narrative architecture.

The process of uncovering these readerly interactions led to a further insight regarding the design of digital literature. By using Ryan's interactive onion and participatory dichotomy as a transmedial framework through which to analyse *Limerence*, I was mindful that the model leaned towards a gaming style of interactivity. For instance, *Limerence* sat in layer two of the interactive onion although it showed the type of embedded narrative seen in layer three adventure games. However, as readers were not directly participating in the story world through controlling an avatar, this made it difficult to fit into layer three. As I delved deeper into my studio practice, I subdued my desire to customise interactivities associated with games. Ryan forewarned that the goal of new media works was not to access the deepest level of the onion, yet practitioners, critics, and audiences still use this type of interactivity as a framework to judge execution of works.

At the beginning of my research, I expressed my frustration at the disparate advice I was receiving from my supervisors and colleagues in the fields of film, creative writing, and games. Although their feedback was insightful, it was inevitably based on their expertise in their particular field as opposed to finding commonalities between the mixed practices. I realised the pressing need to address how practitioners should approach design when combining moving images, sound, written language, and games. Furthermore, as I developed my studio work, I realised that the interactive nature of digital literature requires writers to work outside their traditional training. The experimental form suited the writer as auteur—in some instances, a jack-of-all-trades as they learn to write,

program, and design graphic interfaces. The writer may have to step into the role of directing a small team and curating the disparate elements that make up the multimodal work. They may have to embrace a production culture of commercial transmedia, which stresses collaboration within a large-scale studio pipeline following in the film tradition of producer, director, and creative team. As the gap between media tightens, some cross fertilisation is inevitable. I found during the production of the *Limerence* project that I was no longer just the writer but had to produce, design, and work across the team to manage other aspects of the project. This insight led to the development of my third 'sub-question' that looked at the techniques and strategies that digital writers can adopt to construct readerly experiences.

I proposed the transmedia triangle model as the solution to the issues discussed above, as it realigns types of interactivity towards different audience types. It takes into account that the pleasures of readers are not the same as that of a gamer, nor film viewer. If digital writers are to design for a readerly audience (and not just the reader-gamer or gamer-viewer hybrid), they should investigate interactive strategies that promote digital tmesis, multimodal riddles, and an expansion of the infinite canvas.

My candidature has always been a practice-based investigation driven by a desire to find the shape of new narratives in digital space that appeal to readers. Through the process of creating my studio works, performing a narrative analysis, and interviewing industry practitioners, I have refined my vernacular for describing practices in the area of media convergence and expanded my understanding of non-linear narrative structures. In response to my research question, I have identified three design strategies for readerly interactions in digital media: reader-controlled rhythm by applying digital tmesis; multimodal layering for riddle-based interpretation; and an exploration of spatial–temporal framing based on McCloud's infinite canvas. Aarseth's question as to what we are looking for when we judge new media works is far from answered. There may still be a more appropriate aesthetic framework combining elements of form and media. There are certainly more forms of readerly and filmic interactivity to be explored within the transmedia triangle. We cannot eliminate interactivity from this framework but the

transmedia triangle model proposes a re-alignment by examining this aspect through the lens of the audience's pleasure. By applying these readerly strategies to the affordances of digital media, writers can shift away from designing interactive narratives that are game-hybrids towards a new form that appeals to digital readers.

REFERENCES

Aarseth, Espen J. 1997. *Cybertext: Perspectives on Ergodic Literature*. Baltimore, Md: Johns Hopkins University Press.

———. 2015. "Electronic Literature – What Is It?" *Electronic Literature Festival: The Ends of Electronic Literature.* Keynote speech. Accessed 27 May 2016. https://mediasite.uib.no/Mediasite/Play/f31b084a522148d6afc69ead64bd0b941d?catalog=32d41cb3-5cd7-489f-bd55-f8f2b08528f9.

Abbott, H. Porter. 2008. *The Cambridge Introduction to Narrative.* 2nd ed. Cambridge UK: Cambridge University Press.

Alderman, Naomi. 2015a. "The First Great Works of Digital Literature Are Already Being Written." *The Guardian* (UK) 13 October. Accessed 9 December. https://www.theguardian.com/technology/2015/oct/13/video-games-digital-storytelling-naomi-alderman.

———. 2015b. "Don't Listen to Those Who Try to Own the Definition of a Video Game." *The Guardian* (UK) 4 December. Accessed 10 January 2016. https://www.theguardian.com/technology/2015/dec/04/video-games-gaming-dudegamers.

Alive Events Agency, and Ryan McNaught. 2016. "Brick Man Experience: An Exhibition of Lego Works." Accessed 8 March. http://brickmanexperience.com.au/.

Andersen, Peter Bøgh. 1990. *A Theory of Computer Semiotics: Semiotic Approaches to The Construction and Assessment of Computer Systems*. Cambridge, UK: Cambridge University Press.

Anderson, Richard C., Elfrieda H. Hiebert, Judith A. Scott, Ian A. G. Wilkinson and Wes Becker. 1988. "Becoming a Nation of Readers: The Report of the Commission on Reading." *Education and Treatment of Children* 11 (4): 389–96.

Aristotle, John Baxter, and J. Patrick Atherton. 1997. *Aristotle's Poetics*. Translated and with a commentary by George Whalley. Montreal, Canada: MQUP.

Bakhtin, Mikhail. 1981. *The Dialogic Imagination: Four Essays*. Edited by Michael Holquist, translated by Michael Holquist and Caryl Emerson. Austin: University of Texas Press.

Barthes, Roland. (1973) 1990. *The Pleasure of the Text*. Translated by Richard Miller. Oxford: Basil Blackwell.

———. 1977. "Introduction to the Structural Analysis of Narratives." In *Image–Music–Text*, translated by Stephen Heath, 79–124. Glasgow: Fontana/ Collins.

Barthes, Roland, and Honoré de Balzac. 1974. *S/Z.* New York: Hill and Wang.

Basalla, George. 1988. *The Evolution of Technology*. Cambridge, UK. Cambridge University Press.

Bechmann Petersen, Anja. 2006. "Internet and Cross Media Productions: Case Studies in Two Major Danish Media Organizations." *Australian Journal of Emerging Technologies and Society* 4 (2): 94–107.

Bembeneck, Emily. 2012. "Spatial Storytelling." *Play the Past* (blog). Accessed 5 January 2016. http://www.playthepast.org/?p=2967.

Bezemer, Jeff, and Gunther Kress. 2008. “Writing in Multimodal Texts: A Social Semiotic Account of Designs for Learning.” *Written Communication* 25 (2): 166–95. DOI: 10.1177/0741088307313177.

Bilton, Nick. 2014. “Tinder, The Fast-Growing Dating App, Taps an Age-Old Truth.” *New York Times*. Accessed 13 February 2016. http://www.nytimes.com/2014/10/30/fashion/tinder-the-fast-growing-dating-app-taps-an-age-old-truth.html?_r=0.

Biro, Yvette. 2008. *Turbulence and Flow in Film: The Rhythmic Design*. Translated by Paul Salamon. Bloomington and Indianapolis: Indiana University Press.

Bluestone, George. 1957. *Novels into Films: The Metamorphosis of Fiction into Cinema*. Berkeley: University of California Press.

Bode, Christoph, and Dietrich, Rainer. 2013. *Future Narratives: Theory, Poetics, and Media-Historical Moment*. Vol. 1. Berlin: Walter de Gruyter.

Bolter, Jay David. 2001. *Writing Space: Computers, Hypertext and the Remediation of Print.* Mahwah: Lawrence Erlbaum Associates.

Buchholz, Sabine, and Jahn Manfred. 2005. “Space.” In *Routledge Encyclopedia of Narrative Theory*, edited by David Herman, Manfred Jahn, and Marie-Laure Ryan, 551–54. London: Routledge.

Caillois, Roger. (1961) 2001. *Man, Play, and Games.* Translated by Meyer Barash. Urbana and Chicago: University of Illinois Press. Accessed 4 March 2016. http://townsendgroups.berkeley.edu/sites/default/files/roger-caillois-man-play-and-games-1.pdf.

Campbell, Joseph. (1949) 1968. *The Hero with a Thousand Faces*. 2nd ed. Vol. 17. Princeton, NJ: Princeton University Press.

Candy, Linda. 2006. *Practice Based Research: A Guide*. Sydney: University of Technology, Sydney. http://www.creativityandcognition.com/resources/PBR%20Guide-1.1-2006.pdf.

Cardwell, Sarah. 2003. “About Time: Theorizing Adaptation, Temporality, and Tense.” *Literature/Film Quarterly*. 31 (2): 82–92.

Cash, Hilarie, Cosette Rae, Ann Steel and Alexander Winkler 2012. “Internet Addiction: A Brief Summary of Research and Practice.” *Current Psychiatry Review* 8 (4) (November): 292–98. Doi: 10.2174/157340012803520513.

Chatman, Seymour. 1978. *Story and Discourse: Narrative Structure in Fiction and Film.* Ithaca and London: Cornell University Press.

Coleridge, Samuel Taylor [1817] 2014. *Biographia Literaria*. Produced by Riikonen Tapio and David Widger. Project Gutenberg. Accessed 2 February 2016. http://www.gutenberg.org/files/6081/6081-h/6081-h.htm.

Cooper, Grosvenor, and Leonard B. Meyer. 1960. *The Rhythmic Structure of Music*. Chicago: University of Chicago Press.

Coover, Robert. 1992. "The End of Books." *New York Times*. June 21. Accessed 12 January 2016. http://www.nytimes.com/books/98/09/27/specials/coover-end.html

Couch, Christina. N.d. “Steve Gaynor: Designing ‘Gone Home’.” *Get in Media*. Accessed 3 June 2016. http://getinmedia.com/articles/game-careers/steve-gaynor-designing-gone-home.

Cox, Carolyn. 2014. “Sensory Fiction Books Heat Up, Vibrate While You Read.” *The Mary Sue*, 24 January. Accessed 12 October 2015. http://www.themarysue.com/sensoryfictio/.
Crawford, Chris. 2003. “Assumptions Underlying the Erasmatron Storytelling System.” In *Narrative Intelligence*, edited by Michael Mateas and Phoebe Sengers, 189–97. Philadelphia: J Benjamins Publication.
Csikszentmihalyi, Mihaly. 2014. *Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi*. Springer. eBook.
Dawkins, Richard. (1976) 2006. *Selfish Gene*. Oxford UK: Oxford University Press.
———. 2013. “Just for Hits.” Presentation at Saatchi and Saatchi New Directors New Directors’ Showcase, Cannes. YouTube video (8:46), posted by “Saatchi & Saatchi, 22 June. Accessed 20 March 2016. https://www.youtube.com/watch?v=GFn-ixX9edg.
Deleuze, Gilles, and Guattari, Félix. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia.* Translated by Brian Massumi. Minnesota: University of Minnesota Press.
Deloitte 2015. “Media Consumer Survey 2015. Australian Media and Digital Preferences.” 4th ed. Accessed 29 June 2016. http://www.magazines.org.au/wp-content/uploads/deloitte-au-tmt-media-consumer-survey-2015-100815.pdf.
Dena, C. 2009. "Transmedia Practice: Theorising the Practice of Expressing a Fictional World across Distinct Media and Environments." PhD diss., University of Sydney.
Doob, Penelope Reed. 1992. *The Idea of the Labyrinth: Classical Antiquity through the Middle Ages.* Ithaca, New York: Cornell University Press.
Downes, Geoff, Trevor Horn, and Bruce Woolley. 1979. *Video Killed The Radio Star*. 7" Single. London: Island Records.
Ebert, Roger. 2010. ‘Video Games Can Never Be Art.” *Roger Ebert’s Journal.* April 16. Accessed 4 December 2015. http://www.rogerebert.com/rogers-journal/video-games-can-never-be-art.
Eco, Umberto. 1979. *The Role of the Reader: Explorations in the Semiotics of Texts*. Bloomington: Indiana University Press.
———. 1994. *Six Walks in the Fictional Woods.* Cambridge, Massachusetts: Harvard University Press.
Electronic Literature Organisation. n.d. “What Is E-Lit?” Accessed 12 November 2015. https://eliterature.org/what-is-e-lit/.
Elsmore, Warren. 2014. *Brick Flicks.* New York: Allen and Unwin.
Eskelinen, Markku. 2012. *Cybertext Poetics: the Critical Landscape of New Media Literary Theory*. New York: Bloomsbury Publishing.
Fludernik, Monika. 2009. *An Introduction to Narratology*. New York; London: Routledge.
Forster, E. M. (1927) 1990. *Aspects of the Novel*. London: Penguin.
Gazzard, Alison. 2013. *Mazes in Videogames: Meaning, Metaphor and Design*. Jefferson, North Carolina: McFarland and Company, Inc.
Genette, Gérard. 1980. *Narrative Discourse: An Essay in Method*. Translated by Jane Lewin. Ithaca, NY: Cornell University Press.

Gitelman, Lisa. 2008. *Always Already New: Media, History, and the Data of Culture*. Cambridge, MA: The MIT Press.
Glazier, Loss Pequeño. 2002. *Digital Poetics: Hypertext, Visual-Kinetic Text and Writing in Programmable Media*. Tuscaloosa: University of Alabama Press.
Gunning, Tom. 2003. "Renewing Old Technologies: Astonishment, Second Nature and the Uncanny in Technology from the Previous Turn-of-the-Century." In *Rethinking Media Change: the Aesthetics of Transition*, edited by David Thorburn, Henry Jenkins, and Brad Seawell, 39–60. Cambridge, MA: MIT Press.
Hallet, Wolfgang. 2014. "The Rise of the Multimodal Novel. Generic Change and Its Narratological Implications" In *Storyworlds across Media: Toward a Media-Conscious Narratology*, edited by Marie-Laure Ryan and Jan-Noel Thon, 151–72. Lincoln, Nebraska: University of Nebraska Press.
Halliday, Justin. 2013. "Multi-Platform and Gaming Event." Lecture presented at Griffith Film School. June 20.
Hallet, Wolfgang. 2014. "The Rise of the Multimodal Novel. Generic Change and Its Narratological Implications." In *Storyworlds across Media: Toward a Media-Conscious Narratology*, edited by Marie-Laure Ryan and Jan-Noel Thon, 151–72. Lincoln, US: University of Nebraska Press. Accessed May 29, 2016. ProQuest ebrary.
Hannele, Antikainen, Sonja Kangas, and Sari Vainikainen. 2004. "Three Views on Mobile Cross Media Entertainment." *VTT Information Technology*: Finland. Accessed 1 July 2016. http://www.vtt.fi/inf/julkaisut/muut/2004/crossmedia_entertainment.pdf
Hayles, Katherine N. 2007. "Electronic Literature: What Is It?" Electronic Literature Organisation. Accessed 5 June 2015. http://eliterature.org/pad/elp.html.
Heibeck Felix, Hope Alexis, Legault Julie. 2014. *The Girl Who Was Plugged In* [Sensory book] [original novella by James Tiptree Junior 1974]. Cambridge, MA: MIT Lab.
Howard, Richard. 1990. Note on the text *Pleasure of the Text*, by Roland Barthes. Translated by Richard Miller, v–vi. Oxford: Basil Blackwell.
Huizinga, J. 1955. *Homo Ludens: A Study of the Play-Element in Culture*. Vol. 15. Boston: Beacon Press.
Iser, Wolfgang. 1978. *The Act of Reading: A Theory of Aesthetic Response*. London. Routledge and Kegan Paul.
Jahn, Manfred. 2005. "Freytag's Triangle." In *Routledge Encyclopedia of Narrative Theory*, edited by David Herman, Manfred Jahn, and Marie-Laure Ryan, 189–90. London: Routledge.
Jenkins, Henry. 2001. "Convergence? I Diverge." *MIT Technology Review*. 1 June. Accessed 10 January 2016. https://www.technologyreview.com/s/401042/convergence-i-diverge/.
———. 2003. "Transmedia Storytelling." *MIT Technology Review* (blog). Jan 15. Accessed 10 January 2016. https://www.technologyreview.com/s/401760/transmedia-storytelling/.
———. 2004. "Game Design as Narrative Architecture." *Computer* 44 (3): 118–30.
———. 2006. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

———. 2007. “Transmedia Storytelling 101.” *Confessions of an Aca-Fan* (blog), posted 22 March. Accessed 16 January 2016. http://henryjenkins.org/2007/03/transmedia_storytelling_101.html.
———. 2011. “Transmedia 202: Further Reflections.” *Confessions of an Aca-Fan* (blog), posted 1 August. Accessed 16 January 2016. http://henryjenkins.org/2011/08/defining_transmedia_further_re.html.
———. 2013. “T Is for Transmedia.” *Confessions of an Aca-Fan* (blog), posted 18 March. Accessed 20 January 2016. http://henryjenkins.org/2013/03/t-is-for-transmedia.html.
Kahneman, Daniel. 2011. *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.
Kantor, Ronald J., Tad Waddington, and Richard E. Osgood. 2000. "Fostering the Suspension of Disbelief: The Role of Authenticity in Goal-Based Scenarios." *Interactive Learning Environments* 8 (3): 211–27.
Kauffman, Geoff, and Mary Flanagan. 2016. "High-Low Split: Divergent Cognitive Construal Levels Triggered by Digital and Non-Digital Platforms.” In *CHI '16: Proceedings Of The 2016 CHI Conference On Human Factors In Computing Systems*. New York: ACM.
Karasek, Hellmuth. 1994. “Locomotive of Emotions.” *Der Speigel.* 26 December. Accessed 20 February 2016. http://www.spiegel.de/spiegel/print/d-13687466.html.
Kohler, Chris. 2013. “Gone Home: A Videogame without All That Pesky Videogame in the Way.” *Wired*. Accessed 15 August. http://www.wired.com/2013/08/gone-home-review/.
Kress, Gunther. 2003. *Literacy in the New Media Age*. London: Routledge.
Kress, Gunther, and Theo Van Leeuwen. 2001. *Multimodal Discourse: The Modes and Media of Contemporary Communication*. New York, London: Arnold.
Landow, George P. 2006. *Hypertext 3.0: Critical Theory and New Media in an Era of Globalization*. 3rd ed. Baltimore: Johns Hopkins University Press.
Laurel, Brenda. 1993. *Computers as Theatre*. Reading, Massachusetts: Addison Wesley Longman.
Lindley, Craig A., and Charlotte C. Sennersten. 2008. "Game Play Schemas: From Player Analysis to Adaptive Game Mechanics." *International Journal of Computer Games Technology*. Accessed 10 February 2016. http://dx.doi.org/10.1155/2008/216784.
Lu, Jiaxi, 2014. “What Is ‘Click Bait’ and Why Facebook Wants to Display Less of It.” *The Washington Post*, 26 August. https://www.washingtonpost.com/news/technology/wp/2014/08/26/what-is-click-bait-and-why-facebook-wants-to-display-less-of-it/.
Mangen, Anne, Bente Walgermo, and Kolbjorn Bronnick. 2013. "Reading Linear Texts on Paper versus Computer Screen: Effects on Reading Comprehension." *International Journal of Educational Research* 58: 61–68.
Manovich, Lev. 2001. *The Language of New Media*. Cambridge, Massachusetts: MIT Press.
McCloud, Scott. 2000. *Reinventing Comics*. New York: Harper Collins.
McFarlane, Brian. 1996. *Novel to Film: An Introduction to the Theory of Adaptation.* Oxford: New York: Clarendon Press.

Meyers, Peter. 2011. “The Infinite Canvas” Lecture presented at Books in Browsers summit, San Francisco, California, 27–28 October. YouTube video (18:57), posted by “O’Reilly”, 1 November. Accessed 10 June 2016. https://www.youtube.com/watch?v=HCpKlaoFfV0.

Mullins, Anthony 2014. “The Endgame ARG: New Beginnings or More of the Same?” *The Writing Platform* (blog). 8 December. Accessed 9 October 2015. http://www.thewritingplatform.com/2014/12/the-endgame-arg-new-beginnings-or-more-of-the-same/.

Murray, Janet H. 1997. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York: Simon and Schuster.

———. 2004. “From Game-Story to Cyberdrama.” *First person: New media as story, performance, and game* , edited by Noah Wardrip-Fruin and Pat Harrigan, 2-11. MIT Press.

———. 2011. *Inventing the Medium: Principles of Interaction Design as a Cultural Practice*. Cambridge, MA: The MIT Press.

McLuhan, Marshall (1964) 2001. *Understanding Media: The Extensions of Man*. London: Routledge.

Meifert-Menhard, Felicitas. 2013. *Playing the Text, Performing the Future*. Berlin/Boston, DE: De Gruyter.

Nelson, Theodor H. 1993. *Literary Machines.* California: Mindful Press.

Oxford English Dictionary. 2nd ed. 20 vols. Oxford: Oxford University Press, 1989. Also available at http://www.oed.com/.

Moraru, Christian. 2005. “Intertextuality.” In *Routledge Encyclopedia of Narrative Theory*, edited by David Herman, Manfred Jahn, and Marie-Laure Ryan, 256–61. London: Routledge.

Nestvold, Ruth. 1997. "Do You Want to Hear About It? The Use of the Second Person in Electronic Fiction.” Paper presented at IALS conference. Freiburg.

Pratten, Robert. 2011. *Getting Started in Transmedia Storytelling*. 2nd ed. Accessed 5 January 2016. http://www.conducttr.com/training/getting-started-in-transmedia-storytelling-2nd-edition/.

Prince, Gerald. (1987) 2003. *Dictionary of Narratology*. Lincoln, Nebraska: University of Neabraska Press.

Propp, Vladimir, American Folklore Society and Indiana University Research Centre in Anthropology, Folklore and Linguistics. (1927) 1968. *Morphology of the Folktale*. Translated by *Laurence* Scott. 2nd ed. Austin: University of Texas Press.

Ryan, Marie-Laure. 2003a. “On Defining Narrative Media.” *Image and Narrative* 6 (February). Accessed 30 May 2016. http://www.imageandnarrative.be/inarchive/mediumtheory/marielaureryan.htm

———. 2003b. *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Baltimore, US: Johns Hopkins University Press. Accessed June 9, 2016. ProQuest ebrary.

———. 2004a. *Narrative across Media: The Languages of Storytelling*. Lincoln, Nebraska: University of Nebraska Press.

———. 2004b. “Cyberspace, Cybertexts, Cybermaps.” Accessed 15 February 2016. http://www.dichtung-digital.org/2004/1/Ryan/index.htm#1.

———. 2005. "On the Theoretical Foundations of Transmedial Narratology." In *Narratology beyond Literary Criticism: Mediality, Disciplinarity*, edited by Jan Christoph Meister, 1–23. Narratologia 6. Berlin; New York: Walter de Gruyter.
———. 2006. *Avatars of Story*. Minneapolis, MN: University of Minnesota Press.
———. 2008. "Interactive Narrative, Plot Types, and Interpersonal Relations." In *Interactive Storytelling: First Joint International Conference on Interactive Digital Storytelling, ICIDS 2008 Erfurt, Germany, November 26-29, 2008 Proceedings*, edited by Ulrike Spierling and Nicolas Szilas, 6–13. Berlin, Heidelberg: Springer Berlin Heidelberg.
———. 2011. "The Interactive Onion." In *New Narratives: Stories and Storytelling in the Digital Age*, edited by Ruth E. Page and Bronwen Thomas, 35–62. Lincoln, Nebraska: University of Nebraska Press.
———. 2014. "Story/Worlds/Media." In *Storyworlds across Media: Toward a Media-Conscious Narratology*, edited by Marie-Laure Ryan and Jan-Noel Thon, 25 -49. Lincoln, US: University of Nebraska Press. Accessed May 29, 2016. ProQuest ebrary.
Schell, Jesse. 2015. *The Art of Game Design: A Book of Lenses.* 2nd ed. Florida*:* CRC Press.
Scholes, Robert, James Phelan, and Robert Kellogg. (1966) 2006. *Nature of Narrative*. Cary, GB: Oxford University Press, USA.
Shen, Dan. 2005. "Story-Discourse Distinction." In *Routledge Encyclopedia of Narrative Theory*, edited by David Herman, Manfred Jahn, and Marie-Laure Ryan, 566–67. London: Routledge.
Simogo. 2016. "Device6." Accessed 3 June. http://simogo.com/work/device-6/.
Suler, John. 2004. "The Online Disinhibition Effect." *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society* 7 (3): 321–26.
Summers, Nick. 2013. "Dating App Tinder Catches Fire." *Bloomberg*. Accessed 13 February 2016. http://www.bloomberg.com/news/articles/2013-09-05/dating-app-tinder-catches-fire.
Tassi, Paul. 2013. "What *Gone Home* Could Do Better." *Forbes*. Accessed 22 August. http://www.forbes.com/sites/insertcoin/2013/08/22/what-gone-home-could-do-better/#3a3410d626d4.
Tennov, Dorothy. 1979. *Love and Limerence: The Experience of Being in Love*. New York: Stein and Day.
Thomas, Sue, Chris Joseph, Jess Laccetti, Bruce Mason, Simon Mills, Simon Perril, and Kate Pullinger. 2007. "Transliteracy: Crossing Divides." *First Monday* 12: 12–13. Accessed 4 September 2015. http://firstmonday.org/ojs/index.php/fm/article/view/2060/1908.
Thorburn, David, and Henry Jenkins. 2003. "Introduction: Towards an Aesthetic of Transition" In *Rethinking Media Change: the Aesthetics of Transition*, edited by David Thorburn, Henry Jenkins, and Brad Seawell, 1–18. Cambridge, Mass: MIT Press.
Uglow, Tom. 2014. "pBooks, eBooks, & dBooks: Why We Are Hooked on Books and Bookness." Accessed 15 December 2015. https://medium.com/@tomux/pbooks-

ebooks-dbooks-why-we-are-hooked-on-books-and-bookness-b24bbe506cd4#.5fmh2d7d8.
Marlow, John. 2016. "Adaptation Nation: Movies Based on Books and Other Stories Reign Supreme". *Writer UnBoxed*, 27 February. Accessed 9 June. http://writerunboxed.com/2016/02/27/adaptation-nation-movies-based-on-books-and-other-stories-reign-supreme/.
Yellowlees, Douglas, and Andrew Hargadon. 2000. "The Pleasure Principle: Immersion, Engagement, Flow." In *Proceedings of the Eleventh ACM on Hypertext and Hypermedia*, 153–60. ACM: New York.
Zickuhr, Kathryn. 2013. "In a Digital Age, Parents Value Printed Books for Their Kids." *Pew Research Centre*. 28 May. Accessed January 02 2016. http://www.pewresearch.org/fact-tank/2013/05/28/in-a-digital-age-parents-value-printed-books-for-their-kids/.

Creative Works References

Alcorn Allan. 1972, *Pong* [arcade game]. California: Atari Inc.
Alderman, Naomi and Rebecca Levene. 2012. *Zombies, Run!* [IOS and Android mobile game], London, UK: Six to Start.
Ankerson, Ingrid and Megan Sapnar. 2001. *Cruising* [Flash poem]. Poems That Go. (Spring 2001) Accessed 12 February 2016. http://poemsthatgo.com/gallery/spring2001/crusing-launch.html#
Anthony, Jessica, and Rodrigo Corral. 2011. *Chopsticks* [iOS4.0 Story application]. Penguin Group.
Atari Inc, 1972. *Pong*. [Arcade game] California: Atari Inc.
Austen, Jane. (1813) 2008. *Pride and Prejudice*. New York: Penguin Classics.
Baker, Steve. 2016. *The Wondrous Adventures of Desmondo Ray*. Melbourne: Sense and Centsability. Film.
Bantam Books. 1979–1998. *Choose Your own Adventure Series*. [Book]
Barlow, Sam. 2015. *Her Story* [iOS, Microsoft Windows, OS X game].
Benioff, David and Weiss D.B. 2011–. *Games of Thrones* [television series]. HBO.
Blizzard North 1996, *Diablo* [Computer game: Microsoft Windows], California: Blizzard Entertainment.
Blizzard Entertainment 2004, *World of Warcraft* [computer game: Windows and Mac Os], California: Blizzard Entertainment.
Borges, Jorge Luis. 1998. 'The Garden of Forking Paths'. In *Collected Fictions*. Translated by Andrew Hurley, 67–82. New York: Penguin.
Cage, David, and Quantic Dream. 2010. *Heavy Rain* [Playstation 3, game]. Sony Computer Entertainment.
Capcom 1996, *Streetfighter versus X-men* [arcade game], Osaka: Capcom.
Cizek, Katerina. 2015. *Highrise: Universe Within* [interactive documentary]. Montreal, Canada: National Film Board of Canada. Accessed 12 February 2016. http://universewithin.nfb.ca/desktop.html#index

Chung, Brendon. 2012. *Thirty Flights of Loving* [Microsoft Windows, game]. Culver City, California: Blendo Games
Cortazar, Julio. (1966) 1998. Hopscotch. Translated by Gregory Rabassa. London: Harvill Panther. [Book]
Dena, Christy. 2014. *Authentic in All Caps* [iOS 5.1, Story application]. Universe Creation 101.
Defiant Development 2012. *Heroes Call* [IOS mobile game]. Brisbane, Australia: Defiant Development.
Dickens, Charles (1837-1839) 1966. *Oliver Twist*. Oxford: Clarendon Press.
Fleay, Lindsay. 1985. *The Magic Portal*. Perth, Western Australia: Australian Film Commission. Film.
Flesser, Simon. 2013. *Device 6* [iOS mobile game]. Malmo, Sweden: Simogo Studio.
Foer, Jonathan. 2005. *Extremely Loud and Incredibly Close*. Boston, Massachusetts: Houghton Mifflin.
Frey, James and Johnson-Shelton, Nils. 2014. *Endgame The Calling* [Book and ARG]. HarperCollins and Niantic Labs.
Fukio Mitsuji. 1986, *Bubble Bobble* [arcade game], Tokyo: Taito.
Gaynor, Steve. 2013. *Gone Home*. [Microsoft Windows, Game], Portland, Oregon: Fullbright Company, played February 21 2016.
Game Arts and Sora Ltd. 2008, *Super Smash Bros. Melee* [Wii console] Kyoto: Nintendo.
Green, Hank and Bernie Su. 2012. *The Lizzie Bennet Diaries* [web series]. Accessed 15 September 2015. http://www.pemberleydigital.com/the-lizzie-bennet-diaries/
Gibson, William. 1984. *Neuromancer* [book]. New York: Ace Books.
Hoodlum Studio. 2011. *Slide* [Multiplatform series].
Horowitz, Eli. 2014. *Silent Histories* [iOS 9.0, story application]. Los Angeles, California: Sudden Oak.
Jones David, Houser Dan, Dailly Mike and Benzies Leslie. 1997. *Grand Theft Auto*. [Microsoft Windows, Game]. New York: Rockstar Games.
Joyce, Michael. 1987. *Afternoon* [electronic literature]. Massachusetts: Eastgate Systems. CD.
Kocan, Peter. 1984. *The treatment; and, the cure*. [Book] London; Sydney: Angus & Robertson.
Leishman, Donna. 2014. Front [electronic literature]. Accessed 14 January 2017. http://www.6amhoover.com/front/
Lord Phil and Christopher Miller. 2014. *The Lego Movie*. Australia. Warner Bros. Pictures. Film.
LucasArts 1993, *Day of the Tentacle* [computer game: DOS, Mac OS] Osaka: Lucas Arts.
Mateas, Michael and Andrew Stern. 2005. *Façade* [Online game]. Procedural Arts. Accessed http://www.interactivestory.net/#facade December 2014.
McBratney, Sam and Anita Jeram. 1994. *Guess How Much I Love You*. London: Walker.
McCloud, Scott. 2003. *The Right Number* [web comic]. Accessed 5 March 2016. http://scottmccloud.com/1-webcomics/trn/index.html
Miller, Rand, and Robyn. 1993. *Myst* [Mac OS, game]. California: Broderbund.
Mindscape 1997. *Lego Island* [Microsoft Windows, game], California: Mindscape.

Morris, David. 2012. *Frankenstein* [iOS 4.3, story application]. Cambridge, UK: Inkle Studio
Moulthrop, Stuart. 1992. *Victory Garden.* [Electronic literature]. Massachusetts: Eastgate Systems. CD.
Montfort, Nick. *Through The Park* [Electronic literature]. Accessed 7 January 2017. http://nickm.com/poems/through_the_park.html
Nintendo EAD Group No. 3 2004, *The Legend of Zelda: Four Sword Adventure* [Nintendo Gamecube], Kyoto: Nintendo.
Nolan, Christopher. 2008. *The Dark Knight*. Burbank, California: Warner Bros Pictures. Film.
North, Ryan. 2013. *To Be or Not to Be.* [book] Breadpig.
Perec, Georges. 1978. *Life: A User's Manual*. [book] Translated by David Bellos. France: Hachette.
Persson, Markus and Bergensten, Jens. 2011. *Minecraft* [PC game], Microsoft Windows.
Play Creatividad. 2012. *Ipoe* [ios8.0, story application].
Pope, Lucas. 2013. *Papers Please* [Windows, OSX game], 3909.
Pullinger, Kate and Chris Joseph. 2005. *Inanimate Alice*. [Digital novel]. London: The Bradfield Company.
———. 2008. *Flight Path* [networked novel]. Electronic Literature Organisation. Accessed 14 March 2016. http://collection.eliterature.org/2/works/pullinger_flightpaths.html.
Riviere, Sam, and Joe Dunthorne. 2016. *The Truth about Cats and Dogs* [iOS8 and Android, story application], London, Sydney: Editions at Play with Visual Editions.
Saporta, Marc. (1961) 1963. *Composition No. 1* [book]. Translated by Richard Howard, New York: Simon Schuster.
Shek, Marianna. 2015. *Choose Your Own Death* [book]. Australia: Rock On Kitty.
———. 2016. *Limerence* [iOS, story application]. Australia.
Short, Emily 2006. *Glass* [Interactive fiction]. Accessed 5 January 2016. http://inform7.com/learn/eg/glass/play.html.
Simogo. 2013a. *Device 6*. [iOS, game], Sweden: Simogo, played February 19 2016.
———. 2013b. *Year Walk* [iOS platform, game]. Malmo, Sweden: Simogo.
———. 2014. *The Sailor's Dream* [iOS platform, game]. Malmo, Sweden: Simogo.
Simons, Michael, and Paul Shoebridge. 2011. *Welcome to Pine Point* [Web documentary] Vancouver, Canada: National Film Board of Canada. Accessed 2 March 2016. http://pinepoint.nfb.ca/#/pinepoint.
Shigeharu Umezaki. 1987. *Contra* [arcade game], Tokyo: Konami Corporation.
Stine, R. L. 1992–1997. *Goosebumps Series* [book series]. US: Scholastic Corporation.
Tarantino, Quentin. 1992. *Reservoir Dogs.* Santa Monica, California: Miramax Films. Film.
———. 1994. *Pulp Fiction*. Santa Monica, California: Miramax Films. Film.
———. 2015. *The Hateful Eight.* Los Angeles, California: Double Feature Films and Film Colony. Film.
Thatgamecompany. 2012. *Journey*. [PlayStation 3, game], California: Sony Computer Entertainment, played November 12 2015.\Portal

The Edge, State Library of Queensland. *Player One/ Player Two* [interactive installation], Powerhouse, In Real Life Festival 2015.
Tolstoy, Leo [1875–1977] 1995. *Anna Karenina* [book], translated by Louise and Aylmer Maude. London, UK: Wordsworth Classic.
Tomasula, Steve. 2009. *TOC* [DVD].
Tomohiro Nishikado. 1978, *Space Invader* [arcade game] Tokyo: Taito.
Valve Corporation. 2007. *Portal* [Microsoft Windows, Xbox 360, game], California: Electronic Arts.
Ware, Chris. 2012. *Building Stories* [Graphic novel]. New York: Pantheon Books.
Weiler, Lance. 2011. *Pandemic* [ARG].
Wittig, Rob. 1999. *The Fall of the Site of Marsha* [digital text]. Electronic Literature Collection. Vol 1. Accessed 14 January 2017. http://collection.eliterature.org/1/works/wittig__the_fall_of_the_site_of_marsha.html
Woodward, Ryan. 2012. *Bottom of the Ninth* [IOS 5.0, graphic novel application].

APPENDIX 1

Summary of Propp's thirty-one (31) functions

1st Sphere: Introduces the situation

- 1. Absentation: Someone goes missing
- 2. Interdiction: Hero is warned (e.g. do not look in the closet)
- 3. Violation of interdiction
- 4. Reconnaissance: Villain seeks something (e.g. the location of the treasure)
- 5. Delivery: The villain gains information/ answer to their question
- 6. Trickery: Villain attempts to deceive victim in order to take possession of his belonging
- 7. Complicity: The victim unwitting helps the villain

2nd Sphere: The Body of the story

- 8. Villain causes harm to a member of the family (e.g. abducts a person, seizes a magical item)
- 9. Mediation: Hero discovers the lack and is sent on a quest
- 10. Counteraction: Hero chooses positive action
- 11. Departure: Hero leave on mission

3rd Sphere: The hero goes in search of a method by which the solution may be reached, gaining the magical agent from the Donor

- 12. Testing: Hero is challenged to prove heroic qualities
- 13. Reaction: Hero responds to test
- 14. Acquisition: Hero gains magical item
- 15. Guidance: Hero reaches destination
- 16. Struggle: Hero and villain in direct combat
- 17. Branding: Hero is branded
- 18. Victory: Villain is defeated
- 19. Resolution: Initial misfortune or lack is resolved

4th Sphere: The Hero's return

- 20. Return: Hero sets out for home

- 21. Pursuit: Hero is chased
- 22. Rescue: pursuit ends
- 23. Arrival: Hero arrives unrecognised
- 24. Claim: False hero makes unfounded claims
- 25. Task: Difficult task proposed to the hero
- 26. Solution: Task is resolved
- 27. Recognition: Hero is recognised
- 28. Exposure: False hero is exposed
- 29. Transfiguration: Hero is given a new appearance
- 30. Punishment: Villain is punished
- 31. Wedding: Hero marries and ascends the throne

APPENDIX 2

Title, Date, and Author	Description of media	Narrative theme/ genre/ premise	Mode of story transmission: Diegetic/ Mimetic	Mode of story transmission: Autonomous/ Illustrative	User Position: Internal/ External	User Navigation: Exploratory/ Ontological	Interactive Onion
Inanimate Alice, 2005 (Kate Pullinger and Chris Joseph)	Born-digital novel: text, audio, game, video and graphics	Story follows eight-year-old Alice as she journeys through a futuristic, technology-augmented landscape with her parents and her best friend, a video game character called Brad.	Mainly diegetic through text which flashes across the screen. Mimetic elements through graphics to describe location and sound to enhance atmosphere.	Autonomous – the reader is required to interpret the multimodal elements to make sense of the story plot and structure.	Mostly external – the reader drives the pace by point-and-click mechanism and by completing mini-games to unlock sections, but they are still a passive receiver to Alice's narration. Reader action does not directly influence the plot. Sections are internal in that you can play games as Alice, which unlocks certain story sections.	Ontological with elements of exploratory – the reader can choose which episode to read but the story plot is fairly linear with no branching narratives. There are opportunities to co-create content but this does not ultimately change the course of the story.	Layer One – themes
The Lizzie Bennet Diaries, 2012 (Hank Green and Bernie Sui)	Transmedia: online webs series, video blogs, social media	An adaptation of Jane Austen's *Pride and Prejudice*.	Mainly mimetic as large chunks of the story are revealed through video blog with character relationship development unravelled via Twitter, Facebook, etc.	Illustrative – best user experience comes from familiarity with the romance genre and specifically with the *Pride and Prejudice* novel.	Mostly external – the reader does not play the role of a member of the storyworld. However, there are participatory elements where you can write to the characters on their social	Ontological with elements of the exploratory – the reader can jump between video blogs and choose to read Twitter feeds of the various characters. Reading	Layer Two – variable presentation of pre-determined content

					media platform and they can respond.	all of the Twitter feeds and following the video blogs in sequential order enhances the story experience but jumping does not ultimately change the story outcome.	
Building Stories, 2012 (Chris Ware)	Print media – newspaper, comic, book, pamphlets	Follows several inhabitants of a three-storey building block but the overarching focus is on the nameless tenant on the third floor. This tenant is a single woman who lost her leg as a child.	Both diegetic and mimetic, as graphic novel genre makes both text and images equally important in storytelling.	Mostly autonomous – the reader is required to interpret the multimodal elements to make sense of the story plot and structure. However, some illustrative knowledge regarding how graphic novels are laid out would help with story interpretation.	External – the reader is positioned like a voyeur peeking into the windows of the apartment. The layout of the graphic novels emphasises this as the small panels act like windows, limiting the reader's view into the lives of the character.	Exploratory – the audience is free to choose the reading order but this does not alter the plot.	Layer Two – variable presentation of pre-determined content
Afternoon, 1987 (Michael Joyce)	Hypertext, electronic literature	A story of a recently divorced man who witnesses a car crash involving his ex-wife and son.	Diegetic	Autonomous	External	Ontological	Layer Two – complex, networked narrative structure

Glass, 2006 (Emily Short)	Interactive fiction, digital online	An adaptation of *Cinderella.*	Diegetic – language-based story, prose is limited, and the focus is on the game of revealing the story ending. Aimed at young adults.	Illustrative – there is a presumed knowledge of the *Cinderella* fairy tale.	Internal – the reader plays as one of the characters in the story (the talking bird). Reader can input commands (T talk, Z wait, X look at character/ object) to change the outcome of the story (e.g. Prince finds Cinderella, Prince marries stepsister, Cinderella is killed, etc.)	Ontological – the story outcome changes depending what commands the reader inputs.	Layer Two – variable presentation of pre-determined content
To Be or Not To Be, 2013 (Ryan North)	Printed book	A path adventure based on Shakespeare's *Hamlet*	Diegetic – language-based story, prose is comedic. Suitable for adults.	Illustrative – there is a presumed knowledge of *Hamlet.*	Internal – the reader can play as Ophelia, Hamlet or Hamlet Senior. To control the story plot, reader flips to specific pages in the book.	Ontological – the story outcome changes depending on which path the reader chooses.	Layer Two – variable presentation of pre-determined content
Highrise: Universe Within (2015) (National Film Board of Canada)	Interactive web documentary	Looks at how residents in highrise buildings connect globally.	Diegetic and mimetic (elements of text that need to be read and videos)	Autonomous	External – the audience is led through by an avatar that speaks directly to them.	Ontological	Layer two – anemone structure
Pandemic, 2011 (Lance Weiler)	Alternate reality game – video, social media, live game	A sleeping virus has spread among the adults in a rural town and the youth are cut off from civilisation. Players embark on	Mimetic – the story premise is set up by short film but this was mainly a game with limited story telling.	Autonomous – players need to be told the story set up and directions of play, but some presumed understanding of role-playing games would	Internal – Online players work with participants at the film festival to find hidden objects and return them to Mission Control to unlock the story.	Ontological – story outcome changes depending on how many objects are returned to Mission Control.	Layer Four – real time story generation in a pre-scripted storyworld with some emergent play

		a treasure hunt at the Sundance film festival 2011 to unlock the game-story		help the player's immersion into the story.			
Bottom of the Ninth, 2012 (Ryan Woodward)	Animated graphic novel on iPad	After joining an all-male baseball team, athletic Candy Cunningham tackles the challenges of being a celebrity, discrimination and finding her identity.	Both diegetic and mimetic as graphic novel genre makes both text and images equally important in storytelling.	Mostly autonomous – the reader is required to interpret the multimodal elements to make sense of the story plot and structure. But some illustrative knowledge regarding how graphic novels are laid out would help with story interpretation.	External – the reader is situated outside the virtual world.	Exploratory – the story is linear, and the reader navigates it by flicking the pages from left to right as in a physical book. There are animated videos which can be activated in some panels to enhance the story but not clicking on these videos do not alter the story outcome.	Layer One – themes
Myst, 1993 (Cyan)	Graphic adventure puzzle game	Player needs to find out what happened to the missing explorer Atrus by following one of his manipulative sons.	Mimetic	Autonomous	Internal	Ontological	Layer three – variations on a pre-defined story 'embedded narrative'

Thirty Flights of Loving, 2012 (Blendo Games, Brendon Chung)	Video game for PC or Mac	Game/ Short story about a heist gone wrong. Players don't see the actual heist – only the days leading up to the heist and the aftermath.	Mimetic – described by game developer as a 'short story' but it is not told through language-based text. Relies on a lot of references from films.	Illustrative – It is a loose narrative at best relying heavily on the player's understanding of the heist film archetype (setting up the heist, the heist, unravelling of the plot as the team tries to escape). References from films (such as *In the Mood for Love* and *Delicatessen*) and adventure games (such as *Zork* and *Heroes Quest*) to set the atmosphere	Internal – it is a first person game, player is one of the gang members.	Exploratory – the story is non-linear but uses jump cuts and montages to reveal the story. The player have some freedom to move around the rooms but their actions do not change the course of game play or the story outcome.	Level Three – variations on a pre-defined story
TOC, 2009 (Steve Tomasula)	Digital story using text, video, audio and graphics, download for PC or Mac	Loose vignettes connected by the theme of time. Example of stories include a woman who climbs up a ladder so she can see into the future and a man who digs a hole so deep he can hear the past.	Mainly diegetic despite some storytelling elements using audio, film, photography and graphics.	Autonomous – the reader is required to interpret the multimodal elements to make sense of the story plot and structure.	External mode – the reader is situated outside the virtual world.	Ontological – readers are invited to roam at random: the story may change from reading to reading as some readings will unlock all parts of the story, while another reading may only unlock some of its parts. The version of the	Layer Two – variable presentation of pre-determined content

						story you read may vary depending on the order of the scenes you visit.	
Authentic in All Caps, 2014 (Christy Dena)	Audio storybook, iPad application	An autopsy pathologist and her assistant attempt find the meaning of death on the web.	Mainly diegetic – autopsy pathologist narrates story; additional sound effects and music; interactive moments where audience has to input web addresses.	Autonomous – the reader is required to interpret the multimodal elements to make sense of the story plot and structure	External mode – the reader is situated outside the virtual world.	Exploratory – limited. Readers follow an episodic structure. Certain websites need to be explored before next episode unlocks.	Layer Two – variable presentation of pre-determined content
Frankenstein, 2012 (Inkle Studio, Dave Morris)	Story app for iPad	Adaptation for iPad of Mary Shelley's *Frankenstein*, where readers can choose character's point of view.	Diegetic – language-based story, changing point of view from various characters	Illustrative – readers will have an enhanced experience by familiarity with the original literature	Internal mode – the story is narrated in first person by different characters but they all address the reader directly as if part of an intimate conversation	Ontological – reader chooses the story path by selecting what comments to make in the one-on-one conversation	Layer Two – variable presentation of pre-determined content
Ipoe, 2012 (Play Creatividad)	Story app	Adaptation for iPad of Edgar Allan Poe's short stories	Diegetic – language based story with limited interactive animation e.g. demisting the window pane, knocking over the brick wall to reveal the corpse.	Illustrative – readers will have an enhanced experience by familiarity with the original literature	External mode - reader is situated outside the virtual world	Exploratory – limited. Readers follow a linear structure as if reading a physical book	Layer One – themes

Slide, 2011 (Hoodlum Studio)	Transmedia television show	Teen drama following the lives of five teenagers growing up and finding their identities.	Mimetic – Story mainly told through 10 x 42 minute episodes screened on Fox 8 with additional content release as webisodes, apps and social network.	Autonomous – the viewer is required to interpret the multimodal elements to make sense of the story plot and structure.	External mode – the viewer is situated outside the virtual world although encouraged to participate on fan forums.	Exploratory – limited. Audience follows an episodic plot structure. Accessing additional content online enhances but does not change story	Layer One – themes
Facade, 2005 Mateas and Stern	Interactive drama, computer game	You are the guest Grace and Trip's dinner. Over the course of the game, your interference can get them to make up or break up.	Mimetic	Autonomous	Internal	Exploratory	Layer Four – real time story generation
Flight Path, 2007 (Kate Pullinger and Chris Joseph)	Networked novel	Story of an immigrant escaping Pakistan. He stows away on an airplane, crashes and lands on a car hood in London.	Mimetic and Diegetic	Autonomous	External	Ontological	Layer Two
Chopsticks, 2011 (Jessica Anthony,	Story Application, iPad	Glory, a piano prodigy, heads for a breakdown and is unable to play anything but	Mimetic and Diegetic	Autonomous	External	Ontological	Layer Two

Rodrigo Corral)		'Chopsticks' on the piano.					
Device 6, 2013 (Simogo Studio)	Text-based adventure game for iOS	Anna wakes up in a castle with no memory of how she got there.	Mimetic and diegetic	Autonomous	Internal	Exploratory	Layer Three
Her Story, 2015 (Sam Barlow)	Interactive movie video game	Players search through a database of video clips, mainly interviews with Hannah Smith, whose husband has disappeared.	Mimetic	Autonomous	Internal	Exploratory	Layer Two
The Truth About Cats and Dogs, 2016 (Editions at Play, Sam Riviere and Joe Dunthorne)	Story app	A failed collaboration between novelist Joe Dunthorne and Poet Sam Riviere as they try to collaborate on an Editions at Play project	Diegetic	Autonomous	External	Exploratory	Layer Two – plays on different points of views between the two writers
Welcome to Pine Point, 2011 (National	Interactive web documentary	Part book, film and photo album, it traces what happened to the	Diegetic and mimetic	Autonomous	External	Ontological with some exploratory elements	Layer Two

Film Board of Canada)		community of Pine Point.					
Fall of the Site of Marsha, 1999 (Rob Wittig)	Web based story	Story about Marsha who launches an inspiration webpage about angels only to reveal her personal dysfunctionality.	Diegetic	Autonomous	External	Exploratory elements through hyperlinks	Layer Two
Front (Donna Leishman)	Web based story	Facebook parody tackling privacy in social media	Diegetic	Autonomous	Internal and external – reader 'logs on' as Daphne. However, reader does not have any control over real time status updates on messages. Can only read the messages like an external observer	Exploratory – reader navigates pages between Daphne and her friends	Layer Two

APPENDIX 3

LIMERENCE CREDITS

Marianna Shek - Writer, producer and designer

James Warr - Programmer

David Hethorn - Composer/ Musician

Judy Yeh - Film director

Sen Wong - cinematographer

Liz Tyson-Donelly - Production designer

Ruby Spark - Make up Artist

Sound recordist - Duc Duong

LIMERENCE CAST

Amber O'Reilly - Clarice Mahon

Darren Fisher - Reuben Rosenberg

Jason Theodosis - Joe the Bro

Gregory Davis - Richard Wiley

Jessica Leighton - Sheree Wiley

Alexandra Beitzel - Meggie Brody

Ruby Spark - Jade Spanks

JONES as himself

The following images were remixed under an Attribution-NonCommercial-ShareAlike 2.0 generic creative commons license:

Barka Fabianova https://www.flickr.com/photos/finofilka/16308945629/

Alpha https://www.flickr.com/photos/avlxyz/13417566845/in/photolist-mrExap-dWUmdU-5xgMvt-u55uy-74E5pY-74E5jC-74AaGr-74E53w-2UgvsC-9ujeRr-9ujeJk-2Uca5K-2g6Has-5j7CXw-5j7Cpj-2Uc8YZ-5j7Df7-bcckfg-aUMteX-bcck8v-svmzY-9ujext-6eePPL-9rru4P-yiMje-bcckwD-ARMnC-9XASvg-9XAS8D-9XARqv-9XDJsU-9XDJ1G-9XDHGh-9XAQ1P-9XAPAt-9XAPe8-26rvoE-52pj7b-5j3nAD-yejsb-f1ocA-xRDvd-5cmqqy-xRDz3-xRDgu-xRCHG-bccjZt-xRJgW-xRHMQ-xRHmL

baerchen57 https://www.flickr.com/photos/baerchen57/8015172636/

Jared Polin https://www.flickr.com/photos/jaredpolin/4298598175/in/photostream/

Elias Rovielo https://www.flickr.com/photos/eliasroviello/16245011277/

@Doug88888 https://www.flickr.com/photos/doug88888/2814128135/

Pierpaolo Colancecco

https://www.flickr.com/photos/129166965@N02/17295466416/

James Cao https://www.flickr.com/photos/studiosushi/3942867058/

Kirti Krishna Badkundri https://commons.wikimedia.org/wiki/File%3ACAM01396.jpg

The following images were remixed under an Attribution-NonCommercial 2.0 generic creative commons license:

Herbert Johan https://www.flickr.com/photos/50800971@N03/4669609959

Bloody Marty https://www.flickr.com/photos/slipstreamblue/2590097927/

Axel Foley https://www.flickr.com/photos/axlefoley/3978793359/

Surly Girl https://www.flickr.com/photos/jm_photos/2057214943/

Clotho 98 https://www.flickr.com/photos/clotho98/4010124108/

Edward Liu https://www.flickr.com/photos/edwick/10586861255/

Nymawayca

https://www.flickr.com/photos/15460736@N06/8400026189/in/photolist-dNhk8K-9k5YXZ-oy13vc-5BRdg8-6SS5tz-arRCYk-4Vabdf-asXSa4-4Bc8Ce-4SD2nt-duYsXt-6WGW8t-4vxBTd-4C5YXb-8vTicx-4GHDx-7uzE82-6PHuVm-5gzoB8-8WU1eu-bJKw1-p2fkNW-65irvX-4GHJP-4GHGW-4Hdf9-nCBwWL-axz2XK-4C1G38-3ZpL6-61PHYG-61PHWN-61dj7V-aP7Pz-2F4Ya-dn9WP-dNhp34-4GHFj-61hwnE-4Hdfz-2y2PiN-nEDMhJ-5QmzKx-9AbS19-FvRLc-5Ktwqb-nYVzig-PxpJK-nV6BL9-5KtwgL

Chris Goldberg https://www.flickr.com/photos/chrisgold/7406072016/

Peter Gahlgren https://www.flickr.com/photos/rifqidahlgren/8571496124/

Annalisa Antonini https://www.flickr.com/photos/annalisa/273319984/

Matthew Nasholm https://www.flickr.com/photos/mnasholm/2276193406/

Kitty Vleaveland

https://www.flickr.com/photos/kacleaveland/4334148138/in/photostream/

Tanaka Who

https://www.flickr.com/photos/28481088@N00/1343485427/in/photostream/

https://www.flickr.com/photos/28481088@N00/1340354515/in/photostream/

https://www.flickr.com/photos/28481088@N00/1298930735/in/photostream/

TheeErin https://www.flickr.com/photos/theeerin/274865885

Peter Castleton https://www.flickr.com/photos/petercastleton/4195259635

Tony and Wayne https://www.flickr.com/photos/bonitoclub/5429717402

Richard Riley https://www.flickr.com/photos/rileyroxx/224691572

Nickolai Kashirin https://www.flickr.com/photos/nkashirin/5325053378

Gonzalo Baeza H https://www.flickr.com/photos/gonzalobaeza/6856458760

Oraz Studio https://www.flickr.com/photos/burleydude/4931611492

Banjo Brown https://www.flickr.com/photos/bmente/5141040131

Rebecca Boardman
https://www.flickr.com/photos/grish616/14177751976/in/photostream/

McPig https://www.flickr.com/photos/mcpig/2415033906

Vladimir Pustovit https://www.flickr.com/photos/pustovit/14457099523

C-Monster https://www.flickr.com/photos/arte/9782018636

Hoffnungsschlmmer https://www.flickr.com/photos/hoffnungsschimmer/14817533613

Toshihiro Gamo https://www.flickr.com/photos/dakiny/8356051021

Illusive Photography https://www.flickr.com/photos/alanant/5723501589/in/photostream/

Nicole Vaughan https://www.flickr.com/photos/craftapalooza/150954976

Alexis Lopez https://www.flickr.com/photos/brazilwomenbeach/5897134421/

Judy and ed https://www.flickr.com/photos/65924740@N00/16181876935/

Twinkle Enyong, Max the Shiht-zu
https://www.flickr.com/photos/twinx_doggies/8406383177/in/photolist-5ULtMZ-68GQjv-5UJg4C-5Xpz9p-dNQUQZ

Rob Kleine, Gold Retriever Puppy Swimming
https://www.flickr.com/photos/rkleine/4430632386/

Gimli62, Confucius https://www.flickr.com/photos/gimli62/9759303263/

Seth Lemons, Diamond_samples_B-007
https://www.flickr.com/photos/slemmon/4736184449/

Meghan Wilker https://www.flickr.com/photos/irishgirl/13024049693/

The following images were remixed under a Creative Commons CC0 public domain license.

https://pixabay.com/en/people-black-homeless-black-people-913778/

https://pixabay.com/en/light-bulb-electric-electric-bulb-146595/
https://pixabay.com/en/woman-art-the-hair-the-face-girl-657474/
https://pixabay.com/en/gangster-tough-per-gang-attitude-539993/
https://pixabay.com/en/birdwatching-stand-group-men-male-387463/
https://pixabay.com/en/tahiti-water-sunset-tropical-luxury-671028/
https://pixabay.com/en/infidelity-love-affair-cheating-379565/
https://pixabay.com/en/wildcat-animal-nature-cat-natural-356805/
https://pixabay.com/en/cat-sweet-kitty-animals-323262/
https://pixabay.com/en/turtle-turtoise-reptile-water-411793/
https://pixabay.com/en/girl-lake-beach-mermaid-beauty-829581/
https://pixabay.com/en/antenna-mast-antenna-monitoring-nsa-605307/
https://pixabay.com/en/cat-animal-sleep-cats-pet-animals-800760/
https://pixabay.com/en/woman-bed-female-attractive-506120/
https://pixabay.com/en/girl-woman-sexy-lingerie-posing-254708/
https://pixabay.com/en/bulb-lit-light-pink-christmas-304515/
https://pixabay.com/en/coins-gold-stacked-metal-treasure-29516/
https://pixabay.com/en/bag-money-wealth-revenue-finance-147782/
https://pixabay.com/en/klee-luck-lucky-charm-587484/
https://pixabay.com/en/workstation-stressed-office-148084/
https://pixabay.com/en/strawberry-wood-strawberry-red-7649/
https://pixabay.com/en/active-athlete-background-bar-948798/
https://pixabay.com/en/bouquet-colorful-color-roses-red-499096/

The following image was remixed under a Sampling Plus 1.0 Creative Commons license

Lukasa https://www.freesound.org/people/lukaso/sounds/69681/

The following image was remixed under a standard license

Alinabel/ Shutterstock

http://www.shutterstock.com/pic.mhtml?utm_medium=Affiliate&tpl=42419-43068&id=256804108&utm_campaign=Open%20Stock%20Network&irgwc=1&utm_source=42419

The following images were remixed under a PhotoDune Regular License

CarloDapino http://photodune.net/item/business-woman-dreaming/7838775

CURAphotography http://photodune.net/user/curaphotography

Fotoslaz http://photodune.net/user/fotoslaz

Monkeybusiness http://photodune.net/user/fotoslaz

Additional photography provided by James Warr, Carlos Gonsalves and Bridget Walker

Thank you to my supervisors Andi Spark and Sally Breen.

A prototype of Limerence was initially developed as part of the Digital Writers in Residence Project, managed by the Northern Territory Writers Centre and assisted by the Australian Government through the Australia Council for the Arts, its arts funding and advisory body

APPENDIX 4

WRITERS GUIDELINES

OVERVIEW

Player One/Player Two is a re-invention of the creation myth story. It's a playful commentary tracing the participatory culture of games starting from the iconic *Pong* to modern MMOGs such as *Call of Duty*. The audience will follow a flow-of-consciousness conversation between Player 1 and Player 2 as they debate the existential questions:

Who are they?

Why at they here?

What is the meaning of life?

Is there free will?

Is there life after death?

In terms of story structure, we have an overall narrative arc (much like a TV series works towards an overall arc and resolution). Each individual game can tell a stand-alone story (much like an episode within a TV series) but always working towards the overall story arc.

At the writers meeting, we decided that the final resolution is that P1 and P2 come to the realisation that there is no P1 and P2 in the MMO model of gaming. We are all P1. They also decided that there is no such thing as free will and that P1's and P2's actions are pre-destined.

A rough plan of how the individual game stories fit into the overall arc will work like this:

PLAYER ONE/PLAYER TWO STORY STRUCTURE

Pong: Philosophical introduction. Who am I? What am I doing here?

Space Invaders (Part One): Player 1 provokes the enemy ship. He gloats as he saves the world (seemingly) for the first time…

Contra: Who am I? What am I doing here? What's going to happen afterwards? Comrade relationship between P1 and P2

Bubble Bobble: Comic relief, very short bursts scattered throughout the exhibition. Bub and Bob obsessed with collecting EXTEND letters as opposed to saving their girlfriends

Mario Brothers: Mario wants to save the princess. Luigi tries to dissuade him. This ends up being a battle between the brothers and their role as Player 1 and player 2. In the end, Mario takes on the role of a dictator who ends up killing Luigi.

Diablo: Player 1 is a hardcore gamer, Player 2 just wants to muck around, change costumes etc. This causes conflict which results in them discussing death (being respawned). They decide to put aside their differences and just as they're about to go kill some demons, player 2 dies.

Bubble Bobble: Comic relief, very short bursts scattered throughout the exhibition. Bub and Bob obsessed with collecting EXTEND letters as opposed to saving their girlfriends

Smash Brothers: Still working this one out (Tara/ Angela). Because of the multi-player option (P1, P2, P3 and P4), you could develop a story where P1 forms and alliance with P2 to get rid of P3 and P4, only to have P1 turn against P2 at the final stages to win. This causes a rupture between P1 and P2, with P2 declaring he will never be second fiddle again.

Zelda: Four swords Adventure: Multiplayer, Link versus his alter-egos each battling to establish themselves at the real Link. Will the real P1 please stand up?

Street Fighter: Antagonistic relationship between P1 and P2, tag-team style, Akuma and Ryu gets into an argument over free will versus destiny. Akuma claims he is born evil while Ryu wants him to take responsibility for his choices. To prove his point, Akuma challenges Ryu to stop fighting and walk away. The audience is taken back to –

Space Invaders (Part Two): Player 1 provokes the enemy ship. He gloats as he saves the world (seemingly) for the second time…

Day of the Tentacle: A blast from the past. As P1 and P2 discuss free will versus destiny, they are thrown back to Day of the tentacle to prove/ disprove their theory through time travel. (Still working through details)

Repeat of Space Invaders (part Three): Again, and again and again Go save the world!

Portal: Finally, Player 1 and Player 2 must come to an agreement to set aside their

differences and work together.

Epilogue

World of Warcraft: Final resolution. P1 and P2 realise there is no P1, P2 or even P3 and P4 with network gaming. We are all P1. They settle on a frenemy relationship. They make peace with the fact that there is no such thing as free will and that they are just cogs in this machine of destiny. Question is: what do they do now?

P1 and P2 use their enlightenment to go online and kill American children at Christmas (Dan to write).

APPENDIX 5

PLAYER ONE/PLAYER TWO CREDITS

The Edge, State Library of Queensland

Daniel Flood

Sarah Winter

Mick Byrne

Marianna Shek

Writing team

Tara Brown

Angela Hibbard

RJ Miso

Victoria Posner

Visual design team

Richard Lee

Caitlin McGowan

Leila Watson

Brian Dinh

Craig Bentick

Stacy Field

Gregory Davis

Tara May Flynn

Bob Dobson

Jessica Fay

Recorded sound

Mike Willmett

Reuben Witsenhuysen

Bianca Zouppas

This exhibition is inspired by story and artwork from the following games:

Alcorn Allan 1972, *Pong*, arcade game, Atari Inc, California.

Tomohiro Nishikado 1978, *Space Invader*, arcade game, Taito, Tokyo.

Shigeharu Umezaki 1987, *Contra*, arcade game, Konami Corporation, Tokyo.

Fukio Mitsuji 1986, *Bubble Bobble*, arcade game, Taito, Tokyo.

Game Arts and Sora Ltd 2008, *Super Smash Bros. Melee*, Wii console, Nintendo, Kyoto.

Nintendo R&D4 1985, *Super Mario Bros*, Nintendo Entertainment System, Nintendo, Kyoto.

Blizzard North 1996, *Diablo*, Computer game: Microsoft Windows, Blizzard Entertainment, California.

Nintendo EAD Group No. 3 2004, *The Legend of Zelda: Four Sword Adventure*, Nintendo Gamecube, Nintendo, Kyoto

Capcom 1996, *Streetfighter versus X-men*, arcade game, Capcom, Osaka.

LucasArts 1993, *Day of the Tentacle*, computer game: DOS, Mac OS, LucasArts, San Francisco

Valve Corporation 2007, Portal, computer game: Microsoft Windows and Xbox 360, Microsoft Game Studios, Washington

Blizzard Entertainment 2004, *World of Warcraft*, computer game: Windows and Mac Os, Blizzard Entertainment California

APPENDIX 6: OBSERVATIONS FROM THE *PLAYER ONE/PLAYER TWO* PROJECT

Date	No of people	Observations
7 May, 7pm	12	This was the opening night of the exhibition. On average, people spent 40 seconds listening to the audio and/ or looking at the display at the non-gaming stations. The gaming stations drew reasonable interest.
8 May, 8pm	114	Opening Night party Average time people spent engaged at a station that did not have a game was 20 seconds. The gaming stations drew the most interest – 5 minutes on average, young players mainly. People were very engaged answering the questionnaire at the *Portal* station. People lost interest in the *Diablo* station once they realised it was a machinima animation and not a game.
9 May 7pm	67	*Portal* drew a lot of interest but due to technical issue with the potato being broken from overuse, the questionnaire stopped working.
10 May 2pm	24	People were more engaged with story than games. More people read the didactics explaining the history of the game and listened to the audio story. Average time at a non-gaming station was 34 seconds. Demographic – family with kids. Young kids were interested in the gaming station and the giant space invaders display. They were keen to jump on the display despite security tape.

APPENDIX 7: DIGITAL WRITER'S TOOLKIT WEBSITE LINKS

https://writersinresidence.wordpress.com/2014/11/17/hello-everyone/

https://writersinresidence.wordpress.com/2014/11/18/the-limerance-project/

https://writersinresidence.wordpress.com/2014/11/19/the-digital-writers-toolkit-agency/

https://writersinresidence.wordpress.com/2014/11/21/progress-on-limerance-writers-block/

https://writersinresidence.wordpress.com/2014/11/24/371/

https://writersinresidence.wordpress.com/2014/11/25/digital-writers-toolkit-co-creation/

https://writersinresidence.wordpress.com/2014/11/26/casting-complete/

https://writersinresidence.wordpress.com/2014/11/27/the-user-interaction-triangle/

https://writersinresidence.wordpress.com/2014/11/28/what-comes-first-story-or-media/

https://writersinresidence.wordpress.com/2014/12/01/interactive-narrative/

https://writersinresidence.wordpress.com/2014/12/03/limerence-update/

https://writersinresidence.wordpress.com/2014/12/04/who-is-the-ideal-digital-reader/

https://writersinresidence.wordpress.com/2014/12/09/interview-with-anthony-mullins/

APPENDIX 8: DIGITAL WRITER'S TOOLKIT INTERVIEW QUESTIONS

QUESTIONS FOR HUGH BURTON

1. Coming from a scriptwriting background, what are some of the writing techniques or processes that is unique to scriptwriting compared to other writing forms (e.g. writing a novel)?
2. What comes first – story or media?
3. Can you discuss your work process as you are developing a script?
4. In the scriptwriting process, how important is developing the story world?
5. Not sure how to word this question but it will be something along the lines of asking your opinion of adapting conventional narrative devices such as multiple points of view and non-linear story structure from script to multiplatform….
   Then again not sure how to word it, but leading into a question about your opinion on why you think the epistemic/ mystery genre work well in interactive storytelling platforms whereas drama mostly fail.
6. Have you done any work with cross media; i.e., adaptation from one media to another?
7. Writing is often viewed as an individual art form. Do you see a place for collaborative scriptwriting?

QUESTIONS FOR JASON NELSON

1. Can you describe your art practice?

2. How did you get into this area?

3. One of your popular pieces is *I Made This. You Play This. We Are Enemies*
   Can you please tell me what this piece is about?
   What's your creative process when you develop these digital poetry projects?

4. I really enjoyed *Birds Still Warm from Flying* because I'm not a sophisticated poetry reader. I always feel that the words are cryptic and filled with hidden meaning. So as I was playing with the cube, that interaction and the visual representation actually emulates how I feel when I read traditional poetry.

   How did you intend your reader to feel about this piece?

5. In an interview for ABC earlier this year, you said that digital is the future for poetry. Obviously, the transmission of poetry becomes easier with self-publishing and other digital publishing platforms.
   Do you think that technology enables new responses or understanding from the reader which isn't possible with traditional print poetry?

6. I think that for the audience to be critics, we need to classify things into categories. We know what films and books and music are so we know how to feel about them.
   Do you feel that there is a certain 'boxing in' or limitation when you're described as a digital poet?

7. For the longest time, artists, writers, filmmakers, funding bodies were all bogged down with defining this art form which intersects multiple disciplines. How do you feel about these terms used to describe some aspect resulting from the convergence of media?

   - Electronic literature
   - Transmedia
   - Interactive narrative
   - Multimodal narrative
   - Any others?

8. What comes first: story or media?

9. Writers often talk about having an ideal reader – someone who is the perfect receiver of your work.

   Who do you think is the ideal reader in the digital space?
10. Do you think there is a demographic that is a game-reader hybrid?

11. For transmedia designers and writers, we wonder whether we need a new storytelling formula or whether we just need to bide our time, until the digital native generation grows up.

    Do you think there is a need for the rest of us to develop transliterate skills to fully appreciate and interpret transmedia works?

12. What are some of the tools or techniques you've kept from traditional poetry writing that translates directly to the digital space?

13. How would you encourage traditional writers to get started working in the digital space?

14. Working in the digital space clearly requires collaboration. Is there an ideal team that you generally work with for your projects? (eg programmer, artist, other writers?)

15. Can you tell us about the latest project you're working on?

QUESTIONS FOR GORDON MOYES

1. Can you describe your current art practice?
2. Tell me about your DVA project.

3. What comes first – the story or the media?
4. Can you talk about the design process you go through when you make a narrative game?
5. Do you think that reading a narrative game requires the gamer to utilise different skills to interpret and problem solve compared to reading a book?
6. Are the pleasures of a narrative game different than that of ergodic games? Are these pleasures similar to the pleasures of reading a book?
7. It's been argued that readers approach story like an external voyeur. They like to be told the story but not participate in it. But the beauty of technology is that it enables user agency and co-creation. Are there strategies to design narrative games to engage readers?
8. How different is writing for games compared to writing scripts for film or novel writing?
9. Is interactive fiction the future of digital writing?
10. What's your favourite narrative game?

APPENDIX 9: DIGITAL WRITER'S TOOLKIT INTERVIEW TRANSCRIPTS

EXPLORING THE INTERACTIVE NARRATIVE (TRANSCRIPT)

SUE SWINBURNE (SS): There's an interesting idea that… that I like to think about which is that idea of performing story when we're doing ...when a user is engaging with interactive narrative, we're asking them rather than to create
the story to help the performance of the narrative by you know using their own physical gesture or whatever it is that they need to do for you engage with the work. I like to think it says less about asking them to create the work and more about
inviting them into the performance event narrative.

JASON NELSON (JN): And then I think it's important to think of your work in sort of a multi-linear, multi-layered, multimedia way see... You kinda have to get away from this notion that someone's gonna read something exactly as you write. You kinda have to leave it up to them to make it um... so I think if you're curious, you can get into some tech and can rethink how you sort of see the world and how you see your writing again with the nexus that words are still critical component of it so you
have to obviously make that interesting to get a good start

HUGH BURTON (HB): Mysteries is absolutely central to... what you want to do every moment of a film is to create a mystery about what's the next shot, what's the next moment in your film and you...that's what keeps people glued to it, what's - what's going to happen next and as soon as you know, soon as you can read the plot and you what's going to happen and you know the green monsters gonna come around the corner and there it is, then you switch off, You pull back ... you…you exit the world of the film. You exit the disbelief... you- you come back so yeah
mysteries are really important part of all of us I think.

GORDON MOYES (GM): Games like *Star Trek Armada*, *Dark Reign*, even *Destroy All Humans*, they've all got a very compelling story arch in them with well-developed back

stories for main characters, plot lines and so on however as a player that's not necessarily what players are looking for so it's important that the action, the play, the moment to moment gameplay is exciting and that the narrative in the backstory support play

SS: And also I think it is about … you know, of developing kinda cultural fluency with new forms of storytelling so how we actually evolve our own practice and our own ideas to fully take advantage of all the opportunities that are available to us so I think we're in a state of learning and of a kinda cultural growth where we develop an increasing sophistication with lots of different channels

What comes first: Story or media?

SUE SWINBURNE (SS) I think transmedia... is showing its own roots often in the way that its produced at the moment and what I mean by that is that I think when you look at some of the kinda first mainstream practices of transmedia they tended to come from heritage forms of storytelling, in particular feature film which has used transmedia to extend at the storytelling a feature film to other platforms and so I think often times the practice tends to privilege the ideas that govern feature filmmaking

GORDON MOYES (GM): As a game designer it's going to be a game if I start engaging with it so in that sense it's more about the story or is the proposal suitable for delivery as a game. And if it sounds like it needs to be a movie or an animation I might give someone that advice ... if it originally come from being a movie or a story or a book or a novel then it's really important that we have some freedom to add to the story world to allow to possibly remove from the main characters … some of their... some of the story plot that we are aware off from the movie or the novel and add to the story new elements that the game needs to survive and to sustain itself.

JASON NELSON (JN): When I first started doing it, I think I looked at these sort of interfaces and this digital environment as just simply a place to put my writing and I don't think that's the best way of going about 'cos I think then you really just have a way of displaying writing as opposed to work that really integrate everything … so while it's impossible to work on everything at the exact same time, I try to do that, you know, so it's almost like playing with LEGOs in a way. You know you've got all these bits and pieces that you're starting to work on at the same time you're hoping at the end it becomes a whole

(In relation to his work *Birds Still Warm from Flying*)
JN: So for that work for example I tried to sort of imagine... alright, it's very multidimensional like a little Rubik's Cube. We can twist and turn it and so how can I write writing that both works in a narrative sort of linear way but how can you do work... how can you do writing when you twist it, the lines still interconnect with each other. You know so you could almost take any line, move it around in the poem and the poem still have some resonance to it.

SS: I think when a project starts to come to life whether you think about story or the delivery mechanism first I think can be quite an organic process. For me, given that my background traditionally starts with story, then for my own practice that tends to be where I begin. However in the work I've done with students and in teaching them interactive storytelling, quite often a project can spring from a game mechanic or um you know something that somebody notices in the physical environment and from that story grows around it. So as I say from my own practice, I tend to begin with story but I don't think that's a rule.

APPENDIX 10: INTERVIEW WITH ANTHONY MULLINS

Available at: https://writersinresidence.wordpress.com/2014/12/09/interview-with-anthony-mullins/

Marianna Shek (MS): What comes first: story or media?

Anthony Mullins (AM): Depends. Some ideas come from new possibilities inspired by technology. Others just happen and are inspired by whatever the writer is interested in. Sometimes these ideas that just "happen" sit around for a while not doing much until a new technology comes along and the writer thinks "This new tech would be awesome for that idea where etc…" Bottom line – in any worthwhile project both story and tech have been thought about equally to ensure that they amplify each other. Otherwise the tech usually comes off feeling intrusive and/or gimmicky or the story feels like a distraction from the cool tech stuff.

MS: Even though transmedia talks about equally distributing story between different platforms, do you think this is reflective in current practice? (or do we still rely on one media such as film or game to carry the bulk of the narrative)

AS: A lot of project I've seen (and also made) don't distributed story evenly and are very patchy in how it's executed. Usually there is a "mothership" for the property (a film, a game, a book, etc.) and everything extends from that execution. Budgets only stretch so far, so the quality of storytelling is often superficial, uneven or marginal. It's very hard to "equally distribute" content when one of the platforms cost 200 million dollars. Everything next to it is going to seem like its been done on a budget (which it usually has been). And if the creators haven't been involved, then the story content will often seem peripheral (which is also often the case). Big transmedia executions are usually funded by marketing well established franchises that already have games, toys, theme parks etc. The term transmedia draws those commercial strategies together and tries to call it storytelling

when really, in most instances, it's a perfectly legitimate commercial strategy with more interest in selling tickets, toys, collectibles than telling a coherent story.

MS: At present, it seems a lot of transmedia works are skewed towards gamer interactions. How do you think writers can design transmedia stories to engage readers?

AM: It's a tricky question that I continue to wrestle with. Not all stories are right for an interactive / transmedia execution so a first stop would be how to recognise if your story has this potential. If not, then best concentrate on making the story in your book, film, whatever the best it can be. A standard novel can make an average reader buy the book, attend a book club, pay for a literary festival to hear the author speak, and probably even see the movie / DVD / etc. That's an amazingly rich experience from ink printed on paper – and it's one that is often underestimated probably because it seems so everyday but it's still pretty special I reckon.

MS: Writers often talk about having an ideal reader – someone who is the perfect receiver of their work. Do you think there is an ideal 'digital' reader we need to keep in mind when creating digital stories?

AM: The concept of an "ideal reader" is great for both traditional and digital mediums. It's when the writer spends most of their time doing market research rather than writing that I worry. Digital mediums can make us believe we can become experts in marketing, publishing, distribution etc but it's not writing and won't make you a better writer. And it almost certainly wasn't what attracted you to writing. Only writing can make you a better writing and you have to do a LOT of it. The better you get and the more you read the more refined your taste becomes and the more instinct you get for the "ideal reader".

MS: In your opinion, what are some stand out interactive stories (can be games, transmedia, whatever you want to call it)?

AM: There are some transmedia cliches when it comes to form – see the Writers Platform article I wrote. These sorts of cliches infect interactive storytelling too probably because an imperative to interact pushes writers / designers towards stories where the "doing stuff" happens naturally – solving mysteries, murders, treasure hunts, etc. The stories that deal with this are a bit less obvious about what they're doing or they hide the tropes under unexpected storytelling devices or execution – e.g., *Device 6, Thomas Was Alone, Monument Valley* and *Sword and Sorcery* are all superb interactive stories that use an "escape the room" structure to the interaction. But they create very different worlds and atmospheres and the story and execution are organically linked in ways that amplify each other. We've seen many of the ideas in these games before BUT they have concentrated on one or two areas and been innovative with them and created some really distinctive. Experiences like these are really inspiring and get past the hype to something memorable. And I wouldn't consider any of them "transmedia" – they're just games or maybe interactive stories.

MS: What are you working on at the moment?

AM: Actually working in TV development at the moment – so old school!

MS: Any advice you can give to book writers wanting to experiment with writing in the digital space? Are there any new tools they need to pick up?

AM: If you want to write in the digital or interactive spaces, you're probably already hanging out in those spaces anyway because you're attracted to them. You've probably very active on social media and play casual games while waiting for the bus and go looking for new innovative games and maybe collect interactive stories and probably played "choose your own adventure" or D and D as a kid etc. If all of that is completely foreign to you then that's fine – you're probably a novelist, a screenwriter or a playwright and that's absolutely awesome. Concentrate on being better at what you love – find the very best writers that do what you love and try and be as good as them. Don't try to be a

different sort of writer because you think it's expected of you. A lot of things people say will be the "future of storytelling" will be gone before you know it and the people evangelising for this stuff are usually not storytellers.

Thank you Anthony for the insightful advice! For those interested, here is the link to the article Anthony referred to for The Writing Platform

http://www.thewritingplatform.com/2014/12/the-endgame-arg-new-beginnings-or-more-of-the-same/