School of Media, Creative Arts and Social Inquiry

Raising Awareness of Domestic Violence through the Application of Social Empathy to Game Design

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Declaration

To the best of my knowledge and belief, this thesis contains no material previously published by any other person except where due acknowledgement G50-746-574 3 November 2020 has been made. This thesis contains no material which has been accepted for any other degree or diploma in any university.

Human Ethics

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number # HRE2019-0661

Content Warning

The game prototype - *Hannah: A Friend in Need* created as a part of this doctoral research contains a content warning for Domestic Violence and depression. In addition, this exegesis also discusses themes around alcohol addiction and suicide.

Abstract

Social empathy has been identified as an important way to bring about greater understanding, compassion and promote social change. This research explores how understandings around the development of social empathy can be applied to the design of a gaming application to increase players' awareness and insight about domestic violence. Domestic violence is a significant social and health problem with family and friends often the first to become aware of the situation.

According to social work researcher Elizabeth Segal (2006; 2011), social empathy is a powerful form of empathy that actively encourages individuals to take steps towards making positive social change. Segal argued that engaging individuals in others' life experiences through elements such as first-person stories and facilitating a contextual understanding around these experiences can help promote social empathy.

Hannah: A Friend in Need (Hannah) is an interactive narrative game for Android devices that mimics chat-based social media apps and explores the promotion of Segal's concept of social empathy to strengthen support networks for victim-survivors. Informed by academic research, *Hannah* has been designed to raise awareness of specific elements of domestic violence. Through a creative exploration process, specific narrative and game design elements were implemented in the game to promote a feeling of social empathy in the player for Hannah, the main game character, over a period of days, and to craft a procedural rhetoric that highlights the importance of the support provided by family and friends to victim-survivors.

Professional domestic violence support workers and game designers were asked to provide feedback on a prototype version of the game. Feedback was received praising the way the game raised awareness of some elements of domestic violence and their impact, the way the game incited empathy for victim-survivors, and the way the game

highlighted the importance of friends and family members to those experiencing domestic violence. Feedback was also received from this group regarding future potential developments for the *Hannah* prototype and for further development and research into the application of social empathy to game design. Whilst the application of social empathy to the design of chat-based interactive narrative game is a new and previously unexplored area, this research suggests that social empathy for victim-survivors can be promoted in this format. This work invites future research around the application of social empathy to game design to create games that promote social change across a variety of topics. To increase the ability of designers to continue to explore and further research this area, the creation of a publicly accessible version of the software created to develop the prototype, known as the *Hannah engine* is planned.

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I would also like to thank those who helped develop *Hannah*: Samantha E. Schaffer, Joshua McLean, Andrew G. Taylor, Sophia Reinhardt and Caroline Emery. A full list of those who supported the development of the game and their roles can be found in Appendix 1. Thank you to the participants who took the time to play *Hannah* and provide their valuable feedback and insights.

Thank you also to Samantha Lin, Chad Habel, Jane Cocks and Michele Jarldon for all your support, feedback, and encouragement throughout the development of *Hannah* and this exegesis. Thanks also go to the Awesome Foundation Adelaide for financially supporting the development of the *Hannah* prototype.

Finally, thanks go to my very own Lane, for everything.

Acknowledgement of Country

We acknowledge that Curtin University works across hundreds of traditional lands and custodial groups in Australia, and with First Nations people around the globe. We wish to pay our deepest respects to their ancestors and members of their communities, past, present, and to their emerging leaders.

Our passion and commitment to work with all Australians and peoples from across the world, including our First Nations peoples are at the core of the work we do, reflective of our institutions' values and commitment to our role as leaders in the Reconciliation space in Australia.

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Preface

The following preface provides an autobiographical account that explains why I was inspired to undertake this research, and why this topic is important to me on a personal level.

"But he said he was sorry", wrote my friend in her message. The decision to disclose the abuse was an extremely challenging one and I had considered it for several weeks before eventually deciding to share some of my story, in what was then an uncommon display of defiance and strength for me. I read her reply very carefully, confirming my thoughts that I was indeed overreacting to my situation. "You're right," I wrote back thoughtfully, "maybe he will change, things will be better this time". "You won't know if you don't try :)" my friend responded.

"She's right, I can try not to make him angry again," I thought to myself, "I can do this". I returned to my isolated existence with a new focus, navigating my life so carefully, making sure everything was perfect, not a hair out of place, not a word out of place, all of my effort going into making sure he was happy all the time. The phrases I used every day became "yes, of course", "you're absolutely right", "I'm so sorry, I'll try again". It was hard, and it was so very tiring. I did this for what seemed like a very long time. In fact, it felt like forever. I resigned myself to living this life.

One day I read that, on average, women live longer than men and I was relieved. I found myself dreaming of the day when he would be gone, and I would still be here. I woke up every morning and looked forward to that day. Every morning I was happy to be one day closer to that day as I reminded myself that when it came, I would finally be free! But this day was too far away. Things kept getting worse, and eventually, I became absolutely certain that he would kill me, and I would never get to that day. I thought I knew *how* I would die; I just didn't know *when* he would do it. I began to find not knowing when

unbearable, and, on my darker days, I considered ending my own life to find some freedom from these thoughts.

Thankfully, it was then that a new friend named Lane* came into my life. At this point, I was sure that the abuse I was experiencing was my fault, and I constantly made excuses for my abuser and his behaviour. Despite this, Lane was able to see through my excuses to what was really going on. “You deserve so much better than the way he treats you” Lane messaged me, but I didn’t believe it. “That’s not true,” I thought. “I’ve done so much wrong, I always mess everything up, and I always make him angry” I typed in response as the words blurred through my tears. “Even if that’s true” Lane replied, “no one EVER deserves to be treated that way. And I’ll always be here if you want to talk about it”.

This conversation was the first of many such small interactions that helped me eventually gain the strength to access support services and leave the relationship. Now, many years later, when I look back at my lowest point, when I was waiting to die, it feels like a different life altogether. The support I received from Lane helped me redevelop my self-esteem to the point where I was able to see that I didn’t deserve to die by my abuser’s hand, or by my own, and that is what ultimately saved me.

Although all victim-survivor experiences are different, I found that the importance of family and friends was a common theme in many of the stories I explored throughout my PhD research. Informal support networks are often the first place that those experiencing domestic violence disclose, and the way in which network members respond to these disclosures can be so important to victim-survivors. My own story demonstrates this by showing how two different friends responded to my disclosure, and how these seemingly small interactions deeply impacted and influenced me.

When I undertook this PhD project, I did so because I wanted everyone to have access to positive support such as I did from Lane. I wanted to raise awareness of how domestic

violence can affect those experiencing it and highlight just how important the reactions of family and friends can be to victim-survivors.

This exegesis has been written with accessible language in mind, to help ensure that as many people as possible can benefit from the research as possible. A major goal of this research is to encourage and highlight the benefits of engaging cross-disciplinary teams such as game designers, professionals, and those with lived experience in the development of games that explore topics such as domestic violence. I want to ensure that potential members of such collaborative teams can access the information contained in this exegesis, and I hope that this work inspires the development of future games designed to creatively raise awareness of complex topics, and positively impact social change.

*name changed for anonymity

Introduction

This PhD project, consisting of an interactive narrative game prototype for Android devices titled *Hannah: A Friend in Need (Hannah)* and an accompanying exegesis, focused on exploring the potential of increasing social empathy through the development of a game focused on a victim-survivor's experience of Domestic Violence (DV). This involved bringing together knowledge from a range of disciplines, including knowledge from the social sciences about social empathy, domestic violence, and its impacts on victim-survivors, as well as evidence about what has been shown to be most helpful in escaping DV. This knowledge also included insights from games academics and designers about the engaging and immersive nature of digital games, and the creation of narrative-driven games that communicate ideologies and influence their players, and which have meaning and purpose beyond entertainment.

Elizabeth Segal (2011) describes social empathy as a specific type of empathy that, when invoked amongst multiple individuals, can encourage positive social responses to concerns such as DV. Through an interdisciplinary approach, this project explores integrating elements of social empathy into the design of a game specifically aimed to raise awareness of DV, its impacts and the importance of how support networks respond to victim-survivors. It is anticipated that players of the game will have increased knowledge, empathy and understanding, which will lead to them being more strongly positioned to help friends and family who experience DV in the future. This project is innovative in nature as it explores how digital games may be a valuable addition to increasing social empathy and strengthening responses provided to victim-survivors by support networks.

A combination of research-led practice and practice-led research was undertaken throughout this process. Background research was undertaken into DV, support

networks and existing awareness campaigns as well as the use of digital games to engage their players, communicate information and invoke empathy. Short case studies of existing *deep games* (a term defined by game designer Doris Rusch (2017) to refer to games designed with meaning and purpose beyond entertainment), and interactive narratives (games that focus heavily on story and player choice) were undertaken. These explorations were undertaken to identify some of the practical design elements used by game designers to communicate such meaning and purpose as well as identify some considerations and challenges that may be faced when doing so. A close reading of victim-survivors' stories publicly available on the Domestic Violence Resource Centre of Victoria's (n.d.-b) website was undertaken, and narrative themes present in these stories informed the story I developed for the game.

Next, I undertook a creative practice process where I created a chatbot to explore the application of practical game design elements that may invoke social empathy in players. Following this, I brought together the research undertaken from the areas of social work and game design, lived experience knowledge from the victim-survivor stories and the learnings from the creative practice process of developing the chatbot to result in the design and development of the game prototype *Hannah*, creating a unique contribution to interdisciplinary knowledge and providing a practical outcome of this knowledge. *Hannah* and this exegesis work together to form my PhD research, and it is recommended that the reader play *Hannah* prior to reading this exegesis to avoid spoilers in the game's narrative. Whilst I hope that *Hannah* can stand alone as a creative piece, I also hope that through engaging with this exegesis those who read it will gain an understanding of the context in which *Hannah* has been developed, and some of the research, theory and techniques that have inspired the game, and which I have utilised to ensure an evidence-based approach to the game's design and development.

Game Designers rarely work alone, and often work in teams of hundreds or even thousands to develop games. During the development process of *Hannah*, I undertook many roles in the development process, including that of the game designer, game writer, game producer and graphic designer. Throughout this process, I was lucky enough to work with several wonderful individuals who contributed their time and skills towards the project, including App Developer Samantha E. Schaffer who was responsible for the conversion of the game into an app format for Android devices. A detailed breakdown of those involved in the project can be found in Appendix 1 of this exegesis.

This exegesis is structured in five chapters titled *Context, Craft, Create, Consult*, and *Conclusion*. The *Context* chapter provides a discussion of some of the research that was utilised to inform the development of the *Hannah* game. It provides contextual and background information around DV in Australia – including the definition of DV, and an overview of the historical approaches taken to address the prevalence of DV in Australia. It also includes a discussion around some of the terminology used to refer to those who have experienced DV. Next this exegesis includes a brief exploration of some non-physical elements of DV such as controlling behaviours and identifies a lack of public awareness around non-physical forms of DV and their impact.

The following section of this chapter explores the importance of family and friends to those experiencing DV, explaining that they are often the first to be made aware of abuse, and suggests that the way in which informal support networks respond to learning about abuse can dramatically affect the experiences of victim-survivors, even leading to some remaining with partners using violence due to receiving unhelpful responses from those close to them. To ensure that these family and friends can act as informed and accurate resources and support systems, this group needs to have a strong awareness of non-physical elements of DV, as well as understand the importance of how they respond to learning about abuse. Exploring such awareness raising

methods, the following section of this exegesis explores how empathy-based education has been used in social work and education settings, to specifically raise awareness of DV and sexual assault. Here, I specifically explore the use of personalised narrative recounts conveyed through formats such as literature and film to invoke empathy, with a particular focus on Segal's social empathy (2011), a powerful form of empathy that Segal suggests can actually encourage individuals to take steps towards inciting positive social change.

The *Context* section continues with a discussion around the immersive and engaging nature of digital games, with the goal of exploring how games may be able to deeply engage players in such personalised narrative recounts and provide further opportunities to invoke social empathy through their immersive nature and use of interactivity. Research suggests that games have the unique ability to communicate ideas and information through something games academic Ian Bogost (2007) calls procedural rhetoric, which is the way in which the elements of a game's design, such as the rules and processes contained within the game facilitate players to interact with the game world in ways that convey particular ideologies, and influence players towards certain positions or ideas. This is particularly important for this project which is aimed at highlighting the importance of support networks and encouraging players to think and act in particular ways when responding to DV survivors.

The next section of this chapter explores the genre of deep games, a type of game designed to have meaning and purpose. Here I provide some brief case studies of some existing games that have been designed to craft a procedural rhetoric around raising awareness of challenging issues such as depression and alcohol addiction and explore some of the ways in which the designers have aimed to do so. Finally, in this chapter I explore some of the ethical considerations in creating such games and highlight the importance of ensuring that games designed to raise awareness of specific topics are

informed by research and consultation with experts in the area, such as professionals and those with lived experience.

Informed by the research around the use of personalised narrative recounts to promote social empathy in social work explored in the *Context: Domestic Violence* section of the exegesis, I chose to develop *Hannah* in an interactive narrative format. An interactive narrative is a type of game that focuses heavily on story and as such allowed me to deeply embed and explore such personalised narratives in my game design. In the chapter of this exegesis titled *Craft: Interactive Narrative Digital Games*, I explore some of the unique considerations involved in the development of interactive narrative games, a type of game that focuses heavily on story. Interactive narratives also provide players with opportunities to engage with a narrative and this chapter also discusses various techniques used by interactive narrative designers to control and craft player experience through the type of in-game choices provided to players.

This chapter also explores further practical game design techniques used to create interactive narrative games, including insights from game writers and designers regarding how designers can control and craft the stories contained within interactive narratives to create certain effects or experiences in their players. Finally, this chapter explores some of the risks around designing games that aim to incite specific emotions in their players and suggests some methods designers can use to help prevent their players from becoming emotionally overwhelmed and highlights why this is particularly important for games that aim to promote player's social empathy.

The next chapter of this exegesis, entitled *Create* discusses some of the practical choices and design decisions I employed when creating the *Hannah* prototype. This chapter aims to provide the reader with insight into my creative process and demonstrates how the research evidence presented in the earlier sections of the exegesis is applied to inform and influence the game's design. It describes how the game's narrative was inspired by

lived-experience stories provided by victim-survivors, and how the themes in these stories were used to create the plot of the story, using narrative frameworks and further social work research into the nature of DV.

This chapter continues with a discussion into the creation of the game world and explores how the design decisions and the procedural rhetoric created by the game facilitates player experience with the narrative, whilst encouraging the promotion of social empathy, with the hope of increasing player awareness of DV and its impacts. Raising awareness of non-physical DV and promoting social empathy aims to strengthen support networks for those experiencing DV, by increasing the ability and willingness of players to form part of a supportive network to a friend or family member impacted by DV in the future.

This chapter also explores how the design of the game and its procedural rhetoric have been designed to highlight the importance of informal support networks and the way in which they respond to learning about abuse. Design elements such as the way the social media chat style format of the game simulates everyday conversations between family and friends, the way the player can interact with the game, the choices provided to the player, the use of language and the rules and processes of *Hannah* each work to highlight this. These design elements were inspired and informed by a combination of the background research undertaken into DV and the influential nature of games, research into interactive narrative development and practice-led experimentation through the design and development of the *Cleo* chatbot.

Undertaking background research, I identified the importance of ensuring that games designed to raise awareness of specific topics are informed by research and consultation with experts in the area, such as professionals and those with lived experience. I created Hannah as a lived-experience survivor, and the development of the game was influenced and informed by social work research and lived-experience stories of victim-survivors

provided to the Domestic Violence Resource Centre of Victoria (n.d.-b) and made publicly available on their website. Continuing to highlight the importance of consultation, in the final chapter of this exegesis, *Consult*, I discuss an initial evaluation and feedback process that was undertaken on the Hannah prototype by professional DV support workers, as well as game developers.

Positively, in this initial evaluation process, participants suggested that the game prototype had much potential to raise awareness of non-physical DV and its impacts on players and highlighted several elements of the game's narrative and design that demonstrated this. Participants also suggested that the game prototype may be able to invoke social empathy for victim-survivors in the real world, with one game developer participant stating that playing the game and feeling empathy for Hannah had changed their existing perspectives on DV. Participants also provided feedback and suggestions around moving forward with the development of the game prototype, and this feedback may be useful for others developing deep games in the future.

The development of *Hannah* is unique in that it brings together research and knowledge from game design and social work as well as the stories of those with lived experience, to provide a practical example that explores the potential of games to strengthen community responses to DV through encouraging their players to respond more effectively to victim-survivors. As a new and exciting area of research which feedback received from DV workers and game designers suggests may have great potential, I suggest future directions for this research, through further developing the *Hannah* game prototype and making it available to the public, and through continued development of the engine created to develop the game (*Hannah Engine*). It is hoped that together with this research and the feedback received during the evaluation process, increasing ease of access to the *Hannah Engine* will encourage and inspire game designers, academic and domain experts such as professionals and those with lived experience to work together

to continue to explore the application of social empathy to game design and create their own deep games that are designed to encourage positive social change across a variety of topics.

Context: Domestic Violence

I have previously explained my commitment to wider ranging and more effective responses to DV and how the development of *Hannah* for this project is one such effort. The project required that I develop a greater understanding of DV research evidence and particularly what is helpful for victim-survivors living with DV and what can support them to move forward. To develop a new response by designing a game application for players who could be family and friends of victim-survivors required a theoretical understanding of how social empathy is acquired by individuals and knowledge about how it could be translated into game design. In this way the project draws together and integrates knowledge of game design, social science, and social work knowledge about social empathy and DV. The first part of this section presents relevant knowledge and evidence about DV which has informed the focus and approach to the game design.

Domestic Violence in Australia

Domestic violence (DV) is an ongoing pattern of abusive and controlling behaviours, where a person attempts to systematically control and dominate another with whom they have or had an intimate relationship. The impacts of this control and domination also extend to other family members, such as children, and others close to the victimised partner.

> *"Domestic violence refers to acts of violence that occur between people who have, or have had, an intimate relationship. While there is no single definition, the central element of domestic violence is an ongoing pattern of behaviour aimed at controlling a partner through fear, for example by using behaviour*

which is violent and threatening. In most cases, the violent behaviour is part of a range of tactics to exercise power and control, and can be both criminal and non-criminal"

(Council of Australian Governments, 2010)

The COAG (2010) government definition of DV published above reflects the understanding that DV is about the abuse of power and control in an intimate relationship, with a contemporary gender-neutral stance which acknowledges that heterosexual women can also be perpetrators, and that DV also occurs in gender diverse and non-heterosexual relationships. Whilst DV can be experienced by women, men, and gender-diverse folk, research has identified that the vast majority of those reporting the type of "intimate relationship" violence that the COAG definition of DV discusses are women experiencing violence from male partners or ex-partners (Sutherland, 2015; Bagshaw and Chung 2000). Such violence is also often referred to by other terms including Male Partner Violence (MPV) and Intimate Partner Violence (IPV). However, as DV is a term widely understood and used in the Australian community, including in the COAG definition above to refer to such violence, I have chosen to use the term DV throughout this exegesis and creative production, which explores the experiences of women experiencing violence from male partners or ex-partners.

Suellen Murray's (2011) analysis into Australian Public Policy around DV indicates that DV was largely unnamed in public policy prior to the 1970's. DV researcher Donna Chung (2015) writes that during this period, DV was generally considered to be being addressed by "talking therapies for people seen as capable of change" (Chung, 2015, p.138).

However, Chung writes that this perspective began to shift as feminist groups argued that the cause of DV was the "patriarchal society [that] gave men personal and public power over women" (Chung, 2015, p.138). Murray's (2011) work discusses how feminist groups were integral to the evolution of women's refuges, starting with *Elsie Refuge* in

Sydney in 1974, where members of a feminist group broke into an unoccupied house and declared it a safe haven for women and children who were experiencing DV (Laing, 2001). Murray (2011) highlights the importance of the feminist refuge movement to DV policy in Australia, suggesting that it was the result of the "campaigns and lobbying of the women's refuge movement" (Murray, 2011, p.6) that produced a greater awareness of the seriousness of DV and its impact.

This greater awareness ensured that DV was a named policy issue and that it was beginning to be discussed at a governmental level (Murray, 2011, p.16). In response to this increased awareness, Australia introduced legislative reforms such as Violence Restraining Orders, which focused on the protection of women from further violence, primarily physical violence at the time. These early Australian responses to DV focused on the times of crisis for female survivors and were intended to offer protection to women from further violence. Whilst this demonstrates that the government was willing to begin to respond to the prevalence of DV in society, these responses did not often meaningfully consider the need to prevent violence from occurring in the first place.

In the 1980s however, there was a move towards exploring the role of education and prevention to address DV, and the Australian Government began implementing public awareness campaigns (National Council to Reduce Violence against Women and their Children 2009a; Murray and Powell, 2009). The first educational campaign to raise awareness of DV was introduced nationally in 1987 by the Hawke Labor Government (Murray, 2011, p.123). These awareness campaigns were generally delivered over a short time frame and focus on a very specific area of DV such as physical abuse, resulting in a lack of long-term access to these materials. For example, the national campaign *"Violence Against Women – Australia Says No!"*, a 2004 Australian Government Campaign against Domestic Violence and Assault against women (The Age, 2004) was a short-term campaign that focused on the physical and sexual abuse elements of DV but did not address or raise awareness of other forms of abuse such as emotional, social, and

economic abuse (Domestic Violence and Incest Resource Centre, 2006; Murray and Powell, 2009).

Violence against anyone is not acceptable, and whilst anyone can experience DV, the most common form of DV reported in Australia is women experiencing violence from a current or former male partner (Australian Bureau of Statistics, 2017). Research undertaken in 2015 by *Our Watch*, a multi-jurisdictional government initiative suggests that gender inequality drives a social context in which violence against women occurs through individual attitudes and relationships and systemic social, political, and economic disadvantage (Our Watch, 2015). *Our Watch* was established in 2013 and aims to "embed gender equality and prevent violence where Australians live, learn, work and socialise" (Our Watch, n.d., para. 1). *Our Watch* has aimed to ensure there is an ongoing evidence-based approach to the prevention of male violence against women, including the creation of an awareness campaign titled *Change the Story* (Our Watch, 2015) that focuses on promoting gender equality to reduce the prevalence of male violence against women.

Whilst campaigns such *Change the Story* aim for longer term cultural change, additional and continued awareness campaigns that target different demographics are needed to raise awareness of DV, promote equal and respectful relationships and non-violent norms, and to strengthen support networks for those experiencing DV. This is particularly important, as there was no overall improvement in the number of instances of DV between the 2012 and 2016 *Personal Safety Study* undertaken by the Australian Bureau of Statistics in relation to women reporting violence from a current or previous partner in the 12 months prior to the survey (Webster et al., 2017), and DV related sexual assault increased by 13% in 2020 (Australian Bureau of Statistics, 2021).

DV Victims and Survivors

To ensure that resources designed to strengthen support networks for those experiencing DV are as relevant and useful as possible, it is important that the terminology used reflects an understanding of research in this area. Traditionally, women who had experienced DV were often referred to as *victims*. This term was utilised by feminist activists to help make it clear that DV was not the fault of the woman subjected to it (Chung, 2002), and utilising the term was a way to prevent women from blaming themselves for the DV they had experienced in their relationship, and for feeling guilt regarding the loss of the relationship. Acknowledging victim status in this situation was also a way of utilising legal frameworks to exhibit that DV was a crime, and that someone experiencing it should have access to the same legal support as someone who was assaulted by a stranger (Mills, 1996; Chung, 2002).

However, the term victim was criticised for positioning those experiencing DV as 'passive' and in response to this, researchers such as Kelly et al (1996) and Anderson and Gold (1994) took an empowering approach to terminology, suggesting the term *survivor* be used to replace victim. Kelly et al (1996) and Anderson and Gold's (1994) work posits that rather than physical appearance, or the physicality of the abuse experienced, the term survivor recognises the capacity of women to survive their experiences of DV during and after the relationship. For those who are living in a relationship where there is ongoing DV, the term survivor provides a more inclusive umbrella as it recognises their agency in the situation.

Chung's (2002) research into the terms victim and survivor suggests that both terms can be valuable to those experiencing DV. Chung (2002) highlights how some of those who access support services utilise a victim-survivor narrative to help identify and define their experiences. She identifies how some of those who have safely exited a relationship may

use both terms to describe themselves and their experiences, as they discuss that when they were in the relationship, they felt disempowered as a victim, but through their ability to survive the situation and hopefully eventually break free, they became empowered, becoming a survivor. An understanding of this terminology is useful to those supporting someone experiencing DV, as if a survivor chooses to refer to themselves as such, someone referring to them as a victim could inadvertently make them feel disempowered, based on the way in which the survivor sees their own victim-survivor narrative and their journey to safety.

Continuing to develop the importance of empowering victim-survivors to self-identify with the terminology that they choose is also highlighted in Kaitlin Boyle and Kimberly Rogers' (2020) study, which explores self-identification of terminology used by college students who experienced sexual assault. Boyle and Rogers' study examined how self-identification with the terms victim and survivor relates to individual's self-reported feelings of distress. They found that whilst most respondents identified with both victim and survivor identities, these findings are varied across race and gender categories, where men identifying as victims reported more positive emotional states than those identifying as survivors, and women of colour identifying as survivors reported reduced emotional distress than those identifying as victims.

An understanding of this terminology and research surrounding it can be very useful to those supporting someone experiencing DV, as if a survivor chooses to refer to themselves as such, someone referring to them as a victim could inadvertently make them feel disempowered, based on the way in which they self-identify with the terminology, and potentially the stage in which they see themselves in their own victim-survivor journey. Throughout this piece, I have referred to those who have experienced DV as victim-survivors with the goal of reflecting both identities, and I will discuss later in

this exegesis how this terminology and a victim-survivor narrative has been explored in my creative work.

Coercive Control

Although physical and sexual elements of DV have traditionally been the focus of awareness campaigns and DV policies in Australia, reports from victim-survivors and the growing body of evidence demonstrates that the impacts of non-physical forms of abuse should not be underestimated. The prior focus of awareness campaigns on physical and sexual violence can contribute to uncertainty about what constitutes DV. For example, DV involving coercive control and economic abuse without physical assault might not be viewed as DV by many members of the public. Research with young people has indicated a narrow view of DV, with Anita Harris et al (2015)'s *Young Australian's Attitudes Towards Violence Against Women* report revealing that young Australians aged 16-24 demonstrated a lower-level understanding of non-physical forms of violent behaviour than the older age groups (Harris et al, 2015), with around 50% of males in the 16-24 age group agreeing that it was okay to use electronic tracking methods on a partner without their consent, along with 40% of women in this age group. In the 35-64 age group, this was reduced: only 35% of men agreed that electronic tracking without consent was acceptable (Harris et al, 2015).

The significant impact of non-physical abuse has been highlighted in research by Evan Stark (2007) who suggests that some of the non-physical experiences of control identified by some victim-survivors of DV closely resemble kidnapping or indentured servitude (Stark, 2007). Stark refers to such behaviours using the term *coercive control*. Stark's (2007) research identifies coercive control as a pattern of behaviour used by an abuser with the intent of removing the victim's liberty or freedom, dramatically affecting their self-esteem, and stripping away what Stark refers to as an individual's "sense of self"

(Stark, 2007, p.209). The abuser uses strategies such as isolation, degradation, mind-games, and the micro-regulation of everyday life to force those experiencing the control to live every aspect of their life according to the abuser's unpredictable view of how their partner should behave (Stark, 2007). Stark's work suggests that the isolation and control experienced by victim-survivors of coercive control may be the "most devasting form of abuse" (Stark, 2013, p.18) as it undermines the individual's capacity for independent decision making. Coercive control is a common form of DV, and Stark's work suggests that 60-80% of victim-survivors who seek support report coercive controlling behaviours both with and without accompanying physical violence (Stark, 2013).

Stark's conceptualisation of coercive control has been incredibly influential in this area, with many researchers such as Kristin Anderson (2009) and Jeff Hearn (2013) continuing to build on this work. Anderson's (2009) research further develops the focus on gender inequality in Stark's (2007) research and suggests that existing structural inequality makes women more vulnerable to control by men. In their work, Anderson (2009) identifies the micro-regulation of femininity as a key element of coercive control, discussing how gendered expectations work towards promoting men controlling women. Anderson (2009, p. 1448) discusses the example of the gender expectations of walking through a door - with the "performance of masculinity" containing elements of control, such as opening the door, and the "performance of femininity" containing passive elements - walking through the door that was held open. Anderson's work states that "the doing of gender involves rituals that position men as dominant and women as subservient, and this facilitates men's ability to control women'' (Anderson, 2009, p. 1448).

In considering the development of a help seeking approach aimed at friends and family, it is important that the game strongly conveys that DV is more than physical and sexual violence, and that aspects such as coercive control are severe in their impacts. This game needs to convey an understanding of DV as often a pattern of abusive and controlling

behaviours with physical and/or non-physical elements. It was therefore important to provide a means of indicating the patterns and changes of the abuser's actions and its impact on the victim-survivor to those who would be playing the game. Walker's (1980) Cycle of Violence model is demonstrated in Figure 1 and provides a visual representation of the dynamics of some experiences of abuse, and describes how the tactics of the abuser can change, and can include physical and non-physical elements of DV, such as coercive control.

Figure 1:

Walker's Cycle of Abuse

The image *Walker's Cycle of Abuse* as depicted by Dale Bagshaw from *Preventing domestic, family and intimate partner violence. Why is it men's business?* By D. Bagshaw, 2018 is unable to be reproduced here due to copyright restrictions.

The content can instead be accessed via http://www.catalystfoundation.com.au/wp-content/uploads/2-PRESENTATION-AT-MENS-RETREAT.pdf

Note: This diagram demonstrates Walker's Cycle of Abuse as depicted by Dale Bagshaw. From *Preventing domestic, family and intimate partner violence. Why is it men's business?* By D. Bagshaw, 2018. http://www.catalystfoundation.com.au/wp-content/uploads/2-PRESENTATION-AT-MENS-RETREAT.pdf Copyright 2018 by Dale Bagshaw.

Walker's model has been criticised for presenting a cyclical notion of DV and how it does not offer a theoretical underpinning as it is mostly descriptive. However, it has been adapted for use in building the game to provide players with an understanding of the shifting dynamics of DV. It is intended to highlight patterns and changes rather than being presented as a cycle. Whilst the cyclical notion has limitations the descriptions of different aspects of DV in clusters or patterns which indicate the perpetrator's intent and entrapment are useful for inclusion in the game. For example, the *tension building* phase demonstrate a heavy use of non-physical elements of abuse and coercive control such as "put downs" and threatening behaviour (Walker, 1980).

The patterns outlined by Walker (1980) can demonstrate to players how living with a DV perpetrator can be very confusing for those experiencing it. For example, the perpetrator may not be violent and abusive all the time, as indicated in what Walker (1980) calls the *Honeymoon* phase, where the perpetrator may seem repentant, apologise, and try to justify their behaviour. These changing behaviours and promises from the perpetrator can be very confusing for those experiencing abuse, as the dramatic shift in the abuser's actions may make it seem as though they are truly trying to change their behaviour by acknowledging them and seeking support to improve them. This in turn can lead to those experiencing DV to agree to stay, or return to the relationship, hopeful that things will change in the future. Whilst the notion of the experience being cyclical may not reflect the reality of the patterns of abuse and coercive control for all individuals, it offers a way of explaining the dynamics that can be useful in helping victim-survivors and their supporters understand the changes in their fears, emotions, reactions, and self-perception over time.

Support Networks

Friends and family members are very important in a DV situation and victim-survivors will often seek practical and emotional support from informal support networks where they are available. Regarding practical support, Sutherland (2015) notes that gendered financial disadvantage greatly affects Australian women. As such, women may have difficulty accessing the finances required to support themselves and their families when attempting to break free from abuse. There is also a greater demand than supply of emergency DV accommodation for women trying to access refuges. In a recent report, the *Australian Institute of Health and Welfare* (2020) stated that family and domestic violence is the leading cause of homelessness for women. *Women's Community Shelters*, an Australian organisation that provides crisis accommodation to vulnerable women and children escaping DV explains that they are unable to provide accommodation for everyone who needs it, explaining that "one in two women across Australia who seek a bed in a crisis shelter are turned away every night, mostly due to a lack of space" (Women's Community Shelters, 2020). Challenges such as these mean that many victim-survivors will often seek practical support, such as accommodation and/or financial support from friends and family.

Family and friends have a unique opportunity to provide emotional support as they are often the first to be made aware of abuse (Ingram, 2007; Parker, 2015). Cho et al's (2020) study into the help-seeking behaviours of victim-survivors suggests that informal support networks provide "instrumental support in the initial stages of violence" (Cho et al, 2020 p.4562). It is important that informal support networks respond to learning about abuse in an informed manner, as Janet Fanslow and Elizabeth Robinson's (2009) study into victim-survivor help seeking behaviours further confirmed this, with one of the main barriers to break free to the abuser identified as unhelpful responses from those close to them about their experiences of DV. Research by Angela Moe (2007) and Narae Shin and

Eonju Park (2020) suggests that unconditional, non-judgemental support is the most valuable to victim-survivors and can help them realise “they deserve better” and become “empowered” to break free from their abuser (Shin and Park, 2020 p.13). Shin and Park’s (2020) work also suggests that receiving positive support from informal support networks is one of the most influential factors towards encouraging victim-survivors to access support from formal services such as police, legal and DV services.

To provide the type of informed and non-judgemental support that victim-survivors found the most useful, informal support networks need to have a good understanding of DV and its impacts, however they face many challenges in developing this understanding. As well as the lack of public awareness around what non-physical DV might look like discussed previously, family and friends may have a lack of understanding about the complex nature of abuse (Shin and Park, 2020), or a lack of access to resources to help them support victim-survivors (Latta and Goodman, 2011).

I have previously discussed how abuse such as coercive control can dramatically affect the self-esteem of victim-survivors. This idea is supported by Cathy Humphreys and Ravi Thiara (2003) who found that exposure to abuse from an intimate partner increased the risk of developing mental health conditions including anxiety, PTSD, and depression. These challenges can lead to victim-survivors feeling as though they, or their experiences are not worthy of accessing support (Parker, 2015). Even where victim-survivors recognise abuse, they may hide their experiences from friends and family due to feeling a strong sense of shame or fear of being blamed for the abuse (Moe, 2007; Parker, 2015). Humphreys and Thiara’s (2003) and Moulding et al.’s (2020) research into victim-survivors’ mental health found that many of those who sought help from the mainstream health system, which adheres to a “gender-neutral, universalistic approach to mental-illness” (Moulding et al., 2020, p. 1078), reported feelings of being blamed for the abuse they had experienced and experienced a lack of recognition that the trauma they were

experiencing related to the abuse. (Humphreys and Thiara, 2003; Moulding et al., 2020). These negative experiences of the mainstream health system are supported by Sally Marsden, Cathy Humphreys, and Kelsey Hegarty's (2021) study which found that victim-survivors who sought out psychological treatment following abuse often experienced damaging effects from this seeking this support. As well as increased feelings of being responsible for the abuse (Humphreys and Thiara, 2003), these damaging effects included feelings of being re-traumatised, and an unwillingness to seek further support (Marsden, Humphreys and Hegarty, 2021).

With a more developed understanding of what constitutes DV, family and friends can help identify the actions of the abuser as abusive, and can help rebuild the self-esteem of victim survivors, developing their understanding that they are not at fault for what has happened to them. However, whilst this type of support can be very useful to those experiencing the abuse, it needs to be undertaken carefully and slowly. Research by Lyndal Khaw and Jennifer Hardesty (2009) suggests that breaking free from abuse is a period of increased danger for victim-survivors, with many of those attempting to leave at risk of experiencing severe or even fatal violence. Often those experiencing DV will return to their abuser several times before finally breaking free from the relationship (Khaw and Hardesty, 2009). Research by Renate Klein (2012) suggests that attempting to pressure victim-survivors to leave the relationship or access support services when they are not yet ready to do so can result in those experiencing DV feeling dismissed or blamed, and may affect their willingness to disclose further abuse, to seek support services (Klein, 2012), and may result in them remaining in a relationship with the abuser (Khaw and Hardesty, 2009). Only when friends and family are made aware of the danger and challenges involved with escaping abuse, which results in an elevated risk of danger to victim-survivors, can they empower victim-survivors to make their own choices whilst ensuring that will be supported without judgement.

Whilst there are several detailed online and print-based information pamphlets that provide practical advice to support those experiencing DV (Domestic Violence Resource Centre of Victoria [DVRCV], n.d.-a; Queensland Government, 2016; Australian Government Department of Social Services, n.d.; Domestic Violence Prevention Centre, n.d.), many informal support network members are not aware of these materials or do not access them.

In 2011, as part of a study into the subjective experiences of support networks, Rachel Latta and Lisa Goodman conducted interviews with friends and family who had provided support to victim-survivors. These support networks reported a lack of resources available and that they had difficulty locating appropriate services for victim-survivors (Latta and Goodman, 2011). Latta and Goodman's survey found that even where resources were available, the information on how to access these services was not well disseminated, identifying that only two of the survey participants were aware of these resources, and they had previously worked within the formal support system. As well as allowing them to be better informed to provide support to victim-survivors, access to support resources can help family and friends understand the potential impacts that providing support may have on them. Research by Alison Gregory et al (2017) and Parker (2015) suggests that informal support networks may experience negative impacts on their own health and wellbeing when providing support, including feeling "exhausted, frustrated and lonely" (Parker, 2015 p.37) and even being directly threatened and intimidated by the perpetrator (Gregory et al, 2017).

As 1 in 4 Australian women have experienced physical or sexual violence by a current or former partner since age 15 (Australian Bureau of Statistics, 2017), it is likely that members of the public already know someone who is experiencing or will experience DV in the future. Webster (2009) identifies improving access to resources and support systems for those experiencing DV as vital to addressing the prevalence of DV in society,

and providing opportunities for friends and family members to access and engage with support resources that provide them with an opportunity to develop an understanding DV and the impacts and challenges faced by victim-survivors would work to strengthen the support that current or future members of informal support networks are able to provide when they are made aware of abuse.

Social Empathy

To guide and explore the creation of effective support resources that engage and raise awareness of some of the impacts of non-physical DV and the challenges involved with breaking free from abuse, this section of the exegesis explores how empathy-based education has been previously utilised in areas such as social work. Empathy is understood to be foundational for helping professionals such as teachers, health care professionals and social workers to understand, engage and effectively support those they are working with in practice (Meyers et al, 2019; Hellman et al., 2018; Eriksson and Englander, 2016).

Segal's (2006 and 2011) research identifies a specific type of empathy that she refers to as Social Empathy. Segal's work moves beyond empathy as an individualised notion to explore how feeling empathy for others in different circumstances can produce change at a community or social level. Segal (2011) defines the term social empathy as "the ability to understand people by perceiving or experiencing their life situations" including the "structural inequalities and disparities" that they experience (Segal, 2011, p. 266-277). Segal (2006 and 2011) describes social empathy as a particularly powerful form of empathy that when invoked, can encourage individuals to work towards positive social change.

Segal (2011) argues one of the most effective ways to change existing structural inequalities is by promoting social empathy, providing people with opportunities to gain a deep knowledge of a diverse range of subject positions, life situations, and *empathic insights* of the lives of those who are oppressed. Segal suggests that when social empathy is incited, it has the potential to create a sense of social responsibility amongst those experiencing it (Segal, 2011). This makes social empathy particularly powerful as it could encourage the application of this empathic awareness to actions that could affect public policy, social movements, or other pathways to justice, and could encourage individuals to identify and take their own steps towards creating social change (Segal, 2011). Sal Meyers et al's (2019)'s research into empathy in teaching suggests that where teachers feel social empathy for those from low-socio economic backgrounds, they are more likely to take action to advocate for, and attempt to remove barriers faced by students from this group, resulting in increased academic outcomes (Meyers et al., 2019). Similarly, Ann Hellman et al's (2018) exploration of empathy in nursing found that where social empathy for low socio-economic groups is promoted in nursing students, they are more likely to advocate for policies that promote population health for this group (Hellman et al., 2018).

To encourage the promotion of social empathy, Segal suggests that three components must be met. These are the inciting of individual empathy, a contextual understanding, and a sense of social responsibility. Importantly, Segal states that the process of inciting social empathy through these components is not always linear, and the relationship between them is "mutually reinforcing" (Segal, 211 p. 269). The first condition, individual empathy, is described by Segal as consisting of three parts: affective response, cognitive processing and conscious decision making. Segal describes affective response as "an involuntary physiological and emotional reaction" (Segal, 2011 p.267) that occurs when we are exposed to another person's feelings, expressions, and gestures. Cognitive processing is defined by Segal (2011) as the ability of an individual to understand and

process the meaning of this affective response, using skills such as perspective-taking and emotional regulation. Conscious decision-making is identified by Segal as "taking empathic action based on the collected information" (Segal, 2011 p. 267).

The second condition Segal identifies as being required to incite social empathy is contextual understanding. Segal (2011) explains that individuals must be provided with an understanding of the specific inequality and disparity that is or has been experienced by others. She states that "context and accurate information are everything" (Segal, 2011 p.270), and gives the example of a picture of needles being inserted into a hand. On feeling empathy for the owner of the hand, a person is likely to view the event as a negative one for the person and may have a strong urge to stop the owner of the hand experiencing the needles. But Segal discusses how if someone was provided with a context for this image, such as being told this person was undertaking acupuncture to alleviate existing pain, there would not be an urge to help stop the needles being inserted. It is only when we are provided with the context for this event that we are able make an accurate empathetic assessment of the situation.

The final condition is that the individual embraces the importance of social responsibility, or the need to become socially involved. Segal (2011) posits that when the first and second conditions have been successfully met, or "when individuals obtain an accurate empathetic perspective about the conditions and needs of others, they are more apt to feel social responsibility" (Segal, 2011 p.271). This means that if individual empathy is incited through relevant, informed, and accurate context, individuals can potentially feel responsible and empowered to participate in affecting positive social change (Segal, 2011; Hellman et al, 2018; Meyers et al, 2019).

Therefore, the development of the *Hannah* game is built on a foundational assumption that it must create social empathy in the player for them to feel a sense of responsibility to offer positive support to victim-survivors. In the following section, research which

deployed strategies aimed at building empathy about victim-survivors experiences are reviewed which provide further direction for the development of the *Hannah* game.

Empathy Narratives

Segal states that hearing people tell their own stories are "forms of empathic efforts" (Segal, 2011, p. 273). She discusses how "witnessing and telling people's stories" is one of the simplest ways to expose people from different groups to each other's living situations, building proximity, similarity, and familiarity with these stories, which Segal posits are "the ingredients necessary for empathy" (Segal, 2011, p.274). In this sense, these personal stories or narratives can work as a part of the context in the social empathy model, acting as a medium to incite individual empathy in those engaging with them. There are many existing examples of using narratives to invoke empathy for those who have experienced DV or sexual assault, including approaches explored by Susan Ayres (2014) in the law classroom, John Foubert and Johnathan Newberry (2005) in response to rape prevention, and Washington State Coalition Against Domestic Violence (2000) around developing an understanding of the social barriers encountered by someone attempting to break free from abuse.

Susan Ayres is a law professor whose work explores the potential of taking a narrative approach to invoking empathy amongst law students exploring DV. Ayres' explored the use of personalised narratives in her law classroom and suggested that students "learn more - or perhaps *feel* more" (Ayres, 2014, p. 333) about the impact of the effects of DV on those experiencing it when they are engaged with narrative accounts of DV experiences, rather than simply examining facts and figures. Ayres describes how one of her students was able to make a much deeper connection with her learning through the narrative context, with the student stating that "when she read assigned cases describing

violent abuse, she was almost indifferent" to the abuse, but that when the student was provided with narrative poems describing such abuse, she stated that she actually *"felt* the dramatized punches and bruises" (Ayres, 2014, p. 333).

Foubert and Newberry undertook a study that analysed an empathy-based peer education rape prevention program titled *The Men's Program*. *The Men's Program* was undertaken by university fraternity men and was designed to reduce the instances of rape through inciting empathy for rape victim-survivors (Foubert and Newberry, 2006). The program used a film to expose this group to the personalised recounts of males who had been sexually assaulted. After completion of the program, participants overwhelmingly self-reported an increase in empathy towards rape survivors and a greater understanding of how it might feel to be raped (Foubert and Newberry, 2006). As well as inciting individual empathy, the results of Foubert and Newberry's study suggests that the program may also have been successful in inciting social empathy, as many of the participants in this study self-identified that they had experienced lasting attitude and/or behaviour changes (Foubert and Newberry, 2006). Further to this, Langhinrichsen-Rohling et al's (2011) study also suggested that participants reported that after engagement with *The Men's Program* they were more willing to personally intervene to help prevent sexual assault in the future.

In 2016, Domestic Violence researchers Madelaine Adelman, Karen E. Rosenberg and Margaret Hobart analysed a card-based facilitator supported simulation (in their analysis they use the term "game" and "simulation" interchangeably) created by the *Washington State Coalition Against Domestic Violence* (WSCADV) known as *In Her Shoes (WSCADV, n.d.). In Her Shoes* aimed to incite empathy in its players by exposing them to some of the complex and dynamic personalised experiences of someone experiencing DV whilst being guided by a trained facilitator. By doing so, *In Her Shoes* allowed participants to identify some of the social barriers encountered by those experiencing DV whilst

attempting to access safety and justice. In their analysis, Adelman, Rosenberg and Hobart (2016) explored the potential of *In Her Shoes* to incite social empathy in its players. They posit that simulations like *In Her Shoes* can provide an engaging context for personalised narratives and suggested that they could therefore potentially incite social empathy in those engaging with them. They argue for the pedagogical benefits of simulation type experiences specifically when "learning about domestic violence" (Adelman, Rosenberg and Hobart, 2016 p. 1459) and recommend that educators with a goal of providing students with critical perspectives on DV consider integrating simulations such as *In Her Shoes* into their teaching.

The research discussed above helps to demonstrate that, in line with Segal's concept of social empathy, engaging personalised narratives such as stories, films and simulations can help incite empathy, particularly with regards to DV and sexual assault. Further to this, studies such as those undertaken by Foubert and Newberry (2006) and Langhinrichsen-Rohling et al (2011) suggest that invoking empathy in the participants of The Men's Program could result in lasting attitude or behaviour changes. Inspired by the kind of approaches detailed above, my own creative work *Hannah* draws on social empathy approaches based on the evidence of effectiveness shown in these narrative contexts but will uniquely explore the potential of applying social empathy to the digital gaming medium. In the next section, I will discuss the potential of the immersive and interactive nature of digital games to uniquely engage their audiences in such narrative contexts, together with their ability to communicate information and skills to their players.

Context: Digital Games

Games Engage and Immerse

The most recent Digital Australia Report noted that games are a common part of Australian life, with most Australians regularly using devices such as computers, mobile phones, game consoles, tablets, and handheld games devices to play games. (Brand et al. 2019). Game designer Brenda Romero (previously Brenda Braithwaite) suggests that some of the popularity of games may be due to the way in which these engaging fictional worlds are able to place players *inside* an experience, allowing them to become a part of the experience itself, rather than a passive observer (Braithwaite, 2009). Jesper Juul's (2005) book *Half-Real* identifies that games provide a unique opportunity for their designers to build and create an engaging fictional world that can deeply immerse their players.

Segal (2011) argues that successfully inciting social empathy requires the inciting of individual empathy, together with an "understanding of other groups' contexts and surrounding social conditions, supported by a commitment to cooperation and social responsibility" (Segal, 2011 p. 269). Personalised narrative recounts from those who have experienced DV or sexual assault have been suggested to be useful in inciting individual empathy in those when created in traditional media such as literature and film (Ayres, 2014; Foubert and Newberry, 2006; Adelman et al, 2016). Segal herself describes how technology enables us to "connect with people far away, share ideas and tell our stories" (Segal, 2017 p.171) and invites the use of technology to incite social empathy. In this section, I explore several theories that suggest digital games may provide opportunities for their players to develop what Segal (2011) describes as a "contextual understanding" of the life experiences of those for which empathy is to be incited, through the way in

which they are able to deeply immerse and engage their players in such personalised narratives.

Games Communicate Information

When discussing the unique nature of digital games, Toby Smethurst and Stef Craps (2014) suggest that the element of *interactivity* is "the most commonly referenced characteristic that separates games from other media" (Smethurst and Craps, 2014, p. 277). In this context, Smethurst and Craps refer to *interactivity* as the idea that games require some effort, or active engagement from a player to progress (Smethurst and Craps, 2014, Juul, 2003). This might be the player tapping their screen to choose a dialog option or controlling the motion of a character inside a game using a game controller. However, today many other forms of media regularly utilise game-like elements, such as television shows that allow the viewer to select between certain options using their remote. Thomas Rousse (2012) posits that there is a further element to interactivity which makes most games stand out from other media, one which he identifies as *reactivity*, or "the procedural responses characteristic of the majority of video games" (Rousse, 2012).

Rousse's identification of the term *reactivity* refers to the way in which the game world has the potential to actively change in response to the user as they play the game. Smethurst and Craps note that novels are static text -- the stories and situations that occur inside the novel cannot be affected directly by the reader. Games, however, have the potential for the actions of the player to influence the player's experience of the game in some way (Smethurst and Craps, 2015, Rousse, 2012). This may be through the input of a button press making an in-game character jump, or the player's choice of which direction to go in a game dramatically changing the player's experience; for

example, when making the choice to travel a shorter distance through a dark and dangerous looking forest or taking a much longer route through much safer terrain. If this situation were to occur within a novel, the choice of which direction to go in would always be made by the author and not by the reader. Smethurst and Craps (2014) posit that this concept of reactivity can be taken even further to acknowledge the way in which both the game and players themselves *react* to the experience: the game reacts to the player choices, and the player reacts to the game world. Smethurst and Craps (2014) refer to this process as inter(re)activity, or the inter(re)activity feedback loop.

When discussing inciting empathy, Segal (2011) posits that providing individuals with an opportunity to undertake conscious decision making, or the chance to take empathic action based on the information and knowledge they have acquired is an important element in inciting empathy. Not only could inter(re)activity make games a particularly powerful tool for engaging players, but the way in which it facilitates the game world to respond to the player's actions could provide players with an opportunity to practice what Segal (2011) calls taking empathic action. Such opportunities could encourage players to carefully consider the information and knowledge conveyed through the game's design as they make in-game choices that affect the game world.

Due to the engaging nature of elements such as inter(re)activity in digital games, the potential of utilising games as a context for knowledge transfer, or to communicate information, has been explored since the early days of game development and is supported by education researchers such as James Paul Gee (2003). Through a concept he calls situated cognition, Gee (2003) describes that embedding information to be taught inside a relevant context, such as a video game or simulation, provides players with a more in-depth understanding of the information communicated (Gee, 2003). As an engaging medium that can be created to resemble any location, time period or situation, Gee proposes that games are able to provide an immersive context for this learning that

is not bound by the traditional limits of the classroom or other pedagogical experiences. Gee's work has been built on by education and games researchers Nichola Whitton (2009), Chad Habel and Andrew Hope, (2018) and Katrin Becker (2005 and 2017). Their work suggests that it is not necessary for a game to be designed specifically for education and learning purposes to facilitate the type of learning described by Gee, and between them identify several educational elements and pedagogical theories present in existing commercial games.

When discussing games for learning, Dimitrios Karagiorgas and Shari Niemann (2017) explain how this capacity of games to be used for education purposes has led to two categories of game design elements being used for learning purposes: gamification and serious games (Karagioras and Niemann, 2017). Gamification is the process of applying game-like elements such as badges, levels or points to a non-game context, such as a university course or a training exercise in an attempt to motivate individuals to continue to engage with the activity, such as their learning. Antonia Ypsilanti et al (2014) explain how serious games differ from gamification, in that they are complete virtual worlds specifically designed to allow players to engage with situations that they may not otherwise experience. Engaging with this situation in the context of a serious game allows the player to increase their awareness of a specific topic, and/or to acquire new knowledge and skills (Ypsilanti et al, 2014). In their research exploring the effectiveness of serious games, Ypsilanti et al explain that serious games promote learning in a unique manner, where the design of the game means that simply through playing, the player "creates cognitive links with real-life situations", allowing them to make relevant associations between the game and the real world, and promoting intrinsic learning (Ypsilanti et al, 2014).

Games Influence Players

In his 2007 book *Persuasive Games: The Expressive Power of Video Games*, games scholar Ian Bogost builds on Gee's ideas around the ability of games to communicate information, exploring the idea that design elements such as the rules and processes embodied in a game communicate particular ideologies to their players. Bogost describes this as procedural rhetoric, and explains that through this, games can communicate information and ideas to their players in a uniquely engaging manner. When explaining procedural rhetoric, Bogost takes Gee's (2003) suggestion that games provide an engaging and immersive context to facilitate players to engage with created worlds and experiences, and builds on this, suggesting that what games actually do, is facilitate "meaning and experiences of *particular* worlds and *particular* relationships" (Bogost, 2007 p. 241). Here Bogost explains that the player of a game is only able to experience elements of the game world and relationships that have been created and crafted by the game designer, and through elements such as these limitations, particular ideologies are communicated to the player.

Bogost discusses the design of *America's Army* (US Army, 2002), a first-person shooter game developed by the United States Army with the goal of recruiting prospective soldiers. The player plays as a newly recruited soldier and must carry out the tasks their drill sergeant communicates to them. Should the player deviate from this, for example if they point their weapon at the drill sergeant, the gameplay is interrupted, and the player finds themselves imprisoned. Bogost (2007) explains how the way in which the player's in-game behaviour directly affects their ability to continue playing the game "serves as a convincing procedural rhetoric for the chain of command" in the United States Army (Bogost, 2007 p.78). Rules such as these in the game's design work to communicate the ideologies of the American Army, such as the idea that soldiers must never disrespect, question, or go against a commanding officer.

Interestingly, Bogost's work further suggests that due to the influential nature of procedural rhetoric, games may not need to be designed with particular ideologies in mind to influence their players towards certain ideas.

> *I believe that this power is not equivalent to the content of videogames, as the serious games community claims. Rather, this power lies in the very way videogames mount claims through procedural rhetorics. Thus, all kinds of videogames, from mass-market commercial products to obscure art objects, possess the power to mount equally meaningful expression (Bogost, 2007 preface. ix)*

Here Bogost (2007) suggests that procedural rhetorics may exist in *all* digital games, regardless of the scope and scale of the production. Bogosts explains that even where designers did not consider the procedural rhetoric in their game designs, it exists, and may be influencing players in a method that they did not intend. This makes procedural rhetoric a particularly important and valuable element of game design and if game designers carefully consider the procedural rhetoric present in their game designs, they can ensure this rhetoric works towards supporting the ideas or communicate the information they are indenting to convey to their players.

Particularly relevant to the potential of inciting empathy in a game context is Bogost's suggestion that procedural rhetoric invites the development of games with a "greater and more meaningful coupling with real experience" (Bogost, 2007, p. 244). Bogost argues that the ability of games to employ procedural rhetoric means that they are able to provide players with the opportunity to "empathise with people and situations they might not ordinarily encounter" (Bogost, 2007 p. 239). As such, games are incredibly well positioned to draw players' attention to specific situations, communicate circumstances

around these situations and even encourage players to “begin to make movements to improve it” (Bogost, 2007 p. 332).

Gee’s (2003) definition of situated cognition and Bogost’s (2007) discussion of procedural rhetoric are especially relevant to the consideration of applying social empathy to a games context as these theories work to explain how game designers can build specific worlds and experiences that deeply engage players in personalised narratives and provide opportunities for a more in-depth contextual understanding of their life experiences.

Smethust and Craps’ (2014) concept of inter(re)activity, which describes how a game reacts to player choices, and the player reacts to the game world, suggests that games may be particularly well positioned to allow players to practice what Segal (2011) refers to as conscious decision making, or the act of making decisions or choices in an empathic manner. She explains that undertaking conscious decision making encourages social empathy and leads to individuals taking “empathic action” (Segal, 2011, p.271). Through inter(re)activity, game designers can present players with opportunities to make in-game choices and have those choices affect the game world. Through demonstrating the impact of their choices on the game world, players could be encouraged to undertake conscious decision making, allowing their developing awareness of the perspective of another to help guide their in-game choices.

Bogost’s (2007) work highlights the importance of the rules and processes that designers include in their game, and the need for designers to carefully consider the way in which such decisions can influence and communicate specific ideologies to their players. Bogost’s (2007) suggestion that procedural rhetoric can encourage players to make movements towards improving existing real-world situations is an exciting one, as it suggests that game designers may already have many of the skills and knowledge they need to design and create games that work towards inciting social empathy.

Empathy and Digital Games

The previous discussion demonstrates some of the ways in which the design of games can immerse, engage, communicate information, and even influence their players, and suggests that many game designers may already hold some of the skills and knowledge need to begin using games that explore the intention to incite social empathy. The following section explores how game designers can utilise the immersive and influential nature of games as a context to promote social empathy.

Furthering their work on inter(re)activity, Smethurst and Craps (2014) explore the various ways in which the unique nature of games can be utilised in specific ways to invoke empathy amongst their players. In doing so, they draw upon the work of games scholar James Newman (2002) who suggests that games provide opportunities to engage their player in two different ways of play – referred to as on-line and off-line play. In Newman's (2002) definition, on-line play is when players are in control of the game, and are taking significant actions within the game world, and off-line play refers to when players are not capable of influencing the game state – such as when they are watching predetermined cinematics or watching game loading screens. Smethurst and Craps (2014) suggest that to invoke empathy in their players, game designers need to understand these ways of playing, as empathy is invoked differently in each of these modes of play.

Discussing their theory of invoking empathy specifically in off-line play, Smethurst and Craps (2014) draw upon the work of games researchers Jonathan Belman and Mary Flanagan (2010) who identify a set of key considerations involved when designing games to foster empathy in their players. In this process, Belman and Flanagan suggested a concept they call "empathetic play" (Belman and Flanagan, 2010 p. 10), referring to the state where players are actively encouraged to empathise by inferring the thoughts and feelings of those represented in the game, and looking for similarities between

themselves and characters in the game. Smethurst and Craps (2014) suggest that this form of empathy is focused on raising awareness through narratives and other means and does not specifically involve the use of inter(re)activity to facilitate empathy.

Smethurst and Craps (2014) suggest that this form of empathy could also be incited by other forms of passive media such as film or literature and that it may best describe the type of empathy incited when players are engaging with off-line game experiences. When considering invoking empathy in on-line game experiences, Smethurst and Craps again draw upon the work of Newman (2002), who claims that when players are in control of the action taking place in the game world, they may actually *stop* empathising with the game characters, with the characters potentially disappearing from their mind entirely, as their focus shifts towards the procedural rhetoric of the game, or the rules and processes that they must carry out to play. Whilst this suspension of empathy for game characters initially sounds as though it may be counter-productive towards inciting empathy in players, Smethurst and Craps (2014) suggest that when characters have successfully disappeared from the player's mind, the player is completely immersed in the gameplay, and is the most invested and involved with the game's story and world. It is at this point that players become "telepresent" in the game and are able to identify with the "entire space of the game world" (Smethurst and Craps, 2014 p. 277). Here Smethurst and Craps suggest that as the player becomes a part of the inter(re)active feedback loop, they become so immersed in the game world that they feel as though they are a part of it.

Newman (2002) also suggests that games can be designed to encourage players to switch between on-line and off-line states of engagement as they play. Smethurst and Craps (2014) highlight the potential of games to create specific "rhetorical effects" that can be uniquely achieved by the process of alternating "between these two states of engagement" (Smethurst and Craps, 2014, p. 273) and suggest that the switching

between on-line and off-line modes of engagement can be a productive way to encourage player reflection. For example, a game that forces players to steal an item from an in-game character in on-line play to meet the game's goals, and then later provides opportunities for the player to reflect on the impact of this theft by providing them with off-line evidence of how it affected the emotions and experiences of the in-game character they stole from. Such reflection provides the player with more opportunities to experience another person's feelings, expressions, and gestures, which Segal (2011) suggests can create affective response, the very first thing needed to incite social empathy (Segal, 2011).

Deep Games

> *"I look forward and I see a future in which games... are explicitly designed to improve quality of life, to prevent suffering, and to create real, widespread happiness" (McGonigal, 2011).*

Earlier in this exegesis, I discussed how research by Ypsilanti et al (2014) defines serious games as complete virtual worlds that allow players to increase their awareness of a specific topic and/or acquire new knowledges and skills. In her 2017 book *Making Deep Games*, game designer and academic Doris Rusch discusses the rise of a specific type of serious games which explore profound, thought-provoking, and emotionally diverse experiences and promote awareness of human experience and social change. Rusch suggests the term *deep games* be used to refer to these games, and suggests that through the development of deep games, designers are already harnessing the potential of games to create engaging emotional experiences for their players that have meaning beyond entertainment.

Elude is a 2010 game created by Rusch herself that explores depression. Rusch states that when she designed *Elude*, she hoped that the game would raise awareness of some of the impacts of depression, with the intention of encouraging young adults experiencing depression to seek support. When the player begins *Elude* (2010), they play as a silhouette form of a human character in a dense forest. The player can jump from tree to tree and the goal is for the player to work their way up through the trees to reach the sunlight by jumping onto various branches. Underneath the trees, however, is to be a dark undergrowth with black tentacle-like vines as demonstrated in Figure 2. In my own playthrough of *Elude*, I was constantly drawn to looking at the vines at the bottom of my screen, an omnipresent and constant visual metaphor representing the darkness and insidiousness of depression.

Figure 2:

Elude Gameplay Screenshot

Note: This screenshot taken by the author demonstrates the tree branches and tentacles in the game, *Elude*. Screenshot from *Elude* by Doris Rusch, 2010. http://gambit.mit.edu/loadgame/elude.php Copyright 2010 by Doris Rusch.

Christy Dena's (2009) work on transmedia storytelling suggests that the design options available to those creating games enable many opportunities to convey narrative elements to their players such as through "characters, plot, game mechanics, settings, framing, sound, lighting, spacing, pacing, cursors and code" (Dena, 2009, P.201). In *Elude*, the visual metaphors such as the vines are supported by additional game design elements that work to enhance these messages. Rusch suggests that the immersive experience that is made possible by the inter(re)activity enabled by digital games provides individuals with the opportunity to understand topics such as depression on a deep emotional level (Rusch, 2012), and allowed her as a designer to communicate a deeper understanding of what she refers to as the *inner landscape* of someone struggling with depression (Rusch, 2017).

In *Elude*, as the player works to guide their character from tree to tree to reach the light at the top of the canopy, the black tentacle-vines can stretch from the undergrowth, grabbing the player character and pulling them back down to the lower depths of the trees. This small loss of agency and the set back of the player's progress made in the game so far works as a metaphor to reflect a small portion of the loss of agency and the struggle experienced by those experiencing depression every day. As explored earlier in this exegesis, Smethurst and Craps (2014) suggest that including a shift from on-line to off-line play in a game can positively encourage player reflection, and this was evident in my own playthrough of *Elude*. As the vines grabbed my character and removed the control I had over the game, I was forced to switch from on-line play, where I had full control of my character, to off-line play, as I watched my character pulled to the ground and the screen filled with darkness.

As Rusch (2012) explains, the way in which the game takes control and removes the player's agency without warning was designed to convey that depression is "not a matter of choice" (p. 2). As my agency was stripped away and I watched my character pulled

down, I began to reflect on what I had potentially done wrong in my on-line play to cause this situation. Eventually, I came to realise that the vines pulling my character down would occur no matter how quickly or accurately I played the game. Rusch (2012) describes how despite a player's ability, accuracy or speed playing the game, the game still forcibly removes their control in this manner, a metaphor for the way in which those suffering from depression constantly experience such a loss of agency that occurs through no fault of their own and has nothing to do with their lack of skill or "strength of character" (Rusch, 2012, p.2).

Papo and Yo (Minority Media, 2012) is another game that fits Rusch's (2017) definition of a *deep game.* The game was designed by Vander Caballero and features a young boy who cares for a giant monster as demonstrated in Figure 3. The design of the game was guided by Caballero's experiences with his father, and he explains that developing the game helped him to deal with his own experiences around parental alcohol addiction, and he hoped that it would help others explore their own challenging parent-child relationships (Graft, 2014).

Figure 3:

Promotional art for the game Papo and Yo

Note: This image demonstrates a small boy and a big monster in promotional art for the game *Papo and Yo* by Minority Media, 2012. Copyright 2012 by Minority Media.

Papo and Yo is designed to highlight and convey the strained relationship between the player's character and the monster, a metaphor for the strained relationship experienced by Caballero's own challenging relationship with his father. At the start of the game, the player's character enjoys positive interactions with the monster, who helps the player's character solve the game's puzzles, depicting the dependency that children have on their parents to help them solve the problems they may face. After some time of playing the game in this manner however, the monster character begins to eat frogs that appear in the environment and becomes angry after consuming them, beginning to become violent towards the player character, acting in a way that greatly contrasts the earlier behaviour the player had experienced. Now in the gameplay the player's goal shifts entirely towards finding and feeding the monster a piece of rotten fruit, the only thing that can calm him. When discussing Papo and Yo, Rusch (2017) suggests that when the player is faced with this experience it is at a point in their gameplay when they are already invested in their

relationship with the monster character, and as such are “hopeful that one can possibly cure Monster of his frog affliction to save him as a companion” (Rusch, 2017). This dramatic shift works to highlight the sudden and dangerous events from a personalised narrative experience of someone who was once a child dealing with a parent with an addiction, and the procedural rhetoric created by the rules of the game actually allows the player to *feel* this experience, as their progress stops and they are unable to continue playing the game in the manner that they have been. The rest of the game goals fade away as the player must quickly work to resolve the dangerous situation raised by monster’s anger.

Ethics and Empathy Game Design

Previous sections of this exegesis have focused on the methods that game designers can employ to create games that can engage, immerse, and persuade their players. Bogost’s (2007) discussion of procedural rhetoric in particular highlights just how the knowledge, understanding and perspectives that game designers carry can be implemented in a game design, and can work to influence and persuade players of a particular point of view or opinion, even where this was not an intentional decision by the designer. Due to the influential nature of games, I suggest that those who are designing and creating games have a social responsibility to ensure that they develop a strong awareness of the topics or experiences explored in their game designs when they commence the design process, or they may run the risk of communicating or reinforcing potentially harmful information about such topics or experiences.

Quantic Dream’s (2018) *Detroit: Become Human* is an action-adventure game that contains a depiction of DV that could be considered problematic. Saunokonoko’s (2017) Nine News Australia article discusses concerns around some of the content of the game that

presents imagery of a father perpetrating abuse on his young daughter. Saunokonoko explains that the release of this trailer resulted in the deputy chief of the Australian National Association for Prevention of Child Abuse and Neglect (NAPCAN) requesting that the game not be stocked in Australia. Despite the negative reaction to this topic being explored in a game, the scholarship previously discussed would indicate that it is not the imagery of the DV in the game that could potentially influence negative perspectives towards victim-survivors, but it is the way in which the procedural rhetoric, the inter(re)activity and the player choices are designed to shape and reinforce a specific player experience that could potentially result in some negative views towards victim-survivors.

Detroit: Become Human provides players with opportunities to make decisions that impact the game's story and change their narrative experience. In one chapter of the game the player is put in the position of a humanoid android tasked with caring for a child who is experiencing DV from her father. Like many other parts of the game, this chapter utilises the inter(re)activity loop and provides several potential ways in which the player can experience the narrative events based on their choices and actions.

In my playthrough of the game, I was provided with an opportunity to allow my character Kara to intervene to protect the child from her father's violence. As I chose to intervene, Kara threatened the father with a gun that we had interacted with earlier in the game. In a passive off-line play cut scene, the father attacked my character, knocking the gun from her hand. Suddenly the game switched to on-line play and as demonstrated in Figure 4, I was required to press a series of buttons on my controller in a rapid manner which corresponded with my on-game character physically fighting off an attack from the abusive father.

Figure 4:

Detroit: Become Human gameplay screenshot

Note: This screenshot taken by the author demonstrates the player physically fighting off the abuser in the game, *Detroit: Become Human*. Screenshot from *Detroit: Become Human* by Quantic Dream, 2018. Copyright 2018 Quantic Dream.

I found that when the game presented me with instructions on the screen to press each button rapidly, I did so as quickly as possible. As Smethurst and Craps (2014)'s research into on-line play suggests, my focus in that moment was on achieving the goals that the game had set for me regarding how quickly I could press buttons. In this situation, succeeding at pressing the buttons meant that my character was required to physically fight with an abuser. Following this sequence, the game asked me to press a button repeatedly to pick up the gun again. I failed to press the button quickly enough and the father knocked the gun from my character's hand. At this point the game again switched back to off-line play and showed a cutscene where the father inflicted severe physical violence on my character, before falling to the ground suddenly. Upon falling, the passive cutscene revealed that the child I was tasked with caring for had picked up the gun and had herself shot her father. The passive cutscene continued, showing my character reaching her hand out towards the child and as they flee the scene together.

Through directly showing the dramatic impact of the father's violence on his daughter from the point of view of her caregiver, the game exposes the player to a narrative recount of a child victim-survivor of DV which has the potential to invoke empathy in its players (Segal, 2011). However, the procedural rhetoric employed by the gameplay reveals some potentially problematic elements in this scene regarding DV. During the on-line fight scene, the game provides players with agency and control allowing them to fight off the abuser, however the agency provided to the player by the game here is in stark contrast to the lack of freedom and agency that is experienced by victim-survivors (Stark, 2007). After wounding the abuser, my character, and the child that she cares for were able to flee the scene, and this could imply to players or reinforce existing stereotypes that those experiencing DV could easily gain safety if they, or their support network simply choose to physically fight back.

It is important to note that for many years there has been discussion around the potential of violence in games to promote and glamourise violence. In response to the above content in *Detroit: Become Human*, Pete Saunders, founder of the National Association of People Abused in Childhood stated that "the proliferation of salacious and abusive images" found in video games "is actually encouraging violence and abuse" Saunders (as cited in Yin-Poole, 2017, para. 9). Chairman of the Culture Media and Sport Select Committee for the UK Parliament Damian Collins used this scene from *Detroit: Become Human* to state his case that games should not explore violent themes such as DV. Collins stated that "it's dangerous to plant the seed in people's minds that the way to deal with abusers is to use violence against them" (as cited in Yin-Poole, 2017, para. 17). Collin's concern here is that the scene playing out in this way does not reflect the knowledge that breaking free from abuse is a complex process that often takes several attempts (Khaw and Hardesty, 2009). I suggest that it is not the inclusion of content around DV that could be problematic here, rather it is the way in which the content is represented. Without undertaking research and consultation with experts in areas such

as DV, game designers and writers run the risk of communicating uninformed representations of these issues, that could cause or reinforce potentially harmful views towards those experiencing DV.

Rusch (2017) and games researcher and designer Karen Schrier (2019) suggest that just as many authors and filmmakers undertake research before writing and filming, when developing deep games designed to convey specific knowledge and aspects of a human experience to their players, designers should have an informed understanding of this experience. Rusch (2017) suggests that designers of deep games have a "moral obligation toward those whose experiences [they] aim to convey" (Rusch, 2017 p.144), and suggests designers engage with those who have life experience of such topics and enable their experiences to inform what is being created. An informed collaborative process that enables game designers to work with charities, non-profit organisations and social welfare groups would allow for us to better mitigate potential problematic elements *and* co-create engaging and moving video games that raise awareness of inequalities and disparities in our society, invoke social empathy in their players, and thus help to address these issues in the real-world context.

One such organisation supporting designers to develop deep games is *Jennifer Ann's Group*, a US based charity that supports the creation of games that raise awareness of Teen Dating Violence (Crecente, 2015). It is important to note that violence has been a theme in many commercially released games throughout the years and there has been an ongoing debate around the potential impact of some of these games. When discussing this, the founder of *Jennifer Ann's Group,* Drew Crecente discusses how "so much of the public has been trained to believe video games equal some kind of anti-social behavior" (Crecente as cited in Beresford, 2020). However, Crecente, who tragically lost his own daughter to Teen Dating Violence, explains that organisations such as *Jennifer Ann's Group* work with designers to develop games that do not promote violence,

but are designed to address the harmful impact of violence in society. He explains that it is sometimes very difficult to identify if a relationship is abusive or not, and that games created with the support of the group are designed to help teens understand some of the elements present in unhealthy relationships*. Jennifer Ann's Group* has partnered with the *National Dating Abuse Helpline* and provides contact information for this service throughout its reading material and games. Crecente explains that the *persuasive power* of games means that they have the potential to "actually change somebody's unhealthy attitudes or beliefs" (Crecente as cited in Beresford, 2020, para. 4*).*

The immersive and influential nature of games means that game designers are uniquely positioned to craft game experiences that deeply immerse their players in personalised narratives. This enables them to not only engage with the narrative, but also create emotional experiences in their players (Rusch, 2017) that allow them to potentially *feel* some of these narrative elements, through design choices such as visual and gameplay metaphors. However due to the influential power of this medium, and to ensure that these narratives and game worlds carefully consider the nature of the procedural rhetoric created by their designs, designers have a responsibility to be informed regarding the narratives and situations they are crafting. I suggest that when designing deep games, designers work collaboratively with professionals and those with lived experience throughout the design process and ensure that this knowledge informs all elements of the game's design.

Craft: Interactive Narrative Digital Games

Segal (2017) discusses the importance of perspective-taking to social empathy and describes this as the process where individuals can put themselves in the shoes of someone else. She posits that this perspective-taking is a key element required to incite empathy, but that it can be extremely challenging to do. Segal suggests that often when we think we are taking the perspective of someone else, we may actually still be viewing things from our own point of view (Segal, 2018). Schrier (2015) describes how games are well positioned to help expose players to a perspective that is different to that which they experience every day, and Jenkins (2014) suggests that interactive narratives actively encourage readers to take on the goals of a presented role or character. Mark Riedl and Vadim Bulitko (2012)'s work into interactive narrative structures suggest that interactive narratives can make their players feel as though they are an integral part of a narrative, and that "their actions have meaningful consequences" (Riedl and Bulitko, 2012). As such, interactive narratives could provide an excellent context for game designers to create game choices and circumstances that actively encourage players to put themselves in the shoes of another and when making these in-game choices.

Whilst there are many different types of games that include a focus on story, an Interactive Narrative is a type of game posed as a digital experience where the development is generally concerned primarily with the game's story, or narrative. Exploring an interactive narrative approach to applying social empathy to a game context ensures that the value of personalised narratives in inciting empathy can be best applied to such a project. In this chapter, I will explore some game design theories and techniques that enable designers to control and create the story and player experience in interactive narrative games.

Writing for Interactive Narratives

Due to the nature of inter(re)activity, the writing of a personalised narrative for a game such as an interactive narrative poses a different set of concerns than writing for more passive media where those engaging with it do not have the ability to directly impact the story or world (Ince, 2009).

In 2014, Peter Mawhorter, Michael Mateas, Noah Wardrip-Fruin and Arnav Jhala wrote a piece titled *Towards a Theory of Choice Poetics*, where they coin the term *choice poetics* to refer to "the study of how choices work alongside narrative to communicate" (Mawhorter et al, 2014 p.1). Choice poetics are a particularly important consideration for designers of interactive narratives, as making choices is generally the strongest element of inter(re)activity made available to the player in interactive narrative games. Mawhorter et al position choice poetics as a "subset" of Bogost's (2007) procedural rhetoric (Mawhorter et al, 2014), that is focused on the nature that specific interactive player choices have in creating particular narrative effects. As such, the choices that designers offer the players, and the consideration of the application of choice poetics to these choices is perhaps the main opportunity for designers to craft a specific procedural rhetoric in their game design.

Choice poetics includes a focus on the following three elements: the *modes of engagement* (the way in which the player plays the game) the *choice idioms* (a specific list of types of choices posed to the player and a consideration of how these might impact the player experience – such as the tension created in the player when providing a dead-end option which will end the game if the player chooses it), and the dimensions of player experience (a specific list of player experiences and a discussion of which choice idioms may best incite this experience – such as agency, responsibility, or regret) (Mawhorter et al, 2014). With the power of inter(re)activity and procedural rhetoric in

mind, an understanding of how each type of player choice impacts the player experience can help game designers ensure that the choices they provide to players in their interactive narrative games work to create or maintain the player experience that they are aiming to create.

False Choices and Foldbacks

The Walking Dead (Telltale Games, 2012) are a series of interactive narrative games that focus on life after a zombie outbreak. There are several seasons of this game that progress the game's narrative and develop the characters in the game. As they progress, players are given the opportunity to make choices that impact their experience in the game's environment and narrative, such as demonstrated in Figure 5, where the protagonist of Season One has to make a tough choice about whether or not to leave Lily, a fellow character, behind. The player chooses what the character will do in the situation by pressing the appropriate button for the dialogue choice they would like the character to make.

Figure 5:

The Walking Dead gameplay screenshot

Note: This screenshot taken by the author demonstrates the player's two dialog choices in the game, *The Walking Dead*. Screenshot from *The Walking Dead* by Telltale Games, 2015. Copyright 2015 Telltale Games.

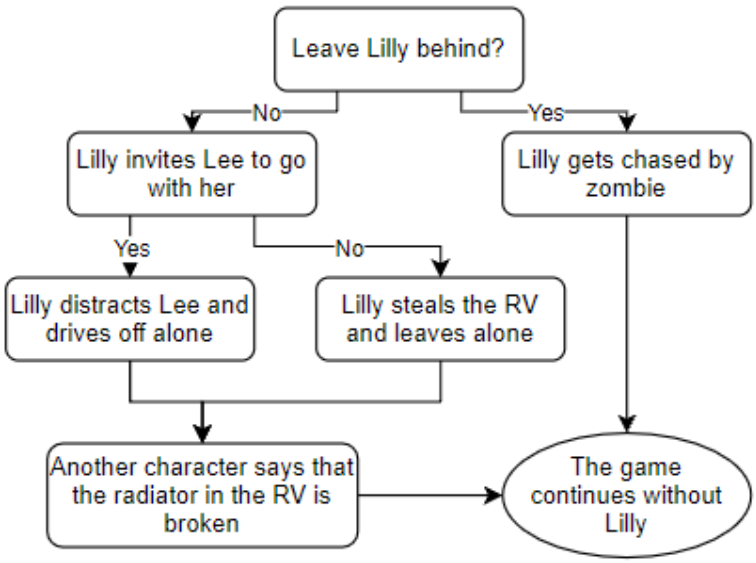
In this example, there are two possible options for the player to choose, they can choose to leave Lily behind *(You're not coming with us)* or take Lily with them *(Get in and we'll figure out what to do with you).* Whilst this decision presents itself as an important one in terms of the narrative as it has the potential to potentially result in another character's death and removal from the story and game world, it is actually a type of player choice that Mawhorter et al's (2014) discussion of choice poetics would refer to as a false choice – meaning that all of the player's options "lead to the same outcome" (Mawhorter et al, 2014 p. 5).

In this example, and as demonstrated in Figure 6, if the player chooses to leave Lily behind, a zombie appears and begins to chase her as shown in the right-hand side path of Figure 6 (labelled "Yes"). Should the player choose to take Lily with them, as shown in

the left-hand side of the diagram below (labelled “No”), Lily invites Lee to continue the journey with her. If the player agrees to this, Lily distracts Lee and drives off alone in the RV. If the player chooses not to go with her, Lily steals the RV and heads off alone. In both scenarios however, another character reveals that the radiator in the RV is broken and that Lily is not expected to get far.

Figure 6:

The Walking Dead dialog options flowchart



Note: This flowchart created by the author demonstrates a false choice evident in the game, *The Walking Dead* (Telltale Games, 2015).

In each of these situations the outcome is the same. The narrative implications for Lily are bleak, and the story continues without her in it. Although each of these initial player options adjust the player’s experience in that they experience different narrative options - either Lily being chased by the zombie or Lily stealing the RV - the result of this experience and the impact on the game world is that Lily has been removed from the

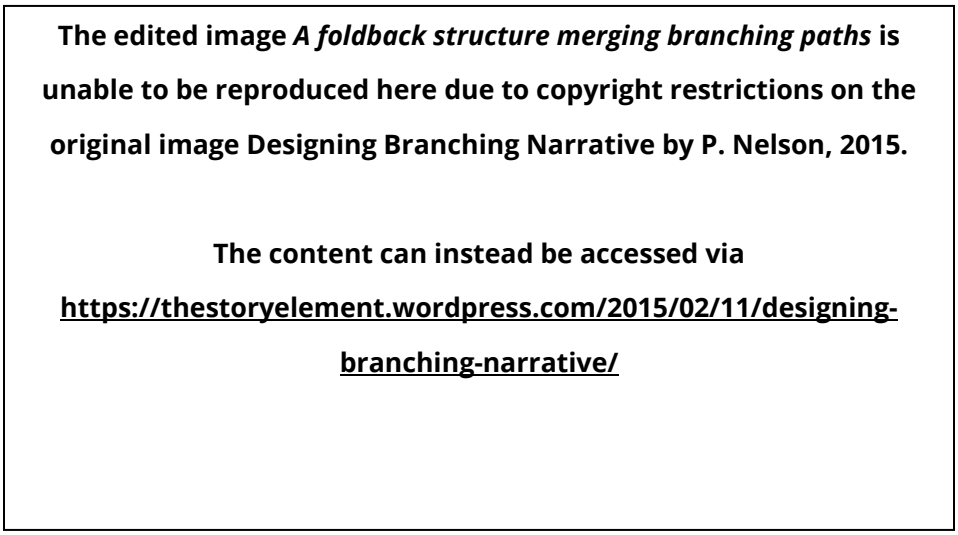
narrative and is no longer a part of the story (that is until season 4 of the game where she unexpectedly reappears regardless of the choices made by the player in the above scenario).

Mawhorter et al (2014) discuss that false choices such as this one are incredibly useful for narrative development, as they are able to "create the illusion of a richly branching story without spending the resources necessary to do so" (Mawhorter et al, 2014 p. 5). If the player's choice regarding Lily's departure continued to affect the overarching story in dramatically different ways – for example, of one option led to Lily remaining with the group and one led to her departure, the game writers would need to create additional paths coming from each of these player choices that accommodate these different narrative paths.

Each of these narrative paths would increase the game resources such as storage space required for the game and would require the writers to write several different versions of the story for their players. Further to this, providing a variety of narrative paths makes it more challenging for narrative designers and writers to control the narrative experienced by their players. In his exploration of writing branching narratives, interactive narrative designer Paul Nelson (2015) discusses some of the ways in which designers can control the expansiveness of a branching narrative and suggests the use of a Foldback Structure (Nelson, 2015) to help narrative designers to control the number of branches present in their game whilst ensuring that particular narrative elements are experienced by all players, regardless of their choices (Nelson, 2015). Figure 7 demonstrates how through using a foldback structure, a designer could for example, allow players the opportunity to explore branching paths, such as various corridors in a house that may contain different experiences in each corridor, only to have each of these corridors meet back at a central location, such as a lobby, allowing a key narrative element, or an important plot point to occur to all players in the lobby, regardless of which corridor they travelled down.

Figure 7:

A foldback structure merging branching paths



Note: This diagram demonstrates a foldback structure that merges branching story paths back together to allow key narrative elements to occur. Adapted from *Designing Branching Narrative*. P. Nelson, 2015. https://thestoryelement.wordpress.com/2015/02/11/designing-branching-narrative/ Copyright 2015, Paul Nelson.

Encouraging Player Reflection

Whilst control elements such as false choices and the foldback structure help designers somewhat control and limit the impact that players can have on the game and the way in which it responds to the player, this does not mean that these kinds of choices are not impactful to players themselves. Game narrative writer Cat Manning (2018) writes about the importance of providing players with opportunities to make expressive choices that allow them to express their own values, opinions and feelings in the game world, and allow them to determine what "sort of a person the character they are playing as will be" (Manning, 2018). Manning refers to such choices as *reflective choices* and suggests that the most effective use of reflective choice are those that "offer player participation in the character" (Manning, 2018), meaning that these choices actually allow players to make

choices that determine elements about their character – such as their personality and values.

Interactive fiction writer Emily Short (2013) highlights the way in which reflective choices help shape character identity, when discussing how a challenging choice she made in *The Walking Dead* helped shaped elements of the playable character Lee's identity. Short describes how she was faced with the choice to use a shotgun to end a suffering character's pain, and potentially risk the noise attracting zombies or allow the character to suffer so that the rest of her group were not threatened. Short made the choice to protect the group and not use the shotgun. In her version of the game, the playable character became someone who put the needs of the group before the needs of one suffering individual. Had she made a different choice, the character that Short was playing as would have been a different person to her, and the way that Short experienced the game would have been different. Smethurst and Craps (2014) discuss the importance of providing opportunities for players to reflect on their gameplay experience, highlighting how the design of *The Walking Dead* provides moments of calm in the game's narrative events, which allows the player to reflect on their gameplay experiences, "contextualising them and filling them with meaning afterwards" (Smethurst and Craps, 2014, p. 285). Short's experience helps to demonstrates this: she reflected on the impact of the choice she had made for several days after the event (Short, 2013).

Delayed Effects and Variables

Another type of choice idiom described by Mawhorter et al (2014) is a Delayed effect. A delayed effect is a type of choice that may appear to have no, or limited short-term effects, but the implications of this choice can manifest itself much later in the game. Mawhorter et al suggest that delayed effect choices can make powerful statements

about what is important in the game as when players learn about the effect, it can lead to them reflecting on their earlier choices. One way in which game designers and interactive narrative writers utilise delayed effects is with variables; a stored value of an element of the game which can be varied or changed.

Life is Strange: Before the Storm (Deck Nine, 2017) utilises variables to impact player experience. In the game, the player controls a character named Chloe, develops a relationship with the character Rachel. As the player progresses in their gameplay, they are given the option to select dialog and interact with Rachel in different ways. In Episode 1 of the game, Rachel and Chloe head to a junkyard and begin to have an argument, at which point Rachel begins to walk away. Chloe calls to her, telling her she doesn't want to ruin "this" and Rachel replies by asking "and what is 'this' exactly?". As demonstrated in Figure 8, the player is given the option to reply to Rachel and can choose the options of *a friendship* or *Something more*.

Figure 8:

Life is Strange: Before the Storm gameplay screenshot

Note: This screenshot taken by the author demonstrates the player's two dialog choices in the game, *Life is Strange: Before the Storm*. Screenshot from *Life is Strange: Before the Storm* by Deck Nine, 2017. Copyright 2017, Deck Nine.

The dialog option the player chooses here affects a variable stored in the game named *intimacy counter.* Should the player choose *Something More* as the dialogue option, the intimacy counter variable will increase in value +1 point (DanielWe 2018). The numerical value of this variable is adjusted and affected throughout the game as a result of Chloe's choices when conversing with Rachel.

In *Chapter Two* of the game, Rachel is reflecting on an overwhelming day. As Chloe, the player is given the opportunity to respond to her and offer support, by saying *something sweet* or *something silly.* These options are available to all players. However, as demonstrated in Figure 9, if the player currently has an intimacy counter of >3 due to their previous choices in the game, they are also given the option to choose to *hold her hand*. Should the player choose this option, their intimacy counter will increase again by another 3 points.

Figure 9:

Intimacy and dialog options in Life is Strange: Before the Storm

The image *Intimacy and dialog options in Life is Strange Before the Storm* as depicted by DanielWe from *[BtS E2] Flowchart for the neighbourhood scene - All choices, outcomes and preconditions.* By DanielWe, 2018. is unable to be reproduced here due to copyright restrictions.

The content can instead be accessed via https://www.reddit.com/r/lifeisstrange/comments/79d3i8/bts_e2_flowchart_for_the_neighbourhood_scene_all/

Note: This diagram demonstrates how the Intimacy variable in Life is Strange: Before the Storm (Deck Nine, 2017) affects the available player dialog options. From *[BtS E2] Flowchart for the neighbourhood scene - All choices, outcomes and preconditions*. By DanielWe, 2018. https://www.reddit.com/r/lifeisstrange/comments/79d3i8/bts_e2_flowchart_for_the_neighbourhood_scene_all/ Copyright 2018, DanielWe.

The game designers and writers of *Life is Strange: Before the Storm* have made use of variables such as the intimacy counter to personalise and shape the dialogue that is experienced by the player as well as the response options that are available to them in order to individually affect player experience based on the way in which the player is engaging with the game. The use of variables allows game designers to provide players with opportunities to interact with the game world, but without creating multiple branching narratives. This means that even where designers have used a foldback structure to ensure players experience key plot points of a narrative, they are able to use techniques such as variables to allow for a personalised gameplay experience within this narrative.

Limiting Player Choice

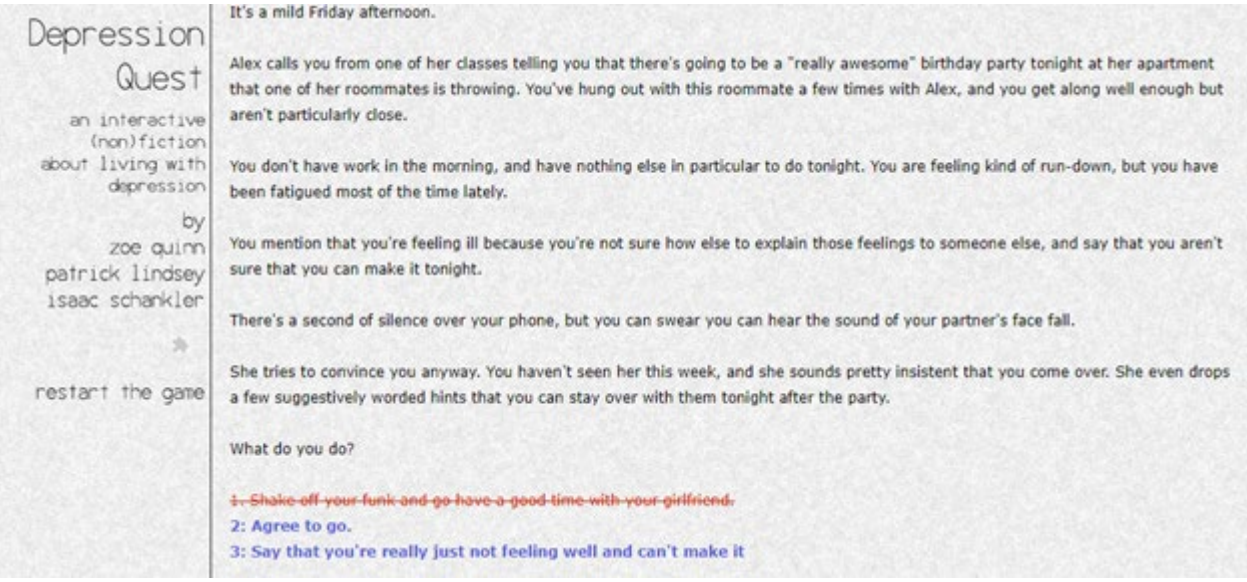
Mawhorter et al (2014) discuss that player choices are an integral part of determining a player's experience of agency within a game and whilst choices generally allow for players to feel in control of their gameplay, limiting player choice can also be utilised by designers to highlight a player's *lack of control*, or agency. The use of limiting player choice to convey a character's lack of agency or control is evident in Zoe Quinn's (2013) game *Depression Quest*.

In *Depression Quest*, the player's role is as a person experiencing depression who, at the beginning of the game, is not undertaking treatment for their condition. As the player plays through the game, the dialog options that are available to them are limited by the character's depression. Figure 10 demonstrates an in-game example where the player is provided with three dialog options to respond to their girlfriend inviting them out to a party. They are required to select one of the options describing how the character will respond to the party invitation, however one of these options is crossed out and red, and

unable to be selected by the player – this choice is made unavailable to them by the game.

Figure 10:

Depression Quest gameplay screenshot



Note: This screenshot taken by the author demonstrates the player's choices being limited by options being crossed out in the game, *Depression Quest*. Screenshot from *Depression Quest* by Zoe Quinn, 2013. Copyright 2013, The Quinnspiracy.

Throughout *Depression Quest,* the player is presented with situations where their agency and ability to complete the tasks are limited by the game itself. This game mechanic works as a metaphor for the mental health issues being experienced by the character, and although everyone's experiences with depression are different, this mechanic encourages perspective-taking in its players, demonstrating to them some of the way in which depression and mental illness actively prevents individuals from making choices that they may have made were they not presently affected by their illness or condition. Just as Rusch's (2010) *Elude* takes the control away from the player as they are dragged to

the bottom of the forest, Quinn's (2013) *Depression Quest* provides an excellent example of how game designers can play with player agency to create metaphorical experiences that have the potential to convey key narrative elements and more deeply immerse players in such narrative experiences.

Emotional Regulation

In the previous section, I discussed the potential of interactive narrative games in exploring social empathy, as they provide an opportunity for players to engage in personal narratives and practice-perspective taking. Earlier in this exegesis I discussed how games have the potential to influence and persuade players towards particular points of view, even when that was not the intent of the designer. I suggested that undertaking research and consulting with groups such as charities, social workers and those with lived experiences can help designers create informed deep games. Whilst this helps ensure that game designers are creating informed and considered representations of the topics they explore, what does this mean for the potential emotional impact on the players of these games?

Research shows that games can help expose players to new experiences and perspectives in a simulated environment where potentially harmful circumstances that may happen in a real-life situation are removed (Gee, 2003; Bogost, 2007). However, just because these potentially harmful circumstances are not occurring the in real world, this does not mean that exploring these issues will not deeply affect or even emotionally overwhelm their players. This is an important consideration for games that wish to explore social empathy, and when discussing the importance of emotional regulation to empathy, Segal (2017) suggests that "in order to feel empathy, we must be able to regulate our emotions" (Segal, 2017 p. 19). She discusses how if an individual is posed

with a situation that invokes a strong emotional response and are not able to regulate their emotions, they may become emotionally overwhelmed and are unable to truly empathise with another. In a context such as a game, such overwhelming emotions could lead to players feeling negatively towards the game or could prevent players from continuing to engage with it.

Life is Strange (Don't Nod, 2016) is a game that had an overwhelming emotional impact on some of its players through its exploration of teen depression and suicide. In *Life is Strange*, players play as Max, a teenager living away from home for the first-time and studying photography at college. As they play through the game, the player becomes aware of the power of their choices in the game, as the actions of the in-game character are determined based on the decisions made by the player.

In the second episode of the game, when Max's classmate Kate, attempts suicide, Max is given the opportunity to talk to Kate prior to her suicide attempt. In my playthrough of the game, my player character Max told Kate that there are people in her family that care about her. As demonstrated in Figure 11, Kate then asked Max to explicitly remind her exactly which of her family members care about her. As I explored the environment in Kate's room thoroughly previously in the game and recalled conversations that the two characters had, I had the knowledge to remind Kate which members of her family care about her. This convinced Kate to come away from the ledge and talk with Max. However, if I had not explored Kate's room in detail, or if I did not remember the details of the two characters' conversations, I would not have known these details about Kate's family and I wouldn't have been able to remind Kate who cares about her. Without hearing this, Kate would have followed through with jumping from the building, making the consequence of this player choice a very serious one.

Figure 11:

Life is Strange gameplay screenshot

Note: This screenshot taken by the author demonstrates the player's choices when speaking with Kate in the game, *Life is Strange*. Screenshot from *Life is Strange* by Don't Nod, 2016. Copyright 2016 Don't Nod.

Game critics such as Patrick Klepek (2015) noted that this consequence had a deep emotional impact on some players of the game, with some going to extreme lengths to replay the entire section of the game, allowing them to make different choices to save Kate. Further potentially impacting the player's emotional response to Kate's suicide attempt, after the player experiences the consequences of their own choices, the game shows the player the outcomes of the choices made by other players around the world. At the time I played the game in 2018, it demonstrated that some 80% of players were able to 'save' Kate, and 20% were not. In her article titled *Anyone else could have saved her: Life is Strange gave my personal tragedy a score,* Laura Dale (2015) discusses how this

gameplay element had an extremely challenging emotional impact on her. She discusses her personal experience of a close friend taking her own life and how this experience made the scene with Kate very real to her and being scored in the minority of those who were unable to save Kate made her feel as though she had “failed”. This led to Dale questioning if she could have saved her own friend if she had done things differently in the past. After seeing how much this game had affected her emotionally, Dale stated that “video game creators need to treat difficult subject material with a greater degree of responsibility” (Dale, 2015).

Segal (2017) cautioned that encouraging empathy needs to be balanced with inciting an overwhelming emotional response as this is counterproductive to building empathy. With specific reference to game development, Belman and Flanagan (2010) highlight the challenges involved with inducing empathy, describing the importance of the game enabling a player to take action so they can apply this empathy by helping the person or group for which empathy has been invoked. They argue there may be negative consequences for players not able to act on this empathy in the game. As well as short term consequences such as players choosing not to further engage with the game, Belman and Flanagan (2010) suggest that these negative consequences could have longer term implications, such as people “guarding themselves against feeling empathy in the future to avoid similarity unpleasant experiences” (Belman and Flanagan, 2010, p xx).

Their argument is supported by Segal’s (2017) discussion of an element called self-other awareness, which she describes as the ability to separate the experiences, feelings and meanings that belong to others from our own. She states that self-other awareness has an active role in encouraging individuals to take action to help or work towards social change. Segal (2017) suggests that self-other awareness means that individuals have a clear sense of their own self, or agency, and recognise that other individuals also have such agency.

When individuals then want to take empathic action, they do so with the understanding that while offering support and assistance to another, they do so in ways that do not negatively impact the agency of those they seek to help (Segal, 2017). Therefore, game designers creating deep games intended to invoke social empathy ought to carefully consider how their game design enables players to take action to help those for which empathy is invoked. Furthermore, to successfully invoke social empathy and lead to players making positive movements towards social change, the design of the game should also facilitate an understanding of self-other awareness amongst players. This is especially critical in designing games that explore topics where individual agency may already have been actively undermined such as DV (Segal 2017).

Context Summary

The discussion provided throughout the Context chapter of this exegesis identifies that despite DV being a common problem in Australia where controlling behaviour includes both physical and non-physical elements, there is a notable lack of public understanding regarding what constitutes non-physical forms of DV and coercive control and the profoundly negative impacts which it can have on victim-survivors. As informal support networks such as friends and family are often the first to learn about such abuse, the way in which they respond to disclosures is incredibly important, as negative attitudes can prevent those experiencing DV from seeking support in the future (Giles et al, 2005). With this research in mind, I suggest that the creation of a game designed to raise public awareness of some of the impacts of non-physical DV and some of the challenges faced by victim-survivors would enable current and future potential members of informal support networks to provide more accurate and informed support to those experiencing DV from the moment they learn about the abuse.

Research suggests that narrative-focused empathy-based education has the potential to raise awareness of issues such as DV and sexual assault (Foubert and Newberry, 2005; Ayres, 2014; Adelman et al., 2016), and Segal's (2006, 2011 and 2017) research highlights social empathy as a particularly powerful form of empathy that when invoked can actively encourage individuals to take steps towards making positive social change. Invoking social empathy is a process that involves the inciting of individual empathy together with a relevant contextual understanding of the topic and experiences of those for which empathy is invoked. Like literature and film, digital games can engage individuals with personalised narratives designed to invoke empathy. However, digital games are unique in that they facilitate the creation of entire (in-game) worlds that can greatly immerse players, allowing them to feel as though they are inside of the experience. Immersion in a game world could allow players to develop more in-depth understanding of the narrative presented, as well as allow for players to engage with a relevant contextual understanding of the topic and experiences of those for which empathy is incited. Due to the importance of these elements in inciting social empathy, digital games could be an excellent medium to promote social empathy in their players.

Research suggests that digital games can be powerful tools to teach and communicate information (Gee, 2003) and to influence their player's perspectives through procedural rhetoric (Bogost, 2007). I have argued that game designers already hold many skills and techniques in their knowledge base that they can use to influence and communicate information to their players which can be utilised to promote social empathy. Many existing deep games are influential in this way (Rusch, 2017). Given the capacity of such games to influence players understandings and emotions, I suggest that designers of deep games have a responsibility to be informed about the worlds and experiences that they are creating by undertaking research and working collaboratively with domain experts such as professional workers and those with lived experience. Such an informed process would work to improve the accuracy and relevance of both the information and

the perspectives communicated in their game. Segal (2007) highlights the importance of taking on the perspective of others when attempting to incite empathy, and that the inter(re)active nature of games provides an opportunity to facilitate such perspective-taking as a part of their design. Interactive narratives are games that could work particularly well to explore this as they allow for their designers to utilise design elements and theories to immerse their players in a personal narrative and game world designed to invoke empathy and convey contextual understanding, whilst crafting specific opportunities for players to explore perspective-taking. However, when creating such experiences, it is important to consider the effects these could have on players of these games as Segal (2011 and 2017) suggests that the ability to regulate emotions is an important element required to invoke social empathy and posits that a strong sense of self and an understanding of individual agency can help ensure emotional regulation is possible.

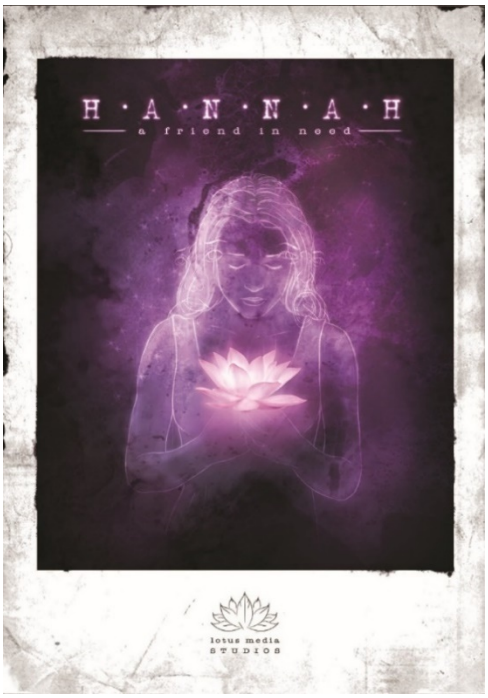
Informed, inspired and influenced by the research explored in the exegesis so far, the following section entitled *Create* discusses some of the creative development process I undertook in developing *Hannah*, an interactive narrative game prototype that aims to practically experiment with the ideas explored in this research to explore how interactive narrative games can be developed to strengthen support networks for those experiencing DV, through raising awareness of the elements and impact it can have on victim-survivors, as well as exploring the potential of games to incite social empathy in their players.

Create: The Development of *Hannah*

In creating *Hannah*, I undertook a process of creative research informed by the theoretical research I had undertaken. This creative process allowed for me to experiment with and explore some of the ways in which I could create a narrative and a game world that worked towards addressing the major goal of this research – exploring how a digital game could be designed to strengthen support networks for those experiencing DV. The creative artefact developed as a result of this creative research and experimentation process was the interactive narrative game prototype *Hannah: A Friend in Need (Hannah).*

Figure 12:

Promotional art for Hannah: A Friend in Need



Note: This image shows a promotional poster created by artist Andrew G. Taylor during the development process of *Hannah*. Copyright 2017 Susannah Emery and Andrew G. Taylor.

Whilst the development of this digital game artefact required many design decisions and considerations, the following section of this exegesis discusses some ways that the design and development was influenced, informed, and inspired by the research described in the first section of this exegesis. The research indicated the importance of informal support networks for those experiencing DV and suggested that there is limited community understanding of how non-physical forms of DV impact on victim-survivors which can lead to a lack of support being provided. Therefore, as a resource targeting informal support networks, the design of *Hannah* was intended to raise awareness of some of the non-physical elements of DV and how these can impact on victim-survivors in order to strengthen the type of support provided by these networks.

To achieve this outcome, I also explored the potential of a game to invoke social empathy amongst its players. This was necessary as without empathy individuals were less likely to respond supportively to victim-survivors. Segal's (2007, 2011 and 2017) work suggests that social empathy has the potential to both communicate a deep understanding of the thoughts, feelings, and experiences of another and could also encourage individuals to take steps towards inciting positive social change. Therefore, social empathy could be extremely beneficial in working to strengthen support networks for victim-survivors. I hoped that in a game like this, social empathy could encourage individuals to actively embrace their role as potential future member of an informal support network and potentially encourage them to work towards invoking or supporting social change for DV victim-survivors in the future.

As discussed in the Introduction to this exegesis, many design decisions went into the creation and development of *Hannah*. Throughout the development process, I undertook extensive creative production research, including the development of several other games and iterations of *Hannah* that explored the research I conducted and influenced the game's final design. It is important to note that *Hannah* is designed to stand alone as

a creative piece, and I hope that the strengths of the game will be evident to those who engage with it. This exegesis is designed to sit alongside *Hannah*, where both pieces contribute to the research goal of exploring the potential of digital games to strengthen support networks for those experiencing DV. It is hoped that this exegesis will provide insight into the application of research evidence to the game design and how this influenced, inspired, and informed my own creative process. I hope that this research could encourage and inspire other game designers, academics, and domain experts such as social workers and those with lived experience to work together to continue to build on the research I have undertaken, particularly with regards to designing games with social empathy elements in mind and creating their own deep games designed to encourage positive social change. Ayres (2014) and Aldeman et al., (2016)'s research suggested the empathy based narrative focused awareness campaigns described in their work can facilitate students of law and social work to develop their understanding of DV, and as such, a game that deeply engages players in such an approach may have the potential to be utilised as a teaching resource in educational contexts to raise awareness of DV in future professionals.

Narrative Design

The evidence previously presented suggests that personalised narrative recounts or experiences have been used to explore empathy-based awareness programs for DV and sexual assault. Designing a narrative that communicated the practical experience of someone experiencing elements of non-physical DV was an important consideration in this study, as it would enable players to be exposed to these elements taking place as well as engage with narrative themes about the impact that they have on the characters experiencing them.

Segal's (2007, 2011 and 2017) work into social empathy explains that whilst narratives can successfully invoke individual empathy, to invoke *social* empathy, in addition to individual empathy, a contextual and historical understanding of the issues explored in these personal narratives is required. The research in the first section of this exegesis highlighted the importance of ensuring the accuracy of information communicated in deep games, or games designed to teach information about a topic (Schrier, 2019; Rusch, 2017) and highlighted the need to undertake research and consultation with those who have a deep understanding and lived experience.

Narrative Themes

To ensure that the information contained in the game's narrative was reflective of a contemporary victim-survivor perspective, my process designing the narrative of the game and the experiences of the two main characters – Hannah and Kelsey, was inspired and influenced by real life stories from Australian victim-survivors. Nineteen short, anonymised case studies which explore the personalised narrative experiences of DV victim-survivors were made publicly available by the Domestic Violence Resource Centre of Victoria (DVRCV, n.d.-b) through their website. These stories were extremely influential when creating the game's narrative design and are herein referred to as the DVRCV stories.

The DVRCV stories were published without dates; however, when I discussed the potential of utilising the stories to inspire a game narrative with the DVRCV, they shared with me that these stories were obtained over the last 10 years from victim-survivors who wished to raise public awareness of their experiences with DV. The DVRCV were supportive of this project and expressed interest in the progress and development of *Hannah*. Prior to developing both Hannah and Kelsey's personalised narratives for the

game, I carefully read through the DVRCV stories with the goal of understanding the variety of experiences and situations that were discussed by these victim-survivors. Whilst each victim-survivor's experience with DV was different, I noted a variety of story elements that occurred across these victim-survivor stories.

Noting these common story elements, I was inspired by Braun and Clarke's (2006) thematic analysis, a method of analysing data that focuses on identifying and examining themes or patterns within in Braun and Clark (2006) and decided to explore how often similar themes were mentioned in these personalised narratives. I wanted to utilise the most common themes identified through this process in my own narrative to ensure that the game's narrative reflected real-life experiences of victim-survivors. In line with Braun and Clark's (2006) thematic analysis principles, I wrote a list of themes that I noticed occurred consistently. I then compared each of these themes across all accounts to identify them amongst each victim-survivor's experiences. This also included counting the number of accounts which mentioned the theme to present an indication of the strength of the theme across these stories. Whilst respecting the differences between individual experiences and stories, the most common narrative themes mentioned by DV victim-survivors in the nineteen stories are outlined in Table 1. These narrative elements were used to inform and guide the development of both Hannah and Kelsey's personalised narratives in *Hannah.*

Table 1:

Narrative Themes and Occurrences in the DVRCV Stories

Narrative Theme	Times mentioned
Leaving: Includes themes about challenges involved with leaving the relationship and with accessing formal safety and support services	12
Coercive Control - isolation: Includes themes around isolation from family and friends and from community connections such as work, school and church.	9
Coercive Control – micro-regulation: Includes themes such as controlling the actions and behaviour of those being abused such as tracking and policing of activities.	9
Coercive Control - degradation: Includes themes around name calling, humiliation and other techniques that negatively impact the self-esteem of those experiencing the abuse.	15
Informal Support Networks: Includes themes around the importance of accessing help and support from non-formal safety and support services including family and friends, neighbours, and strangers.	11

Plot Development

Once these narrative themes had been identified from the close readings of the DVRCV stories, the next stage in the narrative development was to develop a plot for the game that reflected the themes I found to be common in the stories of victim-survivors. To do so, I was inspired by Ashcraft (2000) and Chung's (2002) discussions of the victim-survivor

journey undertaken by those breaking free from DV, and I wanted to explore how such an experience could be applied to a well-known narrative plot structure that focuses on female perspectives and experiences known as *The Heroine's Journey* (Murdock, 1990).

As discussed earlier in this exegesis, Chung's (2002) research identified that the terms victim and survivor may in fact both be valuable to those experiencing DV, as it provides an opportunity for them to see their own experiences as a journey travelled between identifying with each of these terms. I wanted to reflect this understanding in the character journeys of each of the game characters who experience DV, Hannah and Kelsey. Throughout her conversations with Hannah, Kelsey highlights how at the start of the victim stage of this journey, it can be extremely challenging to recognise abusive behaviours. Even when victims do begin to recognise such behaviours as abusive, research suggests that their self-esteem may be so low (Stark, 2007) that they may feel as though they are not deserving of support. In the game, this is represented in Kelsey's story when after Hannah encourages Kelsey to seek formal support for her experiences, Kelsey states that she doesn't want to be "taking up a space that could be used for someone who really needs it".

Hannah's victim-survivor journey begins at the start of the game where she discloses to the player that she is starting to feel powerless in her life. At this point in the game's narrative, the player is not aware that Hannah is experiencing DV, but she does disclose to them that she has recently felt as though she needs her partner Nathan to make decisions and choices for her. The intention was to provide the player with an opportunity to understand that Hannah's self-esteem is not at its strongest, and to allow players to be open to the idea that these negative descriptions of herself could continue to increase as Hannah remains in the relationship.

As the game progresses, Hannah seems to identify with a victim narrative more deeply, and she describes both a lack of agency and taking responsibility for how she feels to the

player, telling them “I’ve made my bed and I need to lie in it”. This indicates a level of self-blame by Hannah for her partner’s behaviour which commonly occurs when experiencing coercive control. However, at a certain point in the game, after discussing how she feels supported by the player and her friend Kelsey, Hannah’s own victim/survivor narrative shifts, and she makes the decision herself to access formal support services. Hannah discusses this mindset shift and her journey with the player, stating “I don’t want to be a victim anymore. With you two helping me I want to be a survivor”.

The victim-survivor journey, faced with challenges and resulting in significant character growth, can be related to that of a narrative structure framework known as the *Twelve Stage Hero’s Journey* (Vogler, 1985), a story structure commonly used in popular narrative pieces such as films, comics, books, and games including the *Harry Potter, Lord of the Rings* and *Star Wars* series. Vogler’s *Twelve Stage Hero’s Journey* was adapted from Joseph Campbell’s (1949/2008) monomyth from the book *The Hero with a Thousand Faces.* Whilst *The Hero with A Thousand Faces* focuses heavily on written texts, the *Twelve Stage Hero’s Journey* framework was created by Vogler to provide a *re-telling* of Campbell’s Hero’s Journey that reflected *contemporary film* (Vogler, 1985).

In *Hannah*, Vogler’s (1985) framework inspired many of the initial key plot elements of the game’s narrative. On her journey to becoming a *survivor*, Hannah passes through many of the 12 Hero’s Journey stages and is guided through them with the support of the player. However, whilst writing *Hannah*, there were some elements of Vogler’s (1985) framework that did not align with the hero to survivor journey undertaken by Hannah, such as the heavy focus on the pursuit of personal glory, and the aggressive approach to confrontation, suggestive of physical violence. This limitation was addressed by drawing on elements from Maureen Murdock’s (1990) text *The Heroine’s Journey,* which Murdock created as a response to Campbell’s (1949/2008) *Hero with A Thousand Faces.* Murdock

created *The Heroine's Journey* due to her concern that Campbell's work did not adequately reflect the "journey of the contemporary heroine" (Murdock, 2016, para. 3). Murdock's (2016) discussion of her work explores the idea that contemporary media represents women in a way that is "impossible to identify with" as the media represents "a society dominated by a masculine perspective where the feminine is perceived as less than the masculine" (Murdock, 2016, para. 10).

Due to this, Murdock posits that individuals may reject the qualities in themselves that they associate with femininity, including nurturing, creativity, emotional expressiveness, and intuition. Murdock discusses how *The Heroine's Journey* differs from a masculine journey as where *The Hero's Journey* generally focuses on achieving the character's goals through a somewhat aggressive approach to confrontation. Murdock's (1990) *Heroine's Journey* contains a focus on achieving the player's goals through the rejection of the qualities that are seen as feminine, through to the reclaiming of these qualities. In an interview with Davis (2005), Murdock discusses how the *Heroine's Journey* includes narrative elements such as exploring one's soul, and healing and reclaiming elements of one's identity which may have been lost and are not elements focused on in Campbell's (1949/2008) *Hero with a Thousand Faces.* Therefore, the game narrative was further developed through the employment of Murdock's work with its focus on the gendered nature of identity. These narrative elements greatly inspired the development of *Hannah* and the stories of both Hannah and Kelsey as they each undertake complex and unique heroine's journeys to recognise the importance of the friendships that they share with each other and the player character. Throughout this process, Hannah and Kelsey reclaim elements of their personality and self-esteem that they have lost due to the abuse -- elements that Stark (2007)'s work on coercive control refers to as an individual's "sense of self".

I utilised the Heroine's Journey framework to create a plot structure for both Hannah and Kelsey's stories using the themes that resulted from my close reading of the DVRCV stories. Developing this narrative through the lens of the Heroine's Journey meant that I was able to use these themes to plot a narrative design that would hopefully engage its audience, whilst ensuring that Hannah and Kelsey's personal stories were the focus of this narrative reflecting the common feelings, impacts and dilemmas faced by women experiencing DV from a male partner. Creating an informed personalised narrative that was based on real life stories and supported by an existing narrative framework allowed me to explore the potential of such narratives to incite empathy. To further explore the potential of inciting social empathy in the game, I also needed to ensure that the game provided opportunities for players to gain a contextual understanding around the situations and circumstances experienced by victim-survivors such as Hannah and Kelsey. Segal (2017) discusses how such a contextual understanding should include insight into the historical events that have shaped and contributed to the identity of those for which empathy is incited.

Whilst the close reading of the DVRCV stories worked to identify some of the experiences of victim-survivors, the medium of a game presented a challenge to present such a contextual understanding as players only engage with the game for a limited time. Due to this, the ability for them to be exposed to extensive information about the history of Hannah and Kelsey's relationships that led up to their current situations was limited.

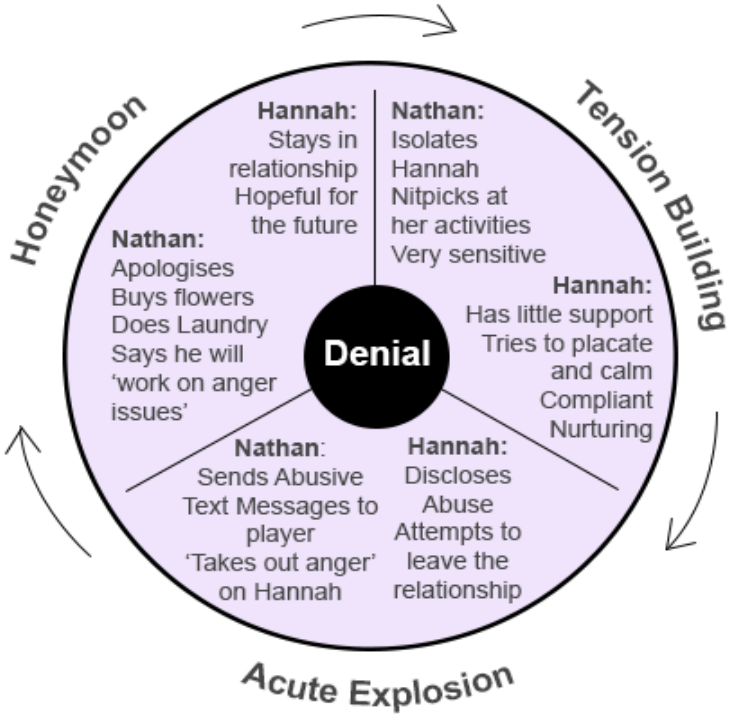
Through the first-person chat format of the game, Hannah does describe to the player some information about her past and how things have changed in the past few years, which particularly highlights her isolation, but I also wanted to provide the player with more opportunities to engage with the context of DV in Hannah's relationship. To do this, I drew upon Walker's Cycle of Abuse model (Walker, 1979). As discussed earlier in this exegesis, Walker's work presents perpetrators of DV as using dramatically changing

behaviours and tactics that can confuse and undermine those experiencing DV. These undermining, threatening, and controlling behaviours can leave the victim-survivor not knowing what will happen next and with can offer a sense of hope that the person has changed when there are signs of remorse following specific incidents.

As discussed earlier this exegesis, Walker's (1979) early work has been heavily criticised for its presentation of DV as cyclical. Whilst not disagreeing with the criticisms, in the context of developing a game, the descriptions of the changing behaviours and actions offered a means to present to players a first-hand means of what it is like to live with the changing behaviours of DV and coercive control. Therefore, the complete cycle was not adopted and translated into the game, but aspects of the phases were incorporated into Hannah's narrative to help facilitate this contextual understanding in players. The intention was to simulate the feeling of "walking on eggshells" which is commonly described by victim-survivors. For example, when Hannah's relationship is in the tension building phase, she regularly tries to justify and reason Nathan's behaviour to the player, and so this can appear to the player as Hannah being highly compliant towards his actions, such as refraining from talking to the player when Nathan is present. Walker's cycle (1979) suggests that, following an *acute explosion,* such as a physical assault, the perpetrator may seem repentant, apologise, and try to justify their behaviour. An example of this in the narrative is when Hannah tells the player that he has promised her that he will work on his 'anger issues'. The game is not presenting DV as a cycle but rather as clusters of behaviours which often occur in sequences at different times in the life of the relationship with the DV perpetrator. Figure 13 demonstrates how one such sequence has been written into the *Hannah* narrative.

Figure 13:

Concepts from Walker's (1979) Cycle of Abuse adapted and demonstrated in Hannah's own story



Note: This diagram created by the author demonstrates an instance of how Walker's (1979) concepts were adapted and incorporated in the narrative of *Hannah*.

Building Hannah's World

With the game's plot and narrative structure identified, I began to consider the approach I would take towards building a game world that would facilitate this narrative. As discussed earlier, research suggests that embedding information inside a game can provide an in-depth understanding of the information communicated. This is because a game can enable players to be placed inside an experience, allowing them to feel as though they are a part of the game world, rather than a passive observer (Gee, 2003;

Braithwaite, 2009). However, when placing the player in the game world, I needed to carefully consider what role they would be taking inside the world, and how this choice would affect the way in which they interacted with the game.

Earlier in this exegesis, I discussed the importance of informal support networks to victim-survivors. Friends and family are often the first to be made aware of abuse and provide instrumental support to victim-survivors (Ingram, 2007; Parker, 2015; Cho et al., 2020). Reflecting this research, I wanted to ensure that the procedural rhetoric of the game worked to highlight the importance of informal support networks to its players. To explore this area in my creative work, I drew upon Riedl and Bulikto's (2012) suggestion that interactive narrative games are particularly well suited to make players feel as though they play an important part in a game's narrative. Earlier in this exegesis, I suggested that through considered use of inter(re)activity and choice poetics, designers can make players feel as though their interactions with the game world are meaningful and impactful. I wanted to draw a parallel between the player's ability to feel as though they can make meaningful and impactful decisions in-game and the importance of the choices friends and family make when interacting with victim-survivors. Exploring this in *Hannah*, I created an interactive narrative experience that places the player directly in the role of a member of a member of Hannah's informal support network. This means that as players play the game and interact with Hannah's story, they become an active participant in her world, and are provided with opportunities to develop empathy and understanding around her situation and experiences, from the perspective of an informal support network member.

Segal's (2011) research suggests that taking on the perspective of another can be a challenging thing for individuals to do where they are expected to take a perspective very different from their existing one, as it can be difficult for individuals to identify with those who they see as different. This suggestion was echoed in Langhinrichsen-Rohling

et al's (2011) and Foubert and Masin's (2012) analysis of *The Men's Program*, a program that used film to incite empathy for victim-survivors of sexual assault. These researchers suggested that men, regardless of if they have committed sexual assault in the past, do not perceive themselves to be perpetrators of sexual assault (Foubert and Masin, 2012). Due to this they posited that inferring to this group that they could be perpetrators would increase defensiveness and make this group less likely to engage with the program (Langhinrichsen-Rohling et al, 2011). In order to address this, *The Men's Program* took a support network approach, explaining to participants that "everyone can contribute to prevention efforts" (Foubert and Masin, 2012 p.912) and as such created a group identity as support network members that participants could easily identify with. This research is in line with Parker's (2015) suggestion that friends and family overwhelmingly want to help and support those experiencing DV and influenced my decision to place the player of *Hannah* in the role of informal support network member. Being placed in this role works to create a player identity that all players can relate to and communicate the idea that everyone can contribute towards eliminating DV in society.

Considerations around how to best craft a procedural rhetoric that highlighted the importance of informal support networks to victim-survivors also informed the format of the game, inspiring the chat/messenger style approach I used in the design of *Hannah*. Research conducted by the *Australian Competition and Consumer Commission* (2020) suggests that Australians are increasingly utilising private messenger services to communicate with others. Due to this, potential players of *Hannah* are likely to be familiar with instant messaging as provided through a service like *Messenger,* which is the most popular online messenger service in Australia (ACCC, 2020). In communications taking place though *Messenger*, individuals can communicate asynchronously, meaning they do not need to be online at the same time for one to send messages to the other. If the conversation app is not presently open, users are alerted to the receipt of a new message through a notification, or an alert on their device. Depending on the settings

put in place by the owner of the device, this might include a visual notification, an audio notification and/or a flashing light to indicate the receipt of a new message.

I wanted to utilise a messenger style format for the *Hannah* game, as the familiarity of the medium would provide a smaller learning curve for those who are familiar with instant messaging, and this would also allow me to creatively explore some of the pre-existing ideas that players may have around the way they engage with and respond to those that they are conversing with, and this is discussed in more detail in some of the following sections of this exegesis. To creatively explore the potential of the ubiquitous nature of such a medium, I decided to design *Hannah* with the intent that players would be interacting with it on a mobile device such as their own phone. Such a strategy enables increased access to the game allowing anyone with a compatible device and internet access to play the game, as no additional technology equipment was necessary allowing even those who are isolated the ability to engage with it.

The *Cleo* Chatbot

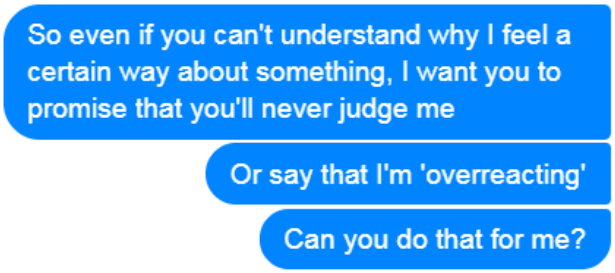
With the goal of creating a messenger-style game identified, I initially explored the potential of using a chatbot client to create this messenger style approach in *Hannah*. Digital media scholar Beth Coleman (2012) identifies chatbots as embodied agents, or low-level Artificial Intelligence software programs that are designed to represent human interactions. In their overview of chatbot technology, Adamopoulou and Moussaides (2020) discuss how interest in chatbots has existed for many years, with the first chatbot created in 1966. They suggest that since 2016 there has been a rapid growth in chatbot development. Adamopoulou and Moussaides (2020) suggest that today chatbots are used for many purposes including for entertainment, education, information retrieval, business, e-commerce and to mimic human conversation.

Inspired by the research described earlier in this exegesis around the potential of personalised narratives to invoke empathy (Segal, 2011; Ayres, 2014), I wanted to construct a narrative that provided those engaging with it the opportunity to be exposed to as much insight into Hannah's feelings and experiences as possible. With this in mind, a first-person chatbot format approach to the story would facilitate the opportunity for me to create the game in such a way that would facilitate the in-game character, Hannah, communicating her emotions, experiences and thoughts to the player in her own words.

When researching software to explore the creation of a chatbot, I discovered that there are several existing chatbot creation engines that can output a chatbot directly to existing messenger services such as *Messenger*, such as the chatbot engine *Sequel* (Kiwi, 2016). Using *Sequel* I created the interactive narrative chatbot *Cleo* (Emery, 2017). Cleo was created using *Sequel* and focused on raising awareness of anxiety and panic attacks to those who had little or no previous understanding of the dramatic effect these can have on those experiencing them. Once exported to *Messenger*, the *Cleo* chatbot allows players to chat with it by typing a response. *Sequel* allowed me to set several keywords that, if identified in the player's responses, (or words that the engine associated as similar) would show the response underneath to the player. In Figure 14, Cleo asks the player not to judge her as she chats with them and asks them to confirm they are willing to do this.

Figure 14:

Screenshot from Cleo gameplay: Cleo questions the player

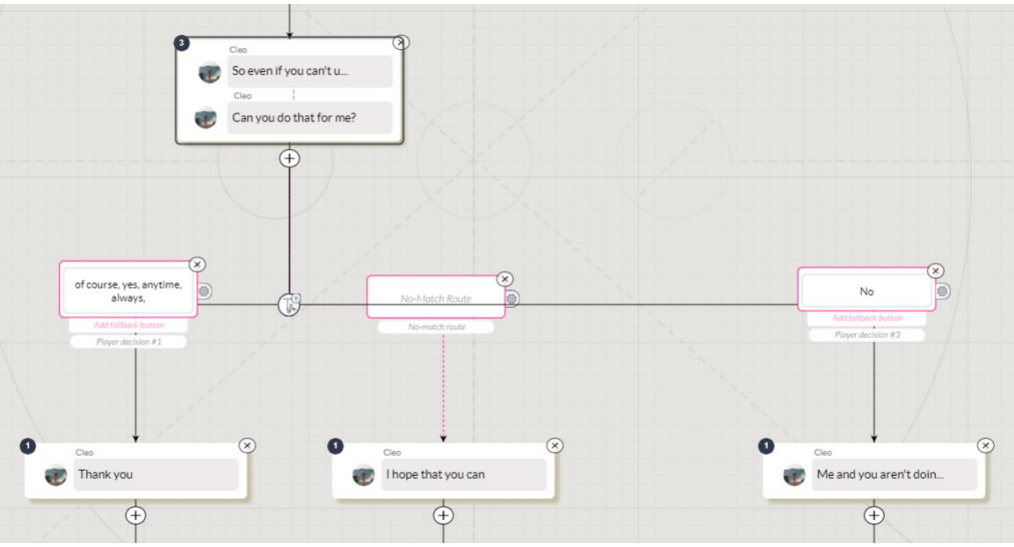


Note: This screenshot taken by the author demonstrates Cleo's message to the player in the chatbot, *Cleo*. Screenshot from *Cleo* by the author.

Figure 15 demonstrates how the dialog above was constructed in the dialog tree for *Cleo*. The top box of the diagram demonstrates Cleo's message to the player (the full text shown above), and the 3 boxes underneath it each attempt to predict the player's potential response categories to this message. In this situation I have identified that the player may be supportive to Cleo and use words such as *yes* or *always,* or that they may be non-supportive to Cleo and use words such as 'no'. Finally, there is a *No-Match Route* that the game uses as a fallback option and travels down if the player utilises phrases that cannot be clearly identified by the game engine as either the supportive or the non-supportive option.

Figure 15:

Dialog tree from a section of Cleo

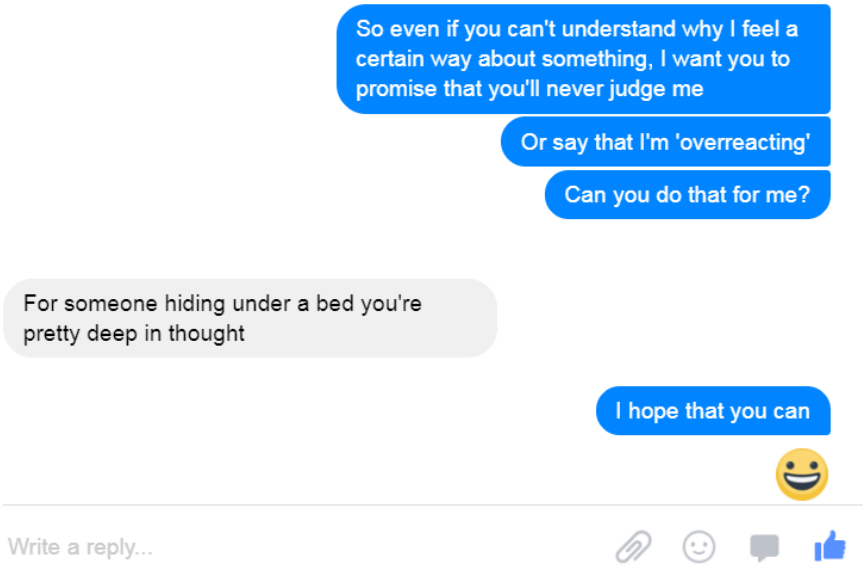


Note: This screenshot of the dialog tree from *Cleo* taken by the author inside the Sequel (Kiwi, 2016) chatbot engine demonstrates my three predicted player response categories to a section of gameplay in the chatbot, *Cleo*. Screenshot from *Cleo* by the author.

As demonstrated at the left of the diagram, if the player's response included the terms *of course, yes, anytime* or *always* (as well as words that *Sequel* (Kiwi, 2016) considers very similar such as *yep, yup* etc), it would be interpreted by the engine as a supportive response and the passage underneath this branch (*Thank you)* would be shown to the player. Should the player's response include terms such as *No* (or similar words such as *nuh, nope* etc.) then the text *Me and you aren't doing so well with this whole trust thing…* would be displayed as Cleo's response to the player. Should the player respond to this question with text that does not match either of the two options, the fallback option will be presented to the player and this is demonstrated in Figure 16.

Figure 16:

Screenshot from Cleo gameplay: the fallback option is activated



Note: This screenshot taken by the author demonstrates the fallback option being presented to the player in the chatbot, *Cleo*. The player input is grey, and Cleo's responses are shown in blue. Screenshot from *Cleo* by the author.

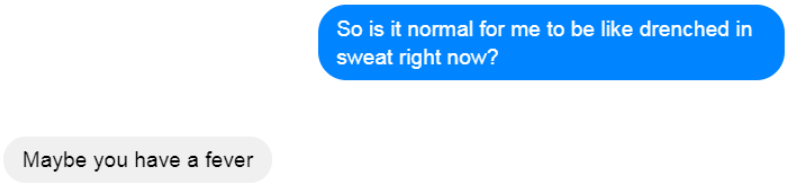
The fallback option in this situation is the text *I hope that you can,* followed by a smile emoji. The fallback option here is designed to be as broad as possible and cover as many possible responses by the player that can't be classified into the other areas. In the Chatbot situation, it was important to have a fallback option as players had the option of typing free text into the reply window. Unfortunately, the option to do this led to the potential for some irrelevant responses from players as demonstrated in the above image, where the player is not engaging with Cleo's situation empathetically but is replying to her messages with humour. In this situation, the fallback option appears to work well with the message as it appears that Cleo is simply ignoring the player's humour and is stating her own wishes instead. On other occasions however this would not function correctly. At one point in the game, Cleo asks the player to research panic

attacks and let her know if some of the physical symptoms she is experiencing are known symptoms of a panic attack, or if something else is happening to her. She specifically asks the player to "Google and check for me if sweating during a panic attack is normal?"

If the player responds with positive information such as *yes* or *it's normal,* Cleo will respond by thanking the player, however if the player responds with a negative response such as *I don't want to Google* or *no,* Cleo will become increasingly worried. Figure 17 shows a player responding to Cleo's question with *maybe you have a fever* rather than researching the symptoms as Cleo requested.

Figure 17:

Screenshot from Cleo gameplay: the fallback option is activated



Note: This screenshot taken by the author demonstrates a player responding to Cleo with humour rather than engaging empathetically with her question in the chatbot, *Cleo*. The player input is grey, and Cleo's responses are shown in blue. Screenshot from *Cleo* by the author.

As one of the gameplay goals of this research was to explore the potential of inciting social empathy in players, it was important that players were able to develop empathy for Cleo and were therefore not rewarded with continued development of the narrative and their in-game relationship with Cleo if they demonstrated behaviour that was inconsistent with the words and phrases used in the supportive route of each of Cleo's questions. I considered adding consequences if the player's choices did not match the 'supportive' route, such as Cleo becoming upset or failing to further engage with the

player, however it would be impossible to tell *why* unempathetic dialog options were chosen in response to Cleo, and as such these consequences may not be appropriate. Players may provide responses that do not demonstrate empathy by choice (for example to *break* the game, or with the goal of receiving strange replies from the in-game character), or the player may have made choices that did not appear to be supportive due to a lack of understanding that they should be playing the game with empathy in mind.

Additionally, the way in which chatbots provide players the opportunity to freely type any response they like in the chat window leads to the potential that players could type words of phrases that do demonstrate a supportive response, but that were not picked up as matching one of the words in the supportive route option by the game engine. The freedom provided by the ability to type any response into the chat window also has the potential to lead to the player experiencing something called analysis paralysis. Game designer Luke Laurie (2014) explains that providing players with too many choices or options in a game can result in them becoming overwhelmed and feeling paralysed. Analysis paralysis can lead to unintended player experiences, such as players rushing to make a choice that they may not have carefully considered, or even refusing to further engage with the game by making no choice at all.

Custom Chatbot Engine

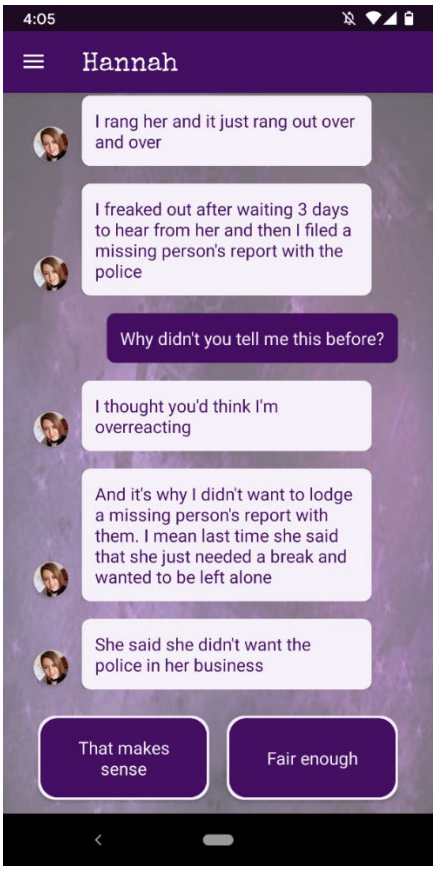
The development of the *Cleo* chatbot provided some insight into some of the potential challenges that would be faced in the development of *Hannah*. The most important finding in this development was the requirement to consider how providing players with complete freedom on the way in which they respond to Hannah could prevent the encouragement of empathic play and could even reward those playing unempathetically.

Additionally, if analysis paralysis was invoked, it could negatively impact player experience and risk players disengaging with the game. Limiting the dialog options available to the player such as through providing two set dialog options that the player can choose from, rather than allowing them to type any response, would work to address the issues resulting from the player's ability to type any text into the response. However, this finding led to challenges using chatbot software such as *Sequel*, as I was unable to find a chatbot engine that prevented the use of free typing as a response. After all, chatbots are generally designed to allow such free typing and much of their design focuses on resembling real life conversation.

With the limitations of chatbot software in mind, discussions commenced with an App Programmer to discuss the potential of having a custom game engine written that would allow me as a designer to provide the player with a series of set responses which they could choose from to reply to the in-game character Hannah. Developing a custom engine would enable me to design a custom user interface for a simulated messenger client that would also limit player choices whilst being accessed on mobile devices. Creating this custom engine allowed me complete freedom with regards to the visual design of the game demonstrated in Figure 18, including the colours, layout, and typography of the game's design. The visual design decisions for the user interface were informed by my background in digital design together with the Game Accessibility Guidelines (Game Accessibility Guidelines, n.d.), a collaboration of studios, specialists and academics that work as a reference for game designers to help them ensure that their game designs are as inclusive as possible, allowing them to provide access to their gameplay for a much wider audience.

Figure 18:

User interface design of Hannah



Note: This screenshot taken by the author demonstrates the final user interface design of *Hannah*. Screenshot from *Hannah* by the author.

Through the *South Australian Women in Games* network, software developer Samantha E. Schaffer expressed interest in the project and kindly donated their time and skills to code the custom game engine. Funding for the development of a prototype for this engine was investigated and a grant of $1000 was provided by *The Awesome Foundation* in July of 2017 to help support this process (Awesome Foundation, 2017). Due to the limited funds available for this project, the decision was made to create only one version of the engine that would allow us to create a Hannah prototype for either Android or iOS devices. As of

October 2019, the market share of Operating Systems in Australia was roughly split with Android sitting at 48.4% and iOS sitting at 51.25% (Statcounter, 2019). As there was no clear outlier with regards to market share, the decision was made to create an Android app based on the simple fact that Android devices are more cost effective and were already owned by each member of the development team, allowing each of us to test the game as we developed it. This means that at this stage the *Hannah* prototype is only available to be accessed on Android devices, but further funding will be sought in the future to create an iOS version of the app that can be accessed on Apple devices.

Witnessing Hannah's Story

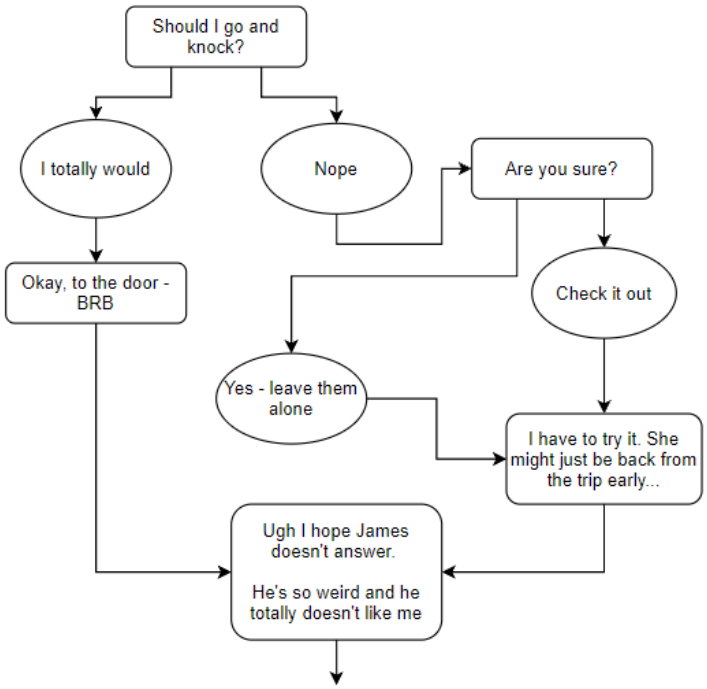
The act of listening to others tell their own stories is referred to by Segal as "witnessing" (Segal, 2011 p. 273). She describes witnessing as the easiest method of being exposed to the life situations of another and argues that the act of engaging with another's personal narrative encourages people to reflect on their own experiences and share their own stories. Consequently, these interactive processes are a catalyst for inciting social empathy and change. In applying these ideas about inciting empathy to the development of the game I decided to create a chatbot-style game. This approach allowed the game's narrative to be conveyed in the style of a first-person narrative recount that enables the player to witness and listen to Hannah's account and understanding of her experiences.

This format presented an opportunity for players to develop a deep understanding of how certain situations or experiences affect Hannah. Players bearing witness to Hannah's story was pivotal to inciting empathy. Therefore, a crucial design consideration was to ensure all players experienced the key narrative plot points, regardless of the in-game choices made by the player. This was achieved through the use of a foldback structure (Nelson, 2015) which allowed me to provide players with the opportunity to

experience short-term individual paths whilst ensuring that I could bring the player back to the main narrative branch to experience key plot points or important narrative elements. An example of the foldback structure utilised in *Hannah* is demonstrated in Figure 19, where Hannah asks the player if she should knock on the door to Kelsey's house, and the player is provided with the choice to either encourage or discourage her from doing so.

Figure 19:

Foldback used to control the narrative in Hannah



Note: This flowchart created by the author demonstrates one example of the foldback structure as employed in the Hannah narrative.

Figure 19 demonstrates how the foldback structure has been employed to ensure that Hannah always knocks on the door, as this leads to an important plot point in the game where she discovers information about Kelsey's disappearance. Should the player

choose to discourage Hannah from knocking on the door, Hannah will question the player further about this choice, providing some rationale as to why she thinks they are wrong, and if they further discourage her to knock, Hannah tells the player that she needs answers and as such, she is going to knock anyway. As well as allowing for certain plot points to continue, situations like this where Hannah exhibits her own agency work to further add to the realism of her character in the game world, making Hannah seem more like a real person to the player.

Demonstrating Hannah's strength in her convictions early in the game also provided me with the opportunity to create an unexpected shift in her character towards the middle of the game when Hannah's self-esteem had been damaged by the DV perpetrated by her partner. Here, Hannah begins to ask the player for constant support with seemingly minor decisions about her everyday life such as what shoes to wear, or what flavour cake to bake. The shift in the dialogue by Hannah is designed to encourage the player to begin to apply some of their developing understanding of DV to make sense of what might have occurred to cause such a shift in the way Hannah is interacting with them.

Narrative Theme: Leaving

As discussed earlier in this exegesis, the existing anonymised case studies collected by the DVRCV provide insight into some of the challenges faced by those attempting to break free from abuse and coercive control. In one of the DVRCV stories, a victim-survivor explains how she found leaving her relationship such a challenge, "you get so comfortable with this person and outside is such an unknown", and I thought "there was no way I would survive without him" (DVRCV, n.d.-b). Another victim-survivor of DV in the DVRCV stories, the anonymised Lena, stated that "It's easy to say, "GET OUT" but highlighted that the emotional reality of this is different - "I know what it feels like

wanting to give a fifth, sixth, and seventh chance" (DVRCV, n.d.-b). Jenna's story explains how much she wanted to keep believing the "justifications and excuses" of her partner. (DVRCV, n.d.-b) The challenges identified by these women around leaving are backed up by research around leaving DV relationships which demonstrates that breaking free from the violence is an extremely dangerous time that puts the victim-survivor at a higher risk of further and more severe violence than when she remains in the relationship (Campbell et al., 2003; Toews and Bermea, 2017; Elizabeth, 2017).

Due to the prevalence of the narrative theme of leaving in the DVRCV stories, when writing *Hannah*, I felt it was important for both Hannah and Kelsey's personalised narratives to discuss some of the challenges they faced when attempting to leave their relationships. Kelsey is the first to leave her relationship, and whilst she does manage to break free from the relationship with her abusive partner James, Kelsey is still isolated and controlled by her fear of James and what could happen if he finds her. Kelsey is living in fear of James and is unable to seek safety or move forward with her life without the support of Hannah and the DV support service. Later in the *Hannah* narrative when Hannah begins to identify that she is also experiencing DV in her relationship, Kelsey encourages her to leave Nathan and seek safety. Despite knowing that services are available to help her, Hannah is not ready to leave the relationship yet. She explains that she is not ready to leave the life that she had constructed with Nathan and she attempts to work harder to try to placate him to keep him happy - baking him cakes, "practicing her smile" and carefully choosing her outfit to please him.

Jenna's story (DVRCV, n.d.-b) highlights how difficult it is to "get the energy to plan a way to get out when you are living day to day just trying not to provoke an angry outburst". Towards the end of the game's narrative, Hannah begins to accept that she might need to access some additional support to help her through her experience, and Kelsey carefully tries to encourage Hannah to gain access to formal support services. After

considering her ideas carefully Hannah responds with “I’m just so tired, I don’t feel like I can leave”. Kelsey explains how her own experiences also reflected feelings like these, replying with “I know how hard it is to try to leave when you are using all of your energy and focus just trying not to make him angry”.

Narrative Themes: Coercive Control

Earlier in this exegesis, I discussed coercive control as a pattern of behaviour used by an abuser with the intent of removing “the victim’s liberty or freedom” that strips away their “sense of self” (Stark, 2007). When utilising coercive control, the abuser uses strategies such as isolation, degradation, mind-games, and the micro-regulation of everyday life in order to attempt to force the victim to live every aspect of their life according to the abuser’s unpredictable and unknowable view of how their partner should behave (Stark, 2007). As highlighted above, the analysis of the stories collected by the DVRCV identified that many elements of coercive control including isolation, micro-regulation and degradation were evident in the experiences of many of those who shared their stories.

Isolation

In another of the DVRCV Stories, the anonymised Kaz (DVRCV, n.d.-b) reflects on the isolation she experienced when she was with a violent partner. She describes how her partner would not let her talk with friends freely and would “throw and break things'' if she tried to do so. Jenna (DVRCV, n.d.-b) speaks about a time when she made a few friends through a mother’s group and tried to spend time with them in the house, but her partner didn’t like that. She eventually cut herself off from these friends because her partner would be “so rude if they visited the house”. In the *Hannah* narrative, Kelsey and

Hannah each experience similar forms of isolation, and although they are best friends, the pair have even been isolated from each other by their partners. Towards the start of the narrative, Hannah reflects on how the relationship between herself and Kelsey has changed, stating “I feel like I hardly ever see Kelsey since he [James] moved in”. Later in the game, when Hannah begins to research DV, she learns that being isolated from your friends is an element commonly used by perpetrators of abuse (Stark, 2007; Sutherland, 2015). Hannah shares this knowledge with the player and later in the game’s narrative, I created a story element where Hannah’s partner Nathan attempts to isolate her from the player by sending them a threatening message through the simulated messenger chat, telling them to “back off and leave Hannah alone”. As discussed earlier in this exegesis, abusers often threaten to harm those close to the ones that their behaviour targets (Gregory et al, 2017) and here the gameplay provides the player with an opportunity to experience an example of one of the ways in which Nathan has isolated Hannah from her friends.

Micro-regulation

Stark’s (2007) research also identifies how abusers undertake micro-regulation of an individual's everyday life, attempting to control and manage all aspects of their world. Tina (DVRCV, n.d.-b) recalls how her partner would give her 15 minutes to get home from work and that if she was later than this, he would accuse her of being unfaithful. Sallie (DVRCV, n.d.-b) discussed how her partner would always look through her things and question her activities. Several of the other stories demonstrate how abusers often check and control where their partner is, and Julie (DVRCV, n.d.-b) discusses how her partner would constantly check to see if her car was at work.

To reflect these elements in *Hannah’s* narrative, the Hannah character did not have access to her own transport. She is limited to travelling in the local area that she can

navigate using the bus and/or walking. At times this is challenging and difficult for Hannah, and early in the narrative, for instance, she tells the player that she is carrying a heavy box of water as she walks home from the shop. The challenges Hannah faces here are designed to demonstrate how micro-regulation from an abuser can make everyday tasks such as travel and shopping extremely challenging. When discussing her day-to-day activities with the player, Hannah occasionally makes disclosures of things that Nathan has said to her, including telling her that she hasn't been "spending enough time on the house", demonstrating his attempts to control Hannah's location and actions when he is not at home.

Nathan's policing of Hannah's activities is also demonstrated in the gameplay throughout the way in which Hannah often leaves suddenly even when she and the player are engaged in a conversation, saying things like "sorry - gotta go talk soon" or "I gotta go before Nathan gets home". These elements of the story and gameplay work to demonstrate the way in which small elements of Hannah's life are dictated by the presence of and actions of Nathan and support Harris et al's (2015) research into Young Australian's Attitudes towards violence against women which revealed that half of young men agree that it is okay to use electronic tracking methods on their partner without their consent.

Reflecting this attitude, Tina (DVRCV, n.d.-b) also discusses how her partner constantly monitored her actions and how he "didn't know the meaning of a little bit of privacy" and was always looking through her things and questioning her activities. In order to reflect this behaviour in *Hannah,* several instances of Nathan's monitoring and tracking have been written into the game's narrative. An example of this is where Hannah discloses to the player that Nathan checks her phone and reads her messages. She asks the player not to message her unless she messages first and explains that she is deleting their conversations so that Nathan can't read them. The game facilitates this by actively

preventing the player from messaging Hannah until she has returned to the chat and requests a response from them.

Degradation

Degradation is a common part of DV and coercive control (Stark, 2007). Sallie (DVRCV, n.d.-b) and Jenna (DVRCV, n.d.-b) both reflect on how their partners consistently degraded them with insulting comments. Sallie discusses how her partner put her down about her weight, compared her to his previous partners and constantly called her names, whilst Jenna noted that her partner would constantly call her derogatory names and humiliate her in front of friends.

Donna (DCRCV, 2013) discusses how the degradation from her partner caused her self-esteem to plummet. As a result of this Donna convinced herself that she was “useless “, “dumb“, “a bitch“, “…whatever he had been calling me”. In *Hannah*, this is demonstrated predominantly in Kelsey’s story. When Kelsey discloses her situation to both Hannah and the player, she talks about how, although she has already fled from her abusive partner, she is unsure of what to do next. Discussing her feelings Kelsey says “I just feel so dumb. Maybe he was right”. This dialog has been created to imply to that the way James has acted towards Kelsey has negatively affected her self-esteem. It is common for those experiencing DV to feel as though the abuse is their fault or that they are “crazy and unlovable” (DVRCV, n.d.-b). Donna (Donna, DVRCV, n.d.-b) discusses how the longer she stayed with her partner, the more she felt her self-esteem was destroyed.

Katherine (DVRCV, n.d.-b) explains that she believed for a long time that the abuse she was experiencing was her fault and that it caused her to lose all belief in herself. In the game, Hannah discloses to the player how she feels “like such a piece of garbage”. Donna (DVRCV, n.d.-b) explains that with her self-esteem as low as it was when she was in her

relationship, she felt that there was no way she could survive without her partner. She felt as though she was a “horrible person “and that no one else would ever want to be with her. Julie (DVRCV, n.d.-b) talks about how the abuse was so subtle, but that it ended up making her feel as though her partner had “stole[n] “her self-worth. Hannah regularly asks the player for support with small decisions, such as the type of shoes she should wear, or the type of cake she should bake for her partner, demonstrating her low self-esteem and her constant need for support and validation. Even when the player helps Hannah make a decision, such as which shoes to wear, there is no *correct* answer here, and Hannah will respond negatively to either choice. As was the case for those in many of the DVRCV stories, due to the abuse that Hannah is experiencing, her self-esteem at this point is so low that she cannot feel confident wearing either pair of shoes. In this situation, the *shoes* have been written as a metaphor, providing the player with an opportunity to reflect on the way in which being in Hannah’s *shoes* is not currently a comfortable or an easy place to be.

Narrative Theme: Informal Support Networks

As discussed earlier in this exegesis, research demonstrates that those experiencing DV are most likely to disclose DV to informal networks such as friends and family, and their responses in this situation are very important (Guggisberg 2008, Humphreys 2008). In the *Hannah* narrative, the importance of how support networks respond to these disclosures is demonstrated throughout the game but is made explicitly clear to the player through the dialogue between Hannah and Kelsey during a situation that occurs in the group chat.

At a certain point in the game, Hannah, Kelsey and the player are in a 3-way group chat when Hannah discloses elements of Nathan’s abuse as *anger issues* to the group. Without

hesitation, Kelsey quickly responds to Hannah's disclosure with "Hannah you HAVE to leave him". Although Kelsey's attempt to encourage Hannah to leave the relationship may have been well intended, what follows in the chat is evidence that Hannah feels judged by this statement, as she angrily tells Kelsey that she does not understand the relationship that she shares with Nathan before isolating herself further by blocking Kelsey from the group chat.

Research by Khaw and Hardesty (2009), Murray (2008) and DVRCV (n.da) demonstrates that breaking free from abuse is a difficult and complicated process that may take several attempts, and that support networks who were open-minded about these challenges were the most useful to those undertaking the leaving process (Parker, 2015). This conversation has been carefully designed to provide the player with an opportunity to witness how Hannah responds to pressure from her support network to leave her relationship and allows the player to reflect on how this interaction has further isolated Hannah prior to making further choices regarding how they choose to interact with and respond to Hannah around this issue.

Character Profiles

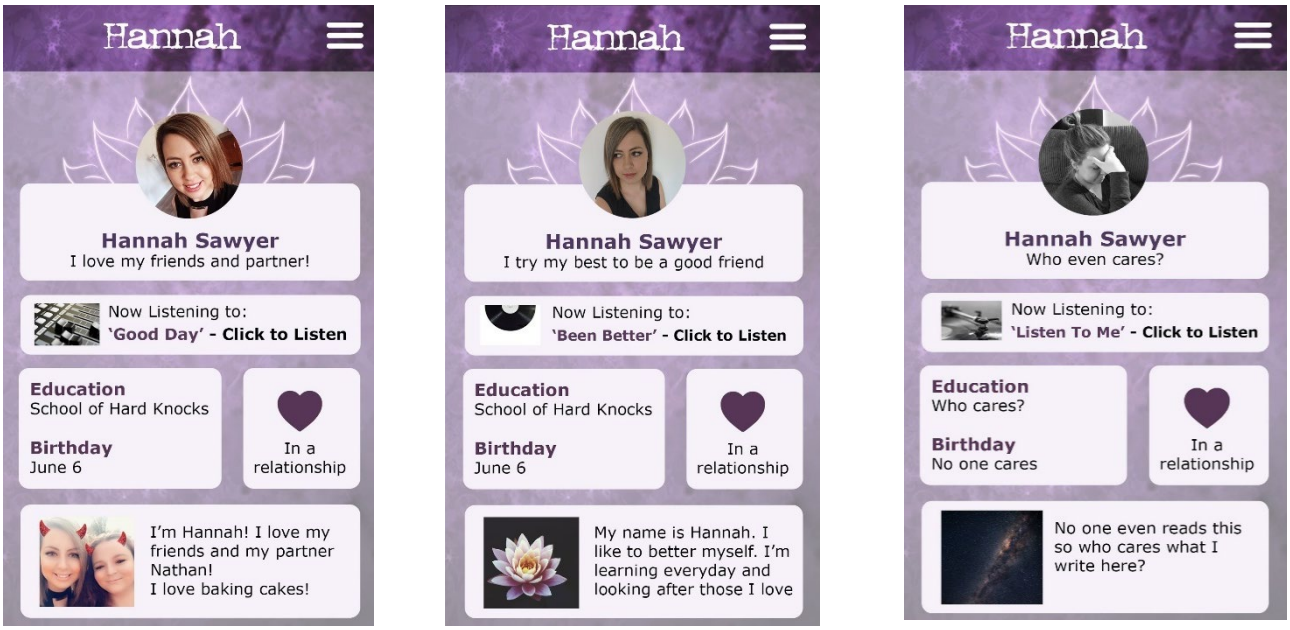
Segal (2011) suggests that providing individuals with contextual and historical information around the lives of those that are different from our own works to promote social empathy. In *Hannah*, profile pages have been created for Hannah and Kelsey which provide the player with an opportunity to additional insight into their lives and personalities. These profile pages contain background and contextual information about each character and can be accessed by the player by clicking on the avatar (the player's face icon) inside the chat. The Hannah and Kelsey characters have contrasting personalities and life experiences, and this is demonstrated in their profiles, highlighting

the fact that anyone can experience DV regardless of elements such as personality, job, education, or physical characteristics.

Hannah's profile is dynamic and changes in response to the events occurring in the game, as shown in Figure 20. At the commencement of the game, Hannah's profile depicts a positive emotional state, with a profile picture where she is smiling with the tagline "I love my friends and partner!" and is listening to an upbeat song called *Good Day*. Sometime into the game, Hannah's self-esteem deteriorates rapidly as she is unable to locate Kelsey and Hannah updates her profile to depict this, her picture becoming greyer and her tagline stating, "I try my best to be a good friend". In this version of her profile Hannah is listening to a song called *Been Better.* When Hannah's relationship with Nathan is at a point of increasingly severe violence and abuse, Hannah's self-esteem and confidence are reduced even further. Her profile is again changed, and her profile picture becomes a black and white photograph with her hands covering her face. Hannah's tagline has been modified to the text "Who even cares?" and she is listening to the song *Listen to Me,* highlighting the way in which Hannah feels voiceless in her relationship with Nathan. I commissioned the music for the profile songs from musician Joshua N. McLean through providing a brief that highlighted the emotions felt by Hannah on each occasion she changed her profile. Throughout this process, Mr McLean shared several iterations of these songs with me and provided with me with the opportunity to suggest changes and contribute to the production of the pieces to ensure that they each worked towards the vision I had intended for them.

Figure 20:

Hannah's dynamic profile page



Note: These 3 screenshots taken by the author demonstrate Hannah's dynamic profile page at 3 different points in the game's narrative. Screenshots from *Hannah* by the author.

Towards the end of the game, Hannah's profile picture is changed for the final time. This profile change takes place where informal support networks, including the player, have supported Hannah to access DV support services. In this update of her profile, Hannah's tagline reads "Looking forward to my future!" and her relationship status has now been changed to "Single". Hannah has also added to her profile that she is "looking forward" to starting her "new journey". Whilst at this point in the game's narrative Hannah has left her partner and begun to access support from formal DV support services, these changes in her profile acknowledge that leaving a relationship does not mean that the abuse and its impacts have ceased but highlights the way in which Hannah has undertaken a victim-survivor journey and is ready to start a "new journey" as a *survivor*.

Encouraging Empathic Play

Empathy Induction

Mawhorter at al's (2014) research into choice poetics describes how players engage with games in different ways, resulting in different *modes of engagement*. They describe how it is not possible for designers to be sure how their players will approach playing their game, however they suggest that it is possible for game designers to employ specific strategies to encourage players to undertake particular modes of engagement whilst interacting with them. Through my development of the *Cleo* chatbot, I found that players may interact with Cleo in a non-empathic way as the goals or expectations that the player would play empathically were not made clear to the player at the start of the game; nor were these expectations reinforced by the procedural rhetoric of the game.

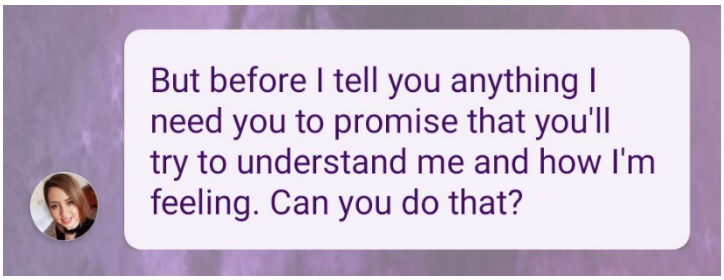
The designer of *Papo and Yo* (Minority Media, 2012), Vander Caballero, describes how the playtesting and release process of *Papo and Yo* demonstrated that deep games need to highlight to their players from the start of the game where an aim or goal of the game is to gain a deeper understanding of a person's situation or experience (Graft, 2014). Belman and Flanagan (2010)'s work into designing games for empathy also highlight the need to encourage an empathic mode of engagement, suggesting that to sufficiently elicit empathy in their players, game designers need to highlight the importance of empathetic play to their players. They suggest that designers of games designed to invoke empathy provide players with an *empathy induction* which they describe as explicit text or subtle encouragement that informs players that they are expected to take an empathetic posture towards their gameplay (Belman and Flanagan, 2010).

When players of *Hannah* first begin engaging with the game, a subtle approach to encourage players to engage with the game in an empathic manner is provided during their first interaction with the character Hannah. Following introducing herself to the

player and telling them that she is looking for someone to help her with an issue she is having, Hannah sends the player the message demonstrated in Figure 21. This text is designed to begin to position players towards empathic play, guiding them towards the idea that they will need to play the game with an empathetic posture and encouraging them to consider Hannah's feelings as they interact with the game.

Figure 21:

Hannah asks the player to consider her feelings



Note: This screenshot taken by the author demonstrates an in-game message from Hannah asking the player to try to understand her feelings as they interact with her. Screenshot from *Hannah* by the author.

Delays

The chatbot format of the game allowed me to present Hannah to the player in way I felt was much closer to a real human than other game formats may have allowed. I wanted to further explore gameplay elements I could implement to lead to the game more closely representing interactions with real humans. Gnewuch et al's (2018) research into response time in customer service chatbots demonstrated that where chatbots employed a delay before they responded to user input, it made the chatbot appear more human and made the conversations feel more natural to the user.

Gnewuch et al (2018) suggest that these findings provide an important consideration with regards to anyone building a chatbot as they theorise that adding delays to increase the response time of the chatbot represents a social cue, and as such it triggers social scripts and expectations in its users, meaning that they are more likely to interact with the chatbot as though it were a human (Gnuewuch et al, 2018). In *Hannah*, I implemented response delays in the game to encourage players to see Hannah as more real, and as such hopefully encourage the making of more empathic choices when engaging with her. To explore this, I added a response delay that considered the length of the message sent by the player to Hannah previously, as well as the length of the message that Hannah was typing.

To further add to the realism of this design element, whilst this delay was occurring, I added a "…" element that is commonly used in messenger clients to symbolise that someone is currently typing a message. This enabled the player to see a visual indicator during the delay that let them know that Hannah was still engaging in the conversation and that she would be responding to them shortly. I added further delays to some of Hannah's responses that took place over a longer period – anywhere between one minute to a maximum of 24 hours. These were implemented to help foster the player's experience of Hannah as a real person, with a life outside of the game that she is required to attend to.

As the game's narrative develops, I utilised this delay element to begin to suggest to the player how Hannah's actions are controlled by Nathan. After the player and Hannah have been talking for some time, she suddenly mentions that Nathan is home from work, and she will talk to the player again soon. At the start of the game the player may interpret this as Hannah just wanting to spend time with her partner, but as the game progresses and the player and Hannah learn more about DV throughout their search for Kelsey, it is

hoped that the player will reflect upon these experiences and what they could mean in terms of Hannah's relationship with Nathan.

Stark's (2007) research into coercive control demonstrates that isolation is a tactic commonly used by abusers to separate those experiencing DV from their friends and family, and Hannah's abrupt endings to conversations before an extended delay is one of the first clues provided to the player that Hannah is experiencing abuse and isolation. As the game develops, and as Hannah's relationship deteriorates even further, she starts to spend less and less time in conversation with the player, and often leaves suddenly and abruptly, even when the player and Hannah are engaging with topics that seem of great importance to Hannah.

Meaningful and Impactful Choices

Providing players with a first-person narrative recount of a victim-survivor's experiences facilitated using a chatbot format game specifically influences and supports the player to witness Hannah's story, exploring the potential of personalised narratives to incite empathy. As I discussed earlier in this exegesis, I wanted the player to believe their decisions in-game were meaningful and impactful, working towards a procedural rhetoric that demonstrates the importance of support networks. With Bogost's (2007) procedural rhetoric in mind, I wanted to explore how I could further employ the rules and processes experienced by the player in the inter(re)activity feedback loop that worked towards creating and enforcing such a rhetoric.

As discussed earlier in this exegesis, in their discussion of inciting empathy in games Smethurst and Craps (2014) suggest that empathy in games is incited in different ways during on-line and off-line modes of play. In Hannah, on-line play is represented as the

times in the game where the player influences the inter(re)activity feedback loop and is required to make a choice regarding how to respond to Hannah.

In my discussion around developing the *Cleo* chatbot, I identified that in the development of Hannah I would provide limited player response options rather than allowing players to free type a response. Employing this design element means that the player can read several potential responses and then make a choice as to which one of these they would like to use as their response to Hannah. Such a system works to encourage players to read each of these potential responses and consider how Hannah may respond to each of them before committing to a choice. In doing so, this element of inter(re)activity directly works to highlight the importance of supportive language when engaging with a victim-survivor by actively requiring the player to consider the ways in which the way in which they respond could impact Hannah.

Smethurst and Craps (2014) suggest that switching between on-line and off-line play allows designers to create specific rhetorical effects in their designs. They suggest that when engaged with on-line play, player behaviours are specifically focused on meeting the goals of the game, but that switching players to off-line play can facilitate players to reflect upon the thoughts and feelings of the in-game characters that may have been affected or impacted by the choices made by players during on-line play. In *Hannah*, the goals of the game require the player to provide support to Hannah. Smethurst and Craps's (2014) off-line play is built into the *Hannah* game design primarily through the player's experiences of reading Hannah's messages, witnessing her story and reflecting on her experiences and feelings during her storytelling process and the in-built game delays.

Belman and Flanagan (2010) assert that off-line play actively encourages players to empathise as they are being provided with opportunities to carefully consider the thoughts and feelings of those represented in the game. In *Hannah,* the entire

inter(re)activity feedback loop has been designed to support players to undertake active reflection to promote empathy. The only way the player can influence the game world is through the choices they make when engaging with the on-line play process and the off-line play process facilitates reflection of these choices as it changes the way Hannah interacts with the player during off-line play.

Game narrative designer Cat Manning (2018) suggests that providing players with reflective choices that allow them to determine *who* the character they are playing can be increasingly impactful in terms of player experience. In *Hannah*, during on-line play players are specifically focused on choosing the option that would best work to support Hannah from their response options. When switched to off-line play the consequences of these choices are highlighted as the player reflects on Hannah's interactions and how these may have been influenced by their choices, demonstrating the meaningful and impactful nature of what support networks choose to say to victim-survivors, and reflect on the way in which the character they have created because of their choices is working to provide support to Hannah.

Bogost (2007) suggests that procedural rhetoric invites the development of games that have a meaningful coupling with real experience. This is due to the way in which procedural rhetoric can deeply communicate ideologies and information in a meaningful way through the rules and processes in the game. Segal (2011; 2017) posits that when social empathy is incited it can encourage the application of empathic action, create a sense of responsibility, and can encourage individuals to work towards creating positive social change. In *Hannah*, the on-line/off-line switch is intended to promote reflection and subsequently invoke the players' social empathy. As the player considers how their choices in the game impact Hannah and the game world, I hope that the procedural rhetoric created will encourage players to consider the importance of their responses to

Hannah, and that this facilitates understanding the importance of the way they interact with those who may be experiencing DV in the real world.

Encouraging Positive Social Change

As discussed earlier in this exegesis, research demonstrates that contemporary cultures, values, and beliefs do not currently work towards reducing the incidences of DV in society (Webster, 2009; Powell, 2012; Our Watch, 2015), with Webster (2009) suggesting that societal shifts are necessary in order to reduce the prevalence of DV. Segal (2011) proposes that inciting social empathy can encourage individuals to incite positive social change, and as such, I also wanted to explore this through the procedural rhetoric in *Hannah*, giving consideration towards how the game could work towards promoting its players to take steps towards inciting positive social change and begin to promote such a societal shift.

Previously I discussed how providing players with two limited choice options to respond to Hannah highlights the importance of the support and language provided by support networks. Requiring the player to read, reflect on and choose how to respond to Hannah contributes to procedural rhetoric of the game and encourages players to take social action, by communicating the idea that support networks must respond when victim-survivors are seeking support. To engage at all with the game, the player must choose from the set responses what they would like to say to Hannah. The player cannot simply remain silent when Hannah seeks their support or input, or the game cannot and will not continue, conveying the idea that informal support networks cannot stay silent in the face of abuse, and promoting and encouraging them to speak out to work towards reducing the prevalence of DV in the real world.

Further encouraging and supporting the idea that support networks have a responsibility to take action to address DV, I included an additional game design element inspired by

Mawhorter et al's (2014) discussion of choice poetics, which they refer to as an *unchoice*. In a game that suggests to its players that their choices are meaningful, Mawhorter et al (2014) suggest that creating an unchoice places players in a situation where their expectations are challenged, and such a shift facilitates designers to create some interesting experiences.

Earlier in this exegesis, I discussed how *Depression Quest* (Quinn, 2013) limited the options available to players by providing a list of choices but crossing out options that players could not choose to highlight the way that the character's abilities were affected by their depression. In some these scenarios, Quinn creates unchoices that limit players to choosing one option, forcing players to make the only choice available to them in order to continue playing the game even where this choice is not their preference, working as a metaphor to convey how depression can limit the ability of those experiencing it to actually achieve or work towards what they actually want to do.

Mawhorter et al (2014) suggest that one way in which an unchoice can be powerful is where designers use them in a way that requires their players to signal their commitment to an intended course of action. In *Hannah*, whilst investigating her friend Kelsey's disappearance, Hannah begins to experience stalking behaviours from Kelsey's partner James, including finding him parked outside her home watching her. After Hannah first discloses this to the player, she immediately begins to doubt her experiences and states to the player that she was probably just "seeing things". This situation is designed to raise doubt in the player's mind about Hannah's self-confidence.

On the next occasion that Hannah interacts with the player, she specifically tells them that she needs to "ask them something", and when choosing their response to Hannah the, the player is faced with an unchoice, given two very similar choice options that essentially signal the same idea: "I'm here" or "I'm ready to talk". As Mawhorter et al (2014) suggest, in this situation I have used this unchoice to require players to agree to

commit to an intended course of action. I hoped that the doubt Hannah shares with the player around her experiences indicates her declining self-confidence and begins to show players that Hannah does need their help. Providing players with this unchoice cements this idea further in the player's mind, demonstrating that to continue to play the game, they must commit to being present or ready to listen and in doing so, must be ready to support Hannah. The inability of the player to stay silent discussed earlier promotes the responsibility of support networks to speak out against DV, and elements such as the unchoice discussed here work to provide the player with an opportunity to signal their willingness to become active members of informal support networks.

Variables

Earlier in this exegesis I discussed the importance of creating a game world that was able to facilitate Hannah telling her own story to the player. I discussed how I had used a foldback structure to ensure key plot points that occur to Hannah in the game are experienced by all players. I also highlighted how despite not affecting the plot of the game, the choices that players make in the game do impact the player experience through the ways in which they encourage player reflection and work towards crafting a specific procedural rhetoric.

However, just because player choices do not affect the plot of Hannah's story, they do affect the player's experience of Hannah's story, as the choices that players make actively change the way in which Hannah responds to and interacts with the player. This idea is in line with research by Giles et al (2005) and Parker (2015) that suggests the way in which support networks respond to those experiencing DV can change the experience of a victim-survivor. When implementing this idea in the game, I was inspired by Mawhorter at al's (2014) definition of a delayed effect choice, which they describe as a choice that

may not seem like it has a large impact at the time but has an impact on the game at a later stage. Mawhorter at al (2014) suggest that delayed effect choices are well positioned to communicate “what is important” to their players (Mawhorter et al, 2014, p.5) and as such is a good choice to demonstrate to players how the words they use can have a dramatic impact on the way in which victim-survivors approach their situation and ask for help.

Earlier in this exegesis, I discussed how *Life is Strange: Before the Storm* (Deck Nine, 2017) utilised an *Intimacy* Variable which was checked to determine the options available to the player when choosing to respond to the in-game characters (DanielWe, 2108). After receiving in-game dialog from a non-playable character, the *Intimacy* variable level was checked and the dialog options that were made available to the player varied based on the result of this check. In *Hannah* I employed the use of variables not to determine the dialog options available to the player but to determine the way in which Hannah responds to the player.

In *Hannah*, a *Trust* Variable is set at 1 at the start of the game. This variable is increased or decreased in value throughout the game as a result of the player’s choices. The aim of this variable is to track how the player is responding to Hannah’s communications with them. Should they respond in a supportive and non-judgemental manner to her communications, the variable will receive a +1 value. Should the player respond to Hannah in a manner that she considers judgemental, this variable will receive a -1 value. Whilst the variable being stored in this game is named *Trust*, it is important to note here that this information is designed to convey much more than the player’s ability to prove themselves trustworthy to Hannah. The *Trust* variable is affected based on the player’s understanding of Hannah’s emotional state and how the responses that they give are relevant to this.

An example of this variable being checked and affecting the player's gameplay is demonstrated at a point in the game where Hannah calls the police. The call takes around 4 minutes during which time Hannah is away from the phone. On her return she writes "OMG How useless…" to the player. The player can choose to respond to Hannah with the option "That was an awfully quick call" or "What did they say?" Whilst responding with "That was an awfully quick call" might seem an appropriate response in this situation, the player needs to consider Hannah's emotional state prior to responding.

In this situation, Hannah is extremely worried about her missing friend, is stressed and is not getting the support she hoped from the police. Due to these events, as well as those in her own relationship not yet disclosed to the player, Hannah is on heightened alert and is feeling sensitive and anxious. If the player responded to Hannah's communication "OMG How useless…" with "That was an awfully quick call", Hannah becomes very upset. At this point, the *Trust* variable receives a -1 value and Hannah replies with "Umm what does that mean? You think I faked calling them? At this point I wish I did for all the good it did". Whilst the player may not have meant to judge or upset Hannah by choosing this response, Hannah's current heightened emotional state meant that the way she interpreted this dialogue resulted in her feeling as thought the player was not using supportive language when engaging with her.

If the player plays the game in a way that results in a very high numerical value on the *Trust* variable, Hannah will feel very comfortable with the player and will reveal and share additional personal information with them. It can be very difficult for someone experiencing DV to speak about the abuse that they have experienced (DVRCV, n.d.-a) and research described previously shows that family and friends of those experiencing DV are the most likely group to first be made aware of the abuse. In *Hannah*, if the *Trust* variable has a very high value when it is checked at a certain point in the game, this means that Hannah has been provided with supportive responses to her

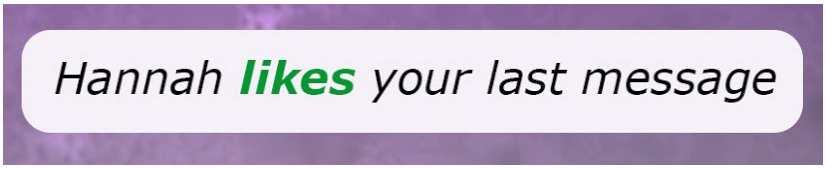
communications throughout the game to this point. It is at this opportunity that Hannah will disclose some of the abuse that she has experienced directly to the player. If the *Trust* variable does not meet the required threshold at that point, the player will be informed about some of the abuse that Hannah is experiencing from Kelsey. Parker's (2015) research into support networks demonstrated that the use of supportive and non-judgemental language was helpful to those experiencing DV as it empowered them to rebuild their self-esteem, and regain their sense of self (Parker, 2015; DVRCV, n.d.-a). Experiences like the above in *Hannah* are designed to highlight the importance of this type of informal support, and to give the player an opportunity to reflect on the importance of the type of language they choose to utilise when engaging with someone who is experiencing DV.

Likes and Dislikes

To reinforce and further guide the player towards empathic play, a selection of choices made early in the game that affect the *Trust* variable positively provide the player with a *like* message from Hannah, as shown in Figure 22, or a *dislike* message where the *Trust* variable's numerical value was reduced due to the player's choice.

Figure 22:

A 'like' message received from Hannah



Note: This screenshot taken by the author demonstrates a message sent to the player indicating that Hannah "liked" their message. Screenshot from *Hannah* by the author.

The visualisation of the *likes* and *dislikes* to encourage empathic play are a hint described by Schrier (2015) as nudges or triggers. Schrier explains how providing this type of feedback to players can help them become more aware, sensitive, motivated, or reflective of their gameplay (Schrier, 2015). Upon making the very first choice that affects the Trust variable and upon receiving a *like* message, the player also receives the following text which appears directly underneath the *like* message:

> *Hannah liked your last message - that's great! When Hannah likes how you interact with her, she'll trust you more and be willing to share more of her story and will find it easier to open up to you.*

In contrast, should the player receive a *dislike* message as a result of their response, they will receive the following accompanying text:

> *Hannah disliked your last message - uh oh! If Hannah feels judged or like a burden, she's less likely to trust you. This will make it harder for her to open up and share her story with you. Try to choose supportive responses to Hannah so that she feels safe with you.*

These messages act as explicit reminders that demonstrate to the player the way in which their actions have consequences and impact. Where the player is playing in an empathetic manner, the text reinforces their gameplay decisions. Where they are not, the text encourages them to consider their choices more carefully in future decisions.

Fail States and Blocks

Whilst the design elements discussed above that guided the creation the game world work to encourage empathic play and reinforce the procedural rhetoric of the game, Bogost (2007) suggests that the unique nature of games allows their designers to create specific rules and processes that "enforce player behaviour along a particular moral register" (Bogost, 2007, p. 287). In terms of social empathy, Segal (2011) suggests that individuals must be provided with opportunities to practice conscious decision making, or to take empathic action (Segal, 2011).

With Bogost's and Segal's work in mind, I wanted to explore creating a system of rules and processes that actively *enforced* conscious decision making, through requiring players to make choices that demonstrated their ability to take empathic action. To explore this, I considered the implementation of a failure state that would prevent players from progressing in the game if they were not demonstrating empathic play. To create such a system, I drew upon the research of Shute and Ventura (2013) who suggest a design element known as stealth assessment. stealth assessment contributes to the procedural rhetoric of a game as it enables games to hide a method of assessing knowledge or skills inside the mechanics and/or narrative of a game design so that the assessment itself is not directly visible to the player. stealth assessment uses the actions of the player in-game to determine the player's level or position regarding a certain competency. These actions are checked or tested throughout the game play and the level, and position or game experience will change based on the achievement of certain competencies.

To explore this in *Hannah*, I created opportunities for the value of the *Trust* variable to be regularly checked, and for a fail state to be employed if a player reached a *Trust* variable value of 0 or below. In this situation, if the *Trust* variable's numerical value dropped

below 0, the game would provide the player with a prompt letting them know that they had failed to support Hannah through her experiences, and that due to the lack of non-judgemental support she had received from the player, she had deleted messenger and would be remaining with the abusive partner.

Research by Giles at al. (2005), Guggisberg (2008) and Humphreys (2008) demonstrates that the way in which support networks respond to those experiencing DV is vital towards positively impacting victim-survivor recovery and as such, an ending like this would work to convey the importance of support networks on victim-survivors. Ending a game in an abrupt manner like this has the potential to demonstrate the importance of their decisions to players (Mawhorter et al, 2014), however where a dead-end results in the end of the gameplay such as above, it prevents players from further engaging with the game. Whilst this ending worked to push home just how important support networks can be for those experiencing DV, it also runs the risk of emotionally overwhelming players.

As I discussed earlier in this exegesis, although an experience takes place in the game world, players may still have a strong emotional reaction to it (Belman and Flanagan, 2010) and becoming emotionally overwhelmed has a negative impact on inducing empathy (Segal, 2011). Segal (2011; 2017) suggests that a good understanding of self-other awareness, or the ability to separate the feelings and experiences of another from our own can work to help regulate emotions and prevent becoming emotionally overwhelmed (Segal, 2011; 2017). To apply this insight, I wanted to develop a system that would communicate the importance of empathic decision making to players, whilst protecting them from a strong negative emotional response. I decided to remove the fail state system from the game, and implemented a block system with the goal of highlighting the importance of player choices, whilst facilitating continued gameplay and promoting an understanding of self-other awareness in players.

To develop an understanding of self-other awareness and ensure that players can employ emotional regulation, Segal (2011 and 2017) suggests that those experiencing strong emotions must have a good understanding that whilst they can offer help and support, individuals are ultimately in charge of their own agency. Research by Khaw and Hardesty (2009) suggested that informal support networks work to support victim-survivors by offering non-judgemental support whilst realising that victim-survivors need to make their own choices about their situations. In the block system I created for Hannah, at various points throughout the game the *Trust* variable is checked.

Where the value of the variable is less than 0, the game simulates Hannah demonstrating the way in which she is ultimately in charge of her own life experiences and blocking the player. Conversation from Hannah tells the player that she really needed their non-judgemental support at this time, and that she's not feeling supported presently. She tells them that she will be blocking them for a while. If the player becomes blocked by Hannah, they receive the following message from the game's system, rather than the message being received from Hannah:

> *Oh no! You've upset Hannah :(She's taking a break for a while.*
> *You should use this time to reflect on what you said and how it might have upset her. Even if you didn't mean to, sometimes something you say can have a big impact on someone.*
> *When she comes back, try to think about how you can help her feel supported when you reply to her.*

During the blocked period Hannah will not speak to the player and the player is unable to interact with the game until they are notified by the game that Hannah has returned to the chat. Such a process has been designed to facilitate self-other awareness by demonstrating that whilst players can give Hannah advice and suggestions, she is ultimately responsible for her own life. During this time the player is provided with an

opportunity to reflect on the reasons for the block, and the text prompts them to carefully reflect on the choices they have made up to this point. Segal (2017) explains that the reflection and understanding developed through self-other awareness can encourage individuals to take social action. As a result of this process, it is hoped that a player will return to the gameplay ready to take empathic action to support Hannah, with a deeper understanding of just how important supportive language choices can be to someone experiencing DV.

Create Summary

Informed by the background research undertaken and explored in the first chapter of this exegesis, this chapter has explained how I undertook the creative exploration process which allowed me to explore ways in which social empathy could be encouraged through the design of an interactive narrative game. To ensure an informed approach to the story, a close reading of victim-survivor stories was undertaken and key themes from these were identified. Informed by the background research into DV, and inspired by Chung's victim-survivor journey, the game's narrative was developed through utilising the Heroine's Journey to explore the key themes identified from the close reading.

Following the development of the game's narrative, I undertook a creative exploration process through the creation of the chatbot *Cleo*, which allowed me to explore some of the practical game design techniques that I could use to encourage social empathy in players. This process allowed me to identify several game design techniques I that I used in *Hannah*, with a goal of creating a procedural rhetoric that promoted the importance of support networks and the way in which they interact with and respond to victim-survivors.

Consult: Prototype Evaluation

Sourcing Informed Feedback

As I discussed earlier in this exegesis, when creating deep games that aim to convey specific knowledges or aspects of human experiences to their players, designers must ensure that they hold a good understanding of the experiences to be conveyed (Schrier, 2019: Rusch, 2017). I suggested that an informed, collaborative process that involves game designers working with those who have a deep understanding of the topics communicated in the game throughout the design process can help ensure a more informed representation of such topics.

Throughout this exegesis I have discussed how the development of *Hannah* was informed by research into DV and anonymised narrative recounts from Australian victim-survivors provided by the Domestic Violence Resource Centre of Victoria (the DVRCV stories). To further ensure the informed nature of the game, an initial evaluation of the game prototype was commenced to seek feedback regarding the potential of the prototype to raise awareness of some of the non-physical elements of DV in its players and their impact, the importance of support networks and their responses, and the potential of the game to incite empathy for victim-survivors.

An evaluation group was sourced that consisted of two cohorts: 1) game developers and 2) professional workers who advocate for, and/or support those experiencing DV. As I discussed earlier in this exegesis, Bogost (2007) suggests that procedural rhetoric is present in all games, regardless of if they were designed with an awareness of this in mind. As such game developers already hold significant skills and knowledge that they utilise to communicate specific ideologies. Sourcing evaluations from game developers provided an opportunity for feedback regarding how the procedural rhetoric in *Hannah*

could be refined and developed to best communicate its intended message. I also hoped that the evaluation process could potentially begin to open a dialogue between game developers and social work professionals regarding the possibilities of games like *Hannah* to raise awareness of social issues such as DV and potentially incite social change.

Whilst the prototype to be evaluated had undertaken initial quality assurance processes, it was still expected that some bugs may be present. The expectation was that bugs would be minimal and would have minimal impact on the evaluation process, however participants were made aware of this fact and were asked to provide any details around potential issues in their gameplay. Participants were provided with contact details of the researchers so that they could alert the developers to any bugs that they experienced during their gameplay, as well as provide feedback with regards to accessibility considerations that could be further included or refined in the prototype.

Participant Recruitment

Professional DV support and advocacy workers were sourced from the Family and Domestic Violence Advocacy Network South Australia (FADVAN), and the Northern Domestic Violence Service (NDVS) (SA). Game developers undertaking the evaluation were sourced from 'Let's Make Games' - the WA Game Development Community and The South Australian Women in Games Network. The term game developer is an inclusive term that may include all the roles involved with the development and production of a game, including but not limited to designers, producers, artists, animators, quality assurance workers and coders. An email was sent to the director of FADVAN (SA), a support worker at NDVS (SA) and moderators for the groups Let's Make Games (WA) and The South Australian Women in Games Network (SA) which requested them to

disseminate information regarding the game and the evaluation to their networks. The initial correspondence noted that all participants must have access to an Android Device on which to play the game. Those interested in undertaking the evaluation were asked to contact the researchers within a one-month period to gain a copy of the prototype and a questionnaire form to complete once they had played the game. Participants were provided with a description of the research project, a participant information form, and were required to sign a consent form prior to receiving a copy of the game prototype and questionnaire form. Ethics approval for this evaluation was granted from Curtin University in 2019 and was provided with the approval number HRE2019-0661.

Access and Evaluation Process

All participants with Android devices who contacted the researchers within the expression period and expressed their willingness to undertake an analysis of the prototype were provided with instructions and support to download the prototype onto their Android device. These details were provided to participants as they expressed interest, throughout the period of July - October 2020. Initially, participants were asked to play through the entirety of *Hannah*, which takes approximately 1-2 weeks from start to finish, depending on how fast or slow players choose to reply to Hannah throughout the gameplay and due to the in-game delays. Once players had completed the game, they were asked to fill out the provided questionnaire and return it to the researchers. The questionnaires provided participants with the opportunity to comment on the following areas:

- How well they felt the game successfully demonstrated some of the non-physical elements of DV through its story

- If they felt the game would successfully invoke empathy for Hannah's situation amongst its players
- If they felt players of the game would be more empathetic to a friend or family member experiencing DV in the real world after playing
- If they learned anything new about DV that they didn't know before as a result of playing
- What potential they see for the game and research to be developed further
- The opportunity to share any other thoughts regarding the game

During the evaluation period one of the participants contacted us to state that they were too busy to complete the full game but that they would still like to undertake the evaluation. A shortened version of the game was created, where the story and the text remained the same, however the delays were removed from the gameplay, and replaced with text stating how long the delay would have occurred for - for example "4 Hours Later" before the next message from Hannah was revealed. All participants were contacted again and were provided with the option to play either the full version of the game, or to access and undertake the shortened version. Most chose to continue with the full version of the game, however at least one participant found the shortened version useful.

Discussion

Ten participants were provided with access details to the game and at the end of the evaluation period we received seven completed evaluation questionnaires. Four of these were completed by professional workers who advocate for, and/or support those experiencing DV, and three were received from experienced game developers and designers. The questionnaires contained no identifying information such as the name of

those completing them but did request their background– ie. game developer or DV support worker. The questionnaires were numbered in the format of the background of the participant and a number, such as Game Developer 1 or DV Support 2, and have been referred to as such throughout this discussion.

Awareness: non-physical forms of DV

Throughout the evaluations that were undertaken, several participants identified that they felt the game was successful in demonstrating some of the non-physical elements of DV, with one participant noting that the game has "certainly proven itself as an effective way of teaching about DV" (Game Developer 3) and that they felt "better equipped" if they were "ever in a real situation similar to the one in the game" (Game Developer 3) after playing. A DV support worker participant commented on the realism of the game, stating that "it felt very realistic. It almost felt like I was undertaking my case manager job at times" (DV Support 1).

Participants listed Hannah's low self-esteem and restricted access to the phone, abusive comments Hannah receives, stalking and coercive behaviour as key non-physical elements of DV that were conveyed in the game. One participant highlighted the way that controlling partners often limit the "social connections, freedoms around leaving the house, access to a vehicle, finances or even phone communication" and noted that these elements were communicated through the game's story (DV Support 3). One participant suggested that they can see great potential for the game to "educate players who have no knowledge or understanding of domestic violence". (DV Support 1).

It was also noted that the "statistics and info" Hannah learns when she calls support services work to help "validate and reiterate" some of the behaviours explored in the

game as abusive (DV Support 4), and another support worker stated that they "would recommend this to people hoping to learn more about how to respond to victim-survivors, as it's a safe place to let their true judgements unfold and learn from them without actually harming anyone" (DV Support 4).

Empathy and support networks

When asked if they felt those who had played *Hannah* would be more empathetic to a friend or a family member experiencing DV in the real world, participants suggested that the way in which elements of the game's narrative and design worked to highlight "how important friends and family are in situations such as these" (DV Support 2) could improve the way in which players respond to learning about DV in the future.

A game developer who noted that they had no previous experience with DV stated that feeling empathy for Hannah and seeing the way in which she was unable to see her own relationship problems actually allowed them to change their perspectives on DV, stating that "being someone who hasn't experienced DV, I often wonder how anyone could let themselves be treated so poorly and this game I think demonstrated this in a clever way" (Game Developer 3). As a result of this shift in perspective, this player theorised that they how have a "better understanding of how someone can get into the DV situation even when they are a smart and rational person" (Game Developer 3) and that this is something they have "taken away and will consider next time [they] judge someone for not leaving an abusive relationship" (Game Developer 3). This feedback revealed how the game had importantly dispelled myths about victim-survivors of DV for the participant.

Participants also stated that they thought "people who haven't had personal experience or have the knowledge of domestic violence and its complexity will develop more

empathy as [the game] is highlighting a real experience. Society sees DV as a victim's responsibility and this game shift[s] this belief." (DV Support 1). Participants also noted that the way in which the game provides two potential responses allows players to "question" the way in which they are responding to Hannah, ensuring that they are "choosing the most suitable and respectful response" (DV Support 1) and that the prompts to reflect on the player's choice of words such as "Hannah disliked this message" could be helpful to players who may "otherwise be careless" with their actions towards those experiencing DV in the real world (Game Developer 2). This feedback is affirming of the design processes used in the game's development, suggesting the capacity of players to gain knowledge about more appropriate responses.

Future research and additional thoughts

Participants also reflected on the game's narrative and explained that it helped them to develop an understanding of why people remain in relationships with those who perpetrate abuse against them, stating that "the twist of Hannah being blind to her own relationship problems versus her friend's was interesting" and that it gave the participant "pause as to how others might end up in these situations" (Game Developer 3).DVRCV, (n.d.-a) identifies that friends and family members are often focused on ensuring that someone experiencing DV gets to safety as soon as possible, and due to their lack of understanding of some of the challenges faced, can feel confused when someone is not willing to access support services immediately.

One of the participants who works professionally with those experiencing DV noted that "clients often say how their supports have backed off from them when they continue to remain in their DV relationship" (DV Support 2). As explored in the *Support Networks* section of this exegesis, it is important not to attempt to persuade those experiencing DV

to leave the relationship before they feel ready to do so as this can push the individual away from support and isolate them further (DVRCV, n.d.-a).

One participant noted that a moment of the narrative worked well to highlight the importance of support networks providing support carefully and slowly whilst reflecting on their experience playing the game. “There was one moment where I said something to Hannah that was good advice but a little too abrupt and judgemental which she didn’t like… This moment stuck with me as it did a good job at demonstrating that you can’t rush things and you have to just make it clear you are there for them when they need it. If you go too hard it will just drive them away and make matters worse” (Game Developer 3).

Several participants evaluating the game also provided constructive feedback with regards to further developing the game’s narrative. One DV support worker commented that they felt both the game, and Hannah herself were “anti” police force, stating that “we need to be careful around people’s experiences with [the police] and not to sustain negative attitudes” (DV Support 2). In contrast, a game developer commented that in the past they themselves have been “targeted by police who lack integrity” (Game Developer 1) and at one point in the gameplay, the player is required to encourage Hannah to contact the police to progress. This player found that this requirement “brought up too much anxiety” for them, and that this drew them out of the immersive experience of the game. Such conflicting views towards the police in the game's narrative demonstrate that this may be a section of the game that requires further development, and could perhaps benefit from additional consultation with players, DV support services, and perhaps the police themselves to create a more informed approach to Hannah’s interactions with the police force. This feedback also indicated that one’s personal and/or professional experience with the police mediated their interpretation of how the police were represented in *Hannah*.

In the game's narrative, both Hannah and Kelsey are able to successfully leave their relationships and access DV support services, and both characters have positive outcomes after connecting with these services. A participant pointed out however that this is not always the case in real life, identifying that the way in which Hannah and Kelsey were able to break free from their relationships felt a little too "quick and smooth"' when Hannah was providing the player with information around the challenges involved with leaving, including that most victim-survivors don't successfully leave on their first attempt (Game Developer 3). This is useful feedback for future game development.

A DV support worker commented on how their own experiences supporting victim-survivors had highlighted to them the lack of accommodation available for those experiencing DV. Future developments or expansions of the game's narrative could explore this element further, with participant comments suggesting that areas such as "multiple contacts to a DV service, even the disillusion pertaining to not being 'high-risk enough' to climb the priority listing for housing, the tragedy of having to leave a pet behind etc." could be explored in the game (DV Support 3).

It was also suggested from several participants that the scale of the game could be increased in length to reflect responses from a broader perspective, through the potential inclusion of more of Hannah and Kelsey's friends into the group chat and the inclusion of perspectives of various DV relationships to "educate further how differing each person's experience can be" (Game Developer 2). However, another participant identified that the game felt long, stating that "the game takes a long time to get anywhere" (DV Support 2). The length of the game was also an issue for another participant who was unable to complete the full version of the game due to the time commitment required. To explore these issues further, future versions of the game could potentially provide a chapter system, where Hannah's initial story is quite short, but additional chapters, or sections, could be accessed at the player's will, perhaps allowing

the player to view other conversations that Hannah has had with the other characters and providing opportunities for new perspectives to be examined and explored. This would allow for the depth and length of the game to be somewhat determined by the player themselves, and players could choose to play only Hannah's story, or they could choose to engage more deeply with the game and examine the alternate perspectives and situations of Hannah's friends and family.

Game Format

Several participants provided feedback with regards to developing their relationship with Hannah through the chatbot style of the game. One of the participants commented that they felt they "did not get the opportunity to establish a relationship/rapport with Hannah prior to jumping into coaching her through her dilemmas" (DV Support 3) and because of this, they noted that at times it "felt taxing to continue responding to what was going on for Hannah" as they were not "invested in her story" (DV Support 3). Another participant who had extensive experience supporting victim-survivors in their role stated that they wanted to speed up the process of Hannah seeking help, pointing out that "with Hannah I just want to tell her what I feel she should be doing without all the second guessing" (DV Support 2). Segal (2007) suggests that in order to invoke social empathy, individuals need to be provided with "insight and knowledge into the life experiences for those which they are feeling empathy for" (Segal, 2007 p.268). Whilst I have attempted to provide a relevant contextual understanding of the DV faced by Hannah through the inclusion of narrative elements about the dynamics of experiencing DV and additional game world elements such as the character profiles, the format of the game as a limited length provides some challenges around providing more extensive contextual information.

To address this, in future versions of the game the potential expansions on the game world discussed earlier could include additional optional game world elements that players can choose to engage with, like the character profiles or perhaps through giving the player more opportunities to engage with other characters such as Kelsey or others from Hannah's past. Such elements could provide players who wish to engage with a deeper understanding of Hannah's life experiences, facilitating the opportunity for them to develop a deeper understanding of the context in which Hannah's story is taking place.

Several participants identified that the delays between some of Hannah's responses (when she is 'away' from the phone) were quite long with one mentioning that Hannah "leaves a little too frequently, especially in the second half. It felt like you were lucky to get 2-3 replies in before she was off again which broke the momentum a little" (Game Developer 3). This constant disappearing and being away from the phone was written into the narrative in order to demonstrate some of the elements of coercive control that Hannah is experiencing and are designed to demonstrate to the player how difficult it can be for someone experiencing DV and their support networks to maintain another connection in the context of abuse. This player's feedback really highlights that they felt this struggle whilst working to support and maintain their in-game relationship with Hannah. However, as Hannah aims to engage players in the game, this feedback demonstrates that further balancing of this element should be considered in future development of the game in order to convey the idea of the challenges involved with maintaining a relationship with someone experiencing DV, whilst keeping players engaged in their gameplay.

One participant suggested that including more multimedia, such as the photographs sent by Hannah could work to "build Hannah more as a character" (Game Developer 3). The participant who felt they didn't establish rapport with Hannah suggested integrating

opportunities for the user to share elements about themselves which would then be recalled in the game, stating that “rapport is built through mutual exchanges of self-disclosure” (DV Support 3). An early version of the game provided an example of this where players were asked to share an image that they loved, and Hannah showed them the image later in the game and said she was using it as her phone lock screen to help keep her strong. This element was removed from the game due to the potential that those playing may be reluctant to share permissions to access photos or images from their phone due to fear of abuse of these images or potential privacy issues. For future development of the game however, further investigation into the risks and mitigation of these could be undertaken to explore if the sharing of images could be carried out in a safe manner that does not put players at risk.

It was also suggested during evaluation, that actual online resources/supports could be integrated into the game, particularly when Hannah herself uses the internet to locate information about DV. This would require changes to the game content on an ongoing basis if websites or online support resources make changes to their content or website URLs. This would also lead to considerations around localisation of the game, ensuring that content such as support websites were relevant to a player’s present geographical location, and as with the image sharing above, this could invite potential concerns around access or misuse of this tracking data.

Referring to the prototype as something other than a “game” was suggested by one of the participants, who suggested that *Hannah* works “really well as a *simulation*”. They raised the concern that referring to *Hannah* as a “game” could “put some people off”. This participant noted that when they started playing, they had certain expectations of what a game would entail, “such as that it would be possible to either win, get points or move to various levels to complete the game” (DV Support 4). This participant suggested referring

to *Hannah* as a simulation rather than a game could help players better immerse themselves in the experience without "being focused on how to win" (DV Support 4).

In relation to this feedback, I suggest that the terminology used to refer to deep games such as *Hannah* is an area that could benefit from further research, as this feedback opens up the suggestion that referring to the prototype as a simulation rather than a game could potentially broaden the player base and may work to encourage those who don't traditionally engage with games to interact with it. However, it may also reduce its uptake as some people may opt to not access it because it is not a game.

Overall, it was very useful to have two different groups of participants evaluate the experience of engaging with *Hannah.* The involvement of the two groups importantly provided different forms of feedback which is critical to the development of a game of this type. Interestingly, but maybe not surprisingly, the game developers commented on how *Hannah* shifted, changed, and increased their understanding of what happens for women in situations of DV. Many of the DV support workers evaluation comments focused on the realism of the situations developed for *Hannah* confirming that the research evidence had been suitably applied to the characters in *Hannah.*

Conclusion

The research discussed in Chapter One of this exegesis identified that informal support networks such as friends and family play a vital role in supporting victim-survivors of DV, however, there is a lack of public understanding around the elements of DV and how they can affect those experiencing them. Informal support networks are often the first to become aware of DV, therefore raising awareness of DV and its impacts in this group has the potential to help strengthen the support they can provide to victim-survivors. Inspired by existing creative narrative-based approaches to raising awareness of DV that incite empathy for victim-survivors through literature and film, this research extends such approaches, by exploring the potential of games to incite Segal's (2006; 2011) social empathy through the development of a game prototype, *Hannah: A Friend in Need (Hannah)*.

As a piece of creative research, *Hannah* provides a practical example of some of the ways Segal's (2006; 2011) social empathy theory can inform the design of an interactive narrative-driven deep game to promote social empathy for victim-survivors and increase player awareness and understanding of DV. As discussed in the *Create* section of this exegesis, elements of Segal's social empathy model informed and inspired both creative and technical aspects of the game's design, including the game's interactivity and narrative. Since social empathy as a concept has not previously been applied to the design of a game, *Hannah* works as a case study into the application of Segal's social empathy theory to interactive narrative game design and some of the ways in which this theory could be implemented.

It is important to note that at this point, *Hannah* is not a complete, polished work. However, despite being at a prototype stage, the Consult chapter of this work discussed that significant encouraging feedback was received from both DV support workers and

game developers regarding the potential of the game to strengthen the support provided by informal support networks. In this preliminary feedback, players identified that the design element that provided them with two potential choices to respond to Hannah encouraged them to reflect on the support they were providing to Hannah, and how she might respond to it. Players further explained that the prompts provided by the design element of Hannah 'liking' or 'disliking' some of their responses helped guide them to play empathically. This feedback demonstrates that the procedural rhetoric facilitated by these design elements was successful in highlighting the importance of the way in which informal support networks respond to victim-survivors.

The feedback process discussed in the Consult chapter identified a particularly encouraging piece of feedback from one game developer participant who stated their existing perspectives towards victim-survivors had shifted after feeling empathy for Hannah and that they now felt better equipped to provide support to victim-survivors. This feedback suggests that including social empathy elements in the game's design were successful in leading the player to feel empathy for Hannah. It suggests that feeling this empathy had dispelled some myths about victim-survivors of DV that the player may have previously held. Identifying that they felt better equipped to provide support after playing the game strongly suggests that feeling this empathy has led to this player being more strongly positioned to act as an informal support network member for victim-survivors.

As well as inciting empathy, the literature on DV discussed in Chapter One highlighted the importance of the accuracy of information contained in deep games, and obtaining information from, and consulting with domain experts and those who have lived experiences is vital to ensure the accuracy and relevance of the information communicated in the game. Such research demonstrates to designers the importance of consultation with such groups as a regular part of the ongoing design process of deep

games. As discussed in the Consult chapter of this exegesis, much of the feedback from DV support workers who played the game talked about the realism of the game's content, confirming that the research evidence had been successfully applied to the development of the game to create an informed game narrative that reflected contemporary victim-survivor experiences. The validation of the realism of the game's content by this group also suggests that *Hannah* and games like it may be able to be used in educational settings to facilitate awareness of situations such as DV to future professionals such as social workers.

As discussed in the Create chapter of this exegesis, during the development of *Hannah,* I discovered that there were no existing game engines that allowed for the creation of the specific design elements I aimed to include in the game to explore the promotion of social empathy. Due to this, the design and development process resulted in the conceptualisation and creation of the *Hannah engine*, a custom-built game engine that enabled the inclusion of these specific design elements with the aim of promoting social empathy. As such, the *Hannah engine* is unique in that it facilitates the design of social media style chat games that allow for deep engagement with first-person narrative-driven stories and promote social empathy in their players. Further development is planned for the *Hannah Engine* to further refine the engine and make it more accessible to teams that involve designers, social workers, and those with lived experiences to co-create interactive narrative experiences with the aim of promoting social empathy.

Throughout the development of *Hannah*, it has been encouraging to see there has been nationwide public and media interest in the game, including a nationally aired segment on *ABC News* in 2020. Articles on the game have been published in various outlets including *ABC News*, *The Lead South Australia* and *Gizmodo Australia*. Interviews about the development and goals of *Hannah* have been provided to various video and audio content creators. In 2021, *Hannah* was named as a finalist in the 2021 *International Gee*

Learning Games Award, alongside many outstanding and commercially successful learning games. Research explored in Chapter One of this exegesis highlighted the importance of ensuring support networks can easily access resources to help them support victim-survivors. To address this, I plan to make *Hannah* available as a free app for Android devices shortly, and funding to create an iOS version of the game will be explored in the coming months. During the evaluation process, several of the DV support workers who evaluated the game expressed their interest in providing *Hannah* to family and friends of their clients and further engagement with formal frontline DV support services to help facilitate distribution of the game to existing informal support networks is planned.

Jane McGonigal said that games have the potential to make us better people, and to even change the world (McGonigal, 2011) and whilst I may not be able to determine the impact that this research and the creation of *Hannah* may have on *the* world, I can say beyond a doubt that the undertaking of this research and the creation of *Hannah* has changed *my* world immensely. As I read back over the preface of this exegesis and my own experiences, I hardly recognise the person I used to be. Through the process of undertaking this PhD research and developing of *Hannah*, I have become someone new. Alongside Hannah, I undertook my own victim-survivor journey, reclaiming and rebuilding my identity as a game designer and an academic.

With my identity as a designer reclaimed and strengthened, I end this exegesis with a call to action – one of the most important parts of any design. I call upon future game designers, researchers, those with lived experiences and those who support them to take the ideas and principles I began to explore in the *Hannah* prototype further. I invite and encourage you to further refine and develop these ideas, to work collaboratively with those with lived experience and domain knowledge to create games, simulations and creative productions that are inspired by social empathy and other social work research. I hope that such productions and pieces will further develop the potential of games and

interactivity to invoke social empathy in their players and promote positive social change. Segal explains that “empathy spreads from one person to another, from one group to another, until differences fade, and ‘they’ become us’” (Segal, 2017 p.190). She suggests that if just a few more people become even a little more empathic, this increased empathy will impact others. The final part of this call to action is a direct call to those of you holding empathy for victim-survivors right now. I want you to know that your empathy is powerful, and I call upon you to feel it. Whether you have always held such empathy, or if playing *Hannah* and exploring this research has helped you identify it, know that it is valuable. I believe this empathy exists to encourage the creation of a society where DV is not accepted, and where support networks for victim-survivors are strengthened. With empathy, you are already changing the world.

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Appendix 1: Hannah Development Team and Roles

Development Roles	Undertaken by
Game production and project management	Susannah Emery
Game design	Susannah Emery
Narrative design and writing	Susannah Emery
Check early game narrative and provide feedback	Dr Samantha Lin (Shakespeare Academy)
User interface design (chat client)	Susannah Emery
Design of additional user interface elements (character profiles etc.)	Susannah Emery
Create in-game graphics (screenshots of posts/messages)	Susannah Emery
Create in-game graphics (photographs)	Susannah Emery
Create Hannah cover art and promotional poster based on provided brief	Andrew G. Taylor
Develop android app according to specified brief (the game engine)	Samantha E. Schaffer
Conversion of narrative to the format required by the new game engine	Joshua N. McLean
Actors for Hannah and Kelsey photographs	Sophia Reinhardt and Caroline Emery
Music creation (character profile music) Additional Game Audio (sound effects)	Joshua N. McLean

Undertake game evaluation with those who support DV survivors and game developers (with regards to gameplay goals)	Susannah Emery
Undertake game testing QA (for bugs and polish)	Joshua N. McLean Susannah Emery Samantha E. Schaffer Andrew G. Taylor
Undertake QA response (make changes as needed in line with testing results)	Joshua N. McLean (Json) Samantha E. Schaffer (App) Susannah Emery