GAME-PLAY AND DIALOGUE SYNTHESIS IN AN RPG

BY

CHARLES LIN

BDES (INDUSTRIAL DESIGN) HON 1ST CLASS,

ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY UNIVERSITY, 2006

A THESIS ESSAY SUBMITTED IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF MASTERS OF APPLIED ARTS

IN

DESIGN

EMILY CARR UNIVERSITY OF ART + DESIGN

2011

ABSTRACT

This thesis details a design process that generates a synthesis between active-driven game-play and dialogue within a computer role playing game (RPG). I intend to generate a process where the player co-evolves with the narrative aspect of an RPG to increase his opportunity to engage and effect the narrative of the game experience. By introducing design methodologies into a game development context, I created adaptive tools through participatory design methods in order to better understand and alleviate points of negative friction during game-play in an RPG. My goal is to facilitate a smoother and more immersive game experience by combining game-play and dialogue together, with both spaces governed by the same cause-and-effect mechanism.

Keywords:

Co-creation, game design, RPG, role playing game, computer game, participatory design, probes, immersion, computational agency

GLOSSARY OF TERMS

360	The Microsoft Xbox 360 video game console
Agency	Direct and immediate participation that causes an equally direct and immediate response in interactions involving a computer. Also referred to as *computational agency*
Affordance	A quality of an object or an environment that allows an individual to perform certain actions intuitively.
Ambient intelligence	Materials (electronics, products, or systems) which are sensitive and responsive to the presence of people.
Audit	A process of collecting specific information in case studies by recording every occurrence of the target subject matter.
Co-creation	A process that emphasies the creation of a product through joint participation by the designer and the user.
Cognitive load	The amount of information a person can make sense of at any one time.
Computer	A desktop or laptop computer.
Console	A home entertainment system designed to work in conjunction with a television.
Dialogue	An element of an RPG which focuses on communication between characters.
ECUAD	Emily Carr University of Art and Design.
Edutainment	A product that combines education and entertainment.
ESL	English as a Second Language.
FPS	The first -person shooter genre in computer games.
Game-play	An element of an RPG which focus on action by the character as controlled by the player.
Gamification	The use of game-play mechanics for non-game applications
GUI	The graphical user interface - an interface that allows users to interact with devices using images rather than, or in conjunction with, text.
Information ecology	A metaphor used when viewing informational spaces as an ecosystem which emphasizes the interrelated nature of distinct features.
Leveling up	A process of increasing the abilities of a character in an RPG.

Multiplayer	Involving more than one human player.
Narrative	A story or account of a series of events
Next-gen	A next generation console - a marketing term for the Playstation 3, Xbox 360, and personal computers which are able to meet the same technical output as the aforementioned machines.
NPC	A non-playable character - usually a character the player's character encounters during the game who might provide the player with helpful or required information.
Participatory design	An approach to design research which actively involves stakeholders in the design process to ensure that the target design meets the needs and requirements of both stakeholders and their environment.
POV	Point of view - usually refers to the player characters view and therefore what the player sees.
Probes	Probes are a set of simple artifacts (cards, maps, pencils, stickers, or cameras) that are given to participants in order for them to record specific events, feelings, or interactions in their usual environment. The purpose is to gain a cultural and textural understanding of the user and their environment (also known as *cultural probes*).
PC	The player character - the character in a computer game that is controlled by the player.
PS3	The Sony Playstation 3 video game console.
Quick-start	A pre-generated character in an RPG which allows a player to begin a game without spending a lot of time creating a character
REB	Research Ethics Board - a committee at ECUAD that ensures that research conducted at the university involving humans adheres to the university's ethical principles.
RPG	A role playing game - a game in which players take on character roles in a controlled fictional setting.
RTS	The real time strategy genre, wherein a game does not progress by incremental turns.
Singleplayer	Involving only one human player.
UI	The user interface, often used to describe the GUI in computer games.
User interaction observations	A process of observing users in action as a form of research.

Wicked problems	A phrase used to describe problems which are difficult to solve due to incomplete, contradictory, or changing requirements.
Wii	The Nintendo Wii video game console.
Zero-sum scenario	A scenario in which there is a definite win or lose outcome. This is a mathematical representation where a player's gain or loss is exactly balanced by the losses or gains of their opponent.

TABLE OF CONTENTS

LIST OF FIGURES

ACKNOWLEDGEMENTS

1.0 INTRODUCTION

People play games, young or old, male or female. We like games because they dispel ambiguity (Schell, The Future is Beautiful, 2010). Games give us a sense of progress and of success, as most games challenge us with problems to solve (Chirag, 2009), and are designed to be won (McGonigal, Gaming can make a better world, 2010). But most importantly, games give us freedom from reality. Their attraction lies in how well they invite and immerse us in an experience. The dimension of immersion is key in our experiences with the extraordinary.

In this paper, I explore instances of fracture between game-play and dialogue in RPG with the goal of diminishing fracture and improving immersion. To start, I begin by considering the existing aspects of RPGs that blend game-play and dialogue into one experience. I then explore how players communicate with non-playable characters (NPC) in an RPG in order to understand and improve player and NPC interactions. This project is not about hardware or software improvements but focuses on managing and navigating content.

Improving immersion invites a player to participate as an active not a passive participant (Barney, 2004). This level of engagement, encouraged by captivating the player through active learning, affords us the opportunity to better understand player interactions with the artificial - in this case, with NPCs. Through this investigation, we can examine the relationship between player and machine (Murray, 1997) - a relationship that is becoming increasingly important as the social potential for computer games is realised (McGonigal, 2007).

Computer games are a product of mass entertainment (Bogost, 2007). But they have also been adapted as agenda advocates such as The Serious Games Initiative and used as predictive models (Marshall, 2009). While the majority of games have been created for entertainment purposes, they have also been leveraged in areas such as medical awareness, emergency services, and cultural change (Nutt, 2010). These shifts have altered our perception of the purpose and abilities of games (Treble, 2010), so that as the medium matures, its content and use also matures (Dinehart, 2009).

Players experience computational agency when engaged with computer games. Cybernetic specialist Norbert Wiener's concept of feedback explains that the computational process allows for constant reinforcement of player position and purpose, facilitating and maintaining agency (Murray, 1997, p. 91).

The significance of computer games lies in their immersive characteristic which stands in contrast to other forms of modern entertainment (Murray, 1997). Advancement in computer game research will allow developers and the public to increasingly view gaming as an active and positive activity (Bogost, 2007, p. 7). As such, this research is critical for the survival of the medium (Remo, Asking 'Why' Will Keep Games Out Of The Ghetto, 2009).

2.0 THE PROBLEM

One of the key features of an RPG is the interaction between the player and NPCs. The immersive power of RPGs comes when the player talks to NPCs (Murray, 1997, p. 242) and then goes on to build a rich tapestry which resonates with the fabric of the game world (Krzywinska, 2009).

The most common form of NPC interaction is turn-based dialogue. The player is given a list of responses to choose from as a way of conversing with an NPC. This list is typically unaffected by game-play actions and remains largely separate from the main body of the game. To enhance immersion, my goal is to improve conversation systems, merging dialogue back into the body of the game as a method of achieving a cohesive experience.

The simplest example of friction in an RPG occurs when the player enters into a conversation with an NPC. The player's immersion is compromised as the game shifts from being movement-driven to dialogue-driven. The transition from action into dialogue is itself not the issue; the change in the rules guiding game-play is what causes friction as the player switches back and forth between different rule sets.

Investigating how a player engages with an NPC, and the intersections between game-play and dialogue, provides an avenue to better equip designers with tools to alleviate tensions between game-play and dialogue. Understanding a player's experience moving from the kinetically charged game-play space into the static dialogue space and vice versa allows the designer to influence that experience.

Deficient transitions damage the overall experience of an RPG, because they interrupt the flow of information (Harvey, 2009).This fracture can manifest as a disconnection between actions in game-play and dialogue that has no bearing on changes in camera point-of-view (POV) for game-play and dialogue (Vidler, 1994). The risk to maintaining the illusion of the game happens when the player has to switch between "languages" - one for game-play and one for dialogue - interrupting the flow of the game. My research project considers the issue of synthesising game-play and dialogue in an RPG and proposes a method of improved dialogue mechanics.

3.0 METHODS/METHODOLOGY

3.1 OVERVIEW/SUMMARY

I used a process of iterating design moves to develop this research project. This process of design research relies on a back-and-forth process of iteration and reiteration for data generation and refinement. See Figure 3.1.1
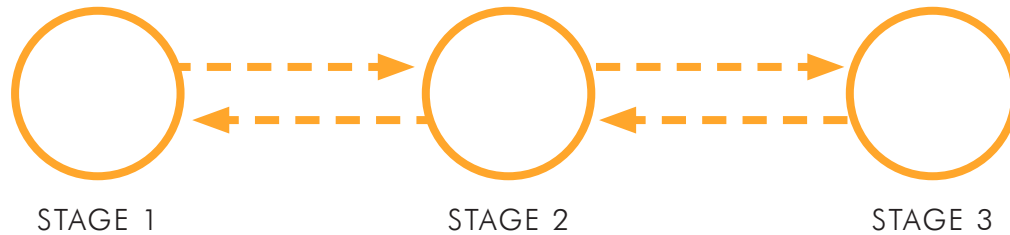
FIGURE 3.1.1: ITERATING DESIGN PROCESS

My project's focus is on a player's experience and his ability to immerse himself in a fictional environment. I conducted case studies of computer RPGs and user participatory research in order to acquire qualitative data (Dykes, Rodgers & Smyth, 2009).

My model for conducting participatory research was based on critical design models such as Nathan Shedroff's unified field theory of design. The purpose of these design models is to connect different schools and disciplines and to overlap process and technique with subject matter (McCullough, 2004, p. 154). I also considered case studies and research management material from scholarly design journals and consumer publications with this goal specifically in mind.

My process was conducted in three main stages. The first stage limited the lines of inquiry. This was to ensure that the resulting thesis question was specific rather than broad, and allowed for a worthwhile avenue of research for a two-year project. See Figure 3.1.2.
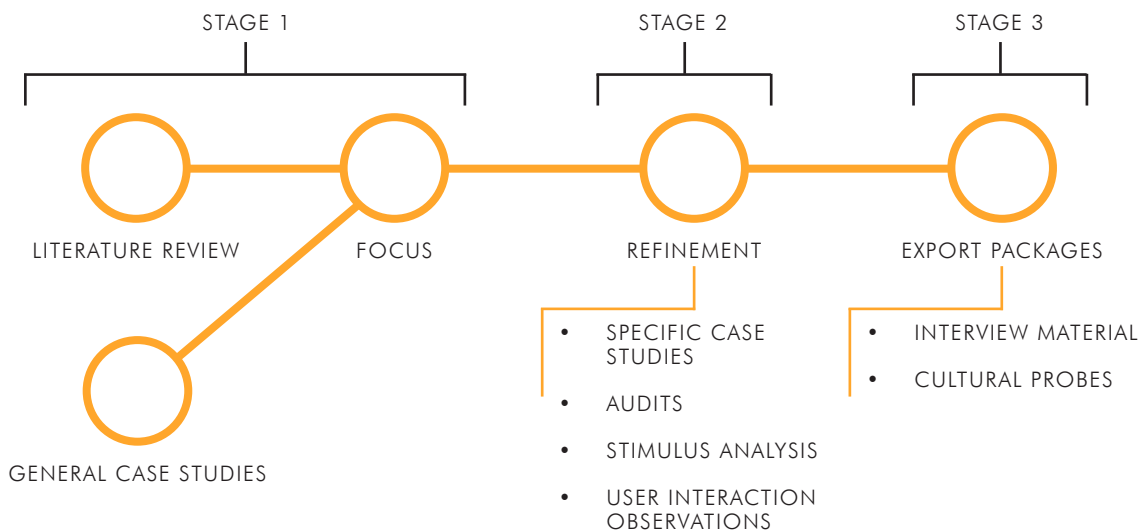
FIGURE 3.1.2: ITERATING DESIGN PROCESS IN DETAIL

This first stage of the thesis project involved a literature review of both academic and popular publications in conjunction with a generalised set of case studies. The combined purpose of the literature review and the generalised case studies was to limit and narrow the focus of the project.

I conducted a literature review in order to gain a deeper understanding of relevant theory. This wide knowledge base allowed me to determine "prescribed and systematic methods of coding and identifying relationships between categories". This material then assisted me in limiting and focusing my lines of inquiry (Leedy & Ormrod, 2010, p. 146).

Method	Purpose
Case study	To understand a situation in greater depth focusing on observations, interviews, and documentation. This can be characterised with the categorization and interpretation of data through common themes and the synthesis of an overall portrait of the ecology.
Literature Review	To derive an understanding based on theory which can present itself through prescribed and systematic methods of coding and identifying relationships between catagories

(Leedy & Ormrod, 2010, p. 146 - abridged diagram)

FIGURE 3.1.3: CHARACTERISTICS OF DATA COLLECTION METHODS

A generalised case study was conducted to achieve the purpose of "understand[ing] [the] situation in greater depth, [by] focusing on observations...and documentation". Case studies are "the categorization and interpretation of data through common themes and the synthesis of an overall portrait of [an] ecology" (Leedy & Ormrod, 2010, p. 146).

As the first stage focused the thesis subject matter, the second stage allowed me to refine my line of inquiry. This stage included specific case studies, audits (both visual and audio), stimulus analysis, and user-interaction observations. The purpose of this stage was to generate a more refined and focused line of inquiry. I next repackaged the data gathered into interview questions and cultural probes for the human participant research study in the third stage. See Figure 3.1.4.
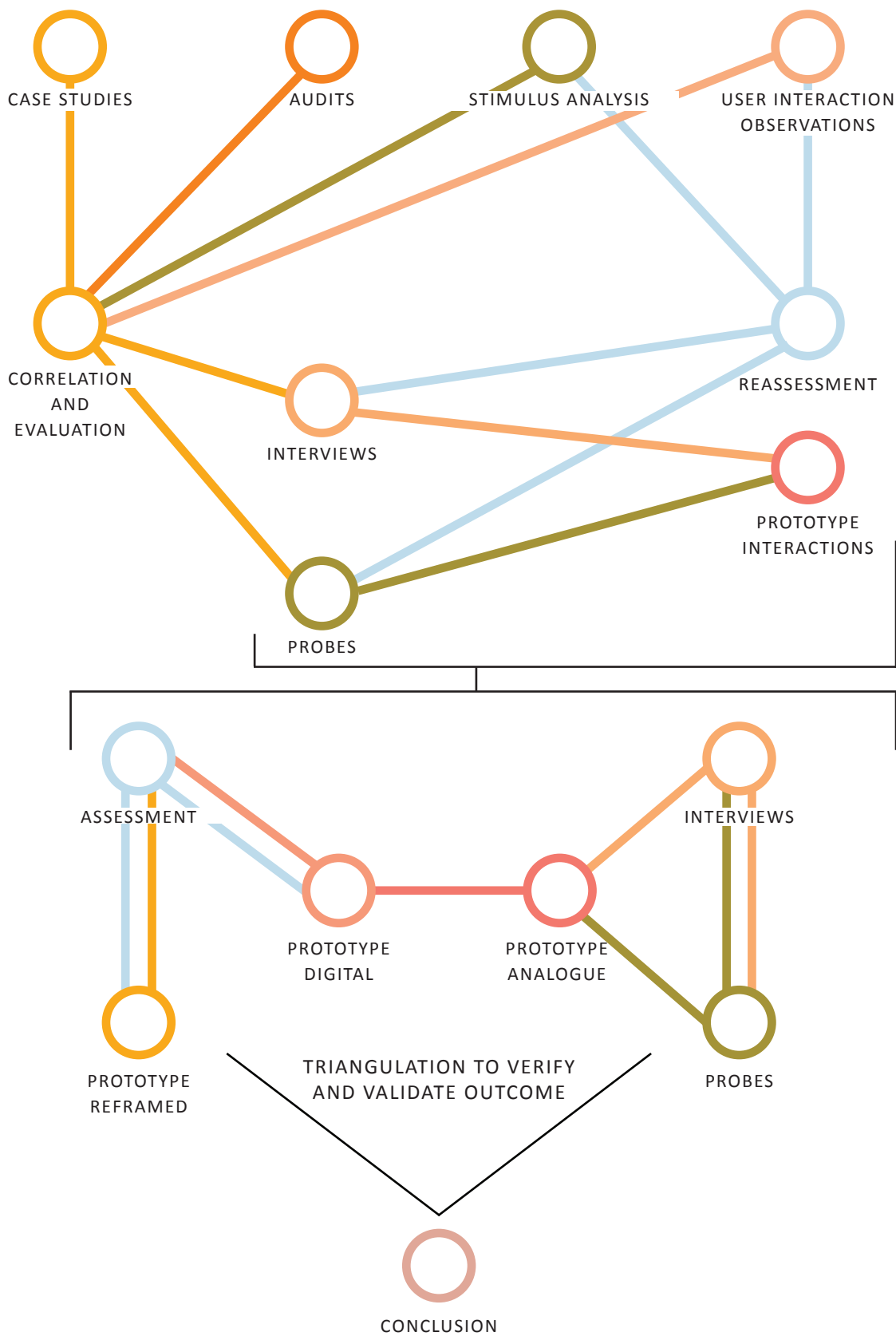
FIGURE 3.1.4: STAGE 2 RESEARCH PROCESS IN DETAIL

The case studies conducted in the second stage were focused solely on computer RPGs. My purpose with the second round case studies was to examine the delivery of narrative in RPGs and how players were involved in this element of the game.

During stimulus analysis, I looked at what cues, whether audio, kinetic, or visual, triggered responses from the player. Stimulus analysis focuses on the micro picture, as opposed to the audits I later conducted, which consider the macro picture. Using the data gathered by stimulus analysis, I established a database of cues or signifiers that the RPGs in the case studies were using to trigger responses in players.

The user interaction observations I next conducted allowed me to observe what a player does when he sits down and begins playing. Criteria considered ranged from how easily a player navigated the game's GUI to how many times the player had to click the mouse before play began, and what effect this had on the player.

I then used audio and visual audits to observe storytelling components in more detail, specifically how narrative was expressed to a player and how the player received that information. For example, I noted how camera POV was used in specific settings and confrontations between the player and NPCs. Figure 3.1.5 and Figure 3.1.6 are examples of how I then experimented with that information on paper. For the audio audits, I observed how background and ambient noise was used during idle moments while a player was choosing a conversation response.
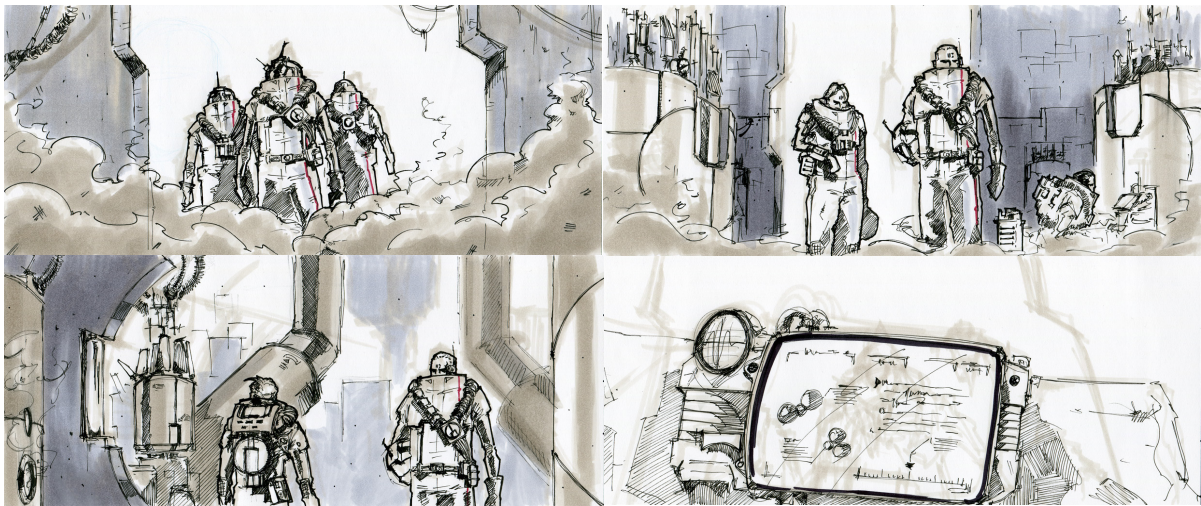
FIGURE 3.1.5: EARLY POV VISUAL EXPLORATION
An early exploration of how POV worked in establishing a game setting. The purpose was to look at how important POV was at creating player position and purpose.

FIGURE 3.1.6: EARLY COLOUR TEST
An example of a colour and POV test. I experimented with several such tests during the initial generalised case studies as a method of expanding on the visual audits conducted later on in the specific case studies.

Each one of these research stages linked and informed the other. The dividing of the process into individual components reflected a process of teasing apart an RPG. The initial stages provided insight into how to frame and package the human participant research study, which involved interview questions and cultural probes as components of a participatory design process in which participants engaged with the line of inquiry (Board of International Research in Design, 2007).

Once the data from the initial stage was collected and considered, I approached participants for the research study. The study included interviews, discussions, hands-on play of two games, and a co-creation activity. The purpose of multiple components was to allow the participants to design the problem (Buchanan, 1992). The synthesis of game-play and dialogue is a wicked problem; there are no true definite boundaries to the problem, so it becomes important for stakeholders to work with the designer to determine and frame the problem. In this type of research, the study becomes part of "a system of observing systems" (Board of International Research in Design, 2007) by identifying systems, the diversity of entities within the system, keystone species, and their locality (Nardi & O'Day, 1999, pp. 51-55). In this type of process, the designer does not take ownership over the design nor the discovery of the problem, but becomes part of the environment in which the problem is imbedded in order to solve for it in context and not in a vacuum (McCullough, 2004, p. 154).

3.2. STAGE NO.1 – CONTAINING AVENUES OF RESEARCH

I. LITERATURE REVIEW

I conducted a literature review at the beginning of the research project, and maintained the review until the closing stages (when I began prototype development) in order to establish a solid intellectual foundation for my ideas and propositions. The literature review introduced material that helped frame the subject matter and develop and shape the thesis topic in a way that ensured relevance and credibility. I measured relevance against existing works and fields of study, and gauged credibility by the depth of the preexisting work and their associated fields of study.

The literature review allowed me to derive an understanding of my topic based on theory, which could present itself through prescribed and systematic methods of coding and identifying relationships between categories (Leedy & Ormrod, 2010, p. 146). This material allowed and facilitated the limiting and refinement of my thesis topic into a concise and cohesive body. The literature review, whether popular or scholarly, constructed a base for my project while acting as a constraint preventing the exploration of additional lines of inquiry that, while interesting, were tangential to my thesis.

I divided the literature review into popular and academic pieces. "Popular" denoted material found in popular publications which were rich with authors' hands-on experiences. What popular publications lacked in traditional academic rigor was compensated for by the authors' lived experiences of the subject matter. As such, material which fell into the popular publications category included journal articles written by game designers such as Stephan Dinehart, reviews and observations from game journalists such as Leigh Alexander, and interviews from Joe Quesada, the Chief Creative Officer of Marvel Entertainment.

"Academic" denoted material gathered from scholarly publications - publications which possess complex ideas and academic rigor in their research and propositions. These publications balance the popular publications. The use of both types of publications allows the inclusion of both explicit and tacit knowledge – knowing through thinking balanced by knowing by doing (Tonkinwise, 2008). The insights offered by the popular publications were "gut feelings" or instinct bred from experience - an intuition of knowledge - while academic publications explain knowledge derived from research and study.

The academic materials included information and theory on understanding information ecologies (Nardi & O'Day, 1999) and situating or integrating designs through stakeholders, as practiced by Dunne and Raby. Understanding a subject's ecology highlights the importance of situating design solutions. As with an environmental ecology, the addition or removal of an entity can cause catastrophic results. Understanding a subject's ecology ensures that design solutions enhance an ecology rather than harm it (Nardi & O'Day, 1999).

In addition, I explored other areas of design theory such as understanding and identifying wicked

design problems, stress testing for user cognitive loads in interactive environments, the gamification of our everyday experiences, and the potential of augmented realities for solving design problems.

Undertaking the literature review increased my ability to visualize the subject matter's geography and identify which elements would provide both an interesting and worthwhile line of inquiry. By conducting the literature review, I was able to evaluate relative points of interest. The knowledge provided by the literature review, in conjunction with the generalised case studies, encouraged a process of limiting the thesis project until it became a concise and coherent body with a clear and focused line of inquiry. With a focused and clear direction, additional case studies or participant research could then be conducted in greater detail to gain more depth as my project progressed (Thackara, 2005).

II. GENERALISED CASE STUDIES

While conducting the literature review, I ran a series of generalised case studies. I used these generalised case studies to gain an understanding of a situation in greater depth, and to enable a focus on observation and documentation. These case studies included a process of categorization and interpretation of data through common themes and the synthesis of an overall portrait of the ecology (Leedy & Ormrod, 2010).

In the initial stages of the project, the case studies helped me determine and eliminate lines of inquiry that were not as relevant or interesting in light of the literature review. I measured relevance and interest against my own personal prejudices and the findings from the literature review in terms of preexisting fields of research and the potential depth a particular line of inquiry might possess.

Specifically, I focused on avenues of research through a combination of my own personal choice, the literature review, and the material extracted from the case studies. By combining these factors, I established a line of inquiry which was interesting as both an area of research and a line of development which would be engaging for a player. At the core, regardless of its category, an RPG is still a game - a medium for entertainment. This thesis privileges this fact rather than obfuscates it because of the importance of immersion in an RPG.

These case studies do not make distinctions between medium and genre. The goal at this preliminary stage was to establish boundaries and limitations. Therefore, both digital games and traditional games (board, card, and tabletop) were explored for a broader textual understanding of the ecology.

The case studies cover board games such as *Settle's of Catan, Carcassonne,* and *Monopoly*. The purpose of this initial inquiry was to understand the context of a game and narrative's relationship to a game in an analogue setting, and to attempt to identify ambient intelligence in the game's design (Aarts & Marzano, 2003). I believe that exploring this relationship in a pre-digital state allowed me to develop a better grasp of the nuances of the line separating game-play and narrative in games.

In addition to the board games, I explored several other analogue games, including traditional pen-and-paper role playing games, miniature war games, and card games. Though the project later focused on single-player experiences in an RPG, the analogue games explored at this stage were all multi-player games (whether cooperative or competitive).

My purpose in including these games was to understand the development of narrative and its effect on the experiences a player has. In a pen-and-paper setting, the presence, purpose, and effect of narrative is easily identified and recognized. The narrative becomes harder to pin down, however, when placed in the context of tabletop wargames or card games. In these instances; a meta-narrative manifested, as the narrative formed between the actions of the players simultaneously with the narrative of the actual game setting.

As with analogue games, I explored several video and computer games from different genres and platforms. They included genres such as RTS, FPS, RPG, musical, and arcade. As with analogue games, my objective was to examine narrative and its relationships with game-play. My purpose was to gain a textual understanding of video and computer games, their ecologies, keystone species, and the overall relationship narrative has with game-play within different genres.

III. THE RETURN

The benefit of conducting both a generalised round of case studies and a literature review was my consequent ability to identify a thesis question. This ability was informed by both tacit and explicit knowledge, and allowed me to determine the relevance of my study and if it was interesting enough to indicate a potential benefit for digital entertainment.

By limiting the project through a literature review and generalised case studies, I was able to consider subsequent stages of the process and to focus on key facets of the thesis question which would have been otherwise closed off. The constraints of a problem allow for a richer design process and solution; had the project not been constrained, the potential of developing a creative solution would have become harder, as it becomes much more difficult to gauge the success of a solution against a problem possessing a nebulous body.

3.3 STAGE NO.2

I. SPECIALISED CASE STUDIES

Having established the thesis question's to focus on RPGs, specifically on the importance and role of narrative in RPGs, it became possible for me to undertake more refined and specialized case studies.

This second stage of case studies focused on digital RPGs and were concerned primarily with how narrative was packaged and delivered to the player and the subsequent relationship between narrative and

player, and narrative and game-play. While the earlier case studies gather a surface or textual understanding of the subject matter, these specialized case studies were orientated to mine deeper into the subject matter in and around narrative.

The case studies addressed the questions of who, what, when, why, where, and how as often as possible. This resulted in lines of inquiry focusing on the following:

- What sort of game is it?

- What game mechanics are present?

- Does the game promote individual mechanics or multiple mechanics working together?

- What is the visual language being used?

- How is the visual language being used?

- How is the camera managed?

- Why is the camera being managed in this way?

- What is the game's audio language?

- When and how is that language being used?

- How are NPC interactions managed and why?

- How is the game experience balanced overall?

- How is the UI positioned in relation to everything else on screen?

- How does the UI work with other components of the game?

My goal in focusing the case studies in this manner was to mine material and piece together where narrative sits in the dynamic between game-play and dialogue. My purpose was to generate enough material to inform the participant research study, and the continued refinement of the thesis.

As these case studies focused on RPGs, I employed several games including *Mass Effect, Mass Effect 2, Dragon Age: Origins, Heavy Rain,* and *Fallout 3*. Each of the games are considered next-generation RPGs, meaning that they have been developed within a technological bracket bound by the hardware capabilities of the PS3 and Xbox 360.

Each game also represents a different style of RPG. I canvassed different types and styles of RPGs in order to understand the components that bind RPGs together as games when narrative is deeply woven

into the game-play. *Mass Effect* and *Mass Effect 2* represent action RPGs, with game-play functioning very similar to action games such as *Gears of War,* but while maintaining a strong narrative and role playing element. Of note is the dialogue system, which guides the tone and direction of the protagonist's conversation rather than having the player choose direct responses. *Dragon Age: Origins* represents an RPG deeply influenced by traditional RPGs. It possesses an isometric POV and tactically complex game-play mechanics. Its dialogue system also harkens back to earlier RPGs were players selected their response verbatim from a provided list. *Heavy Rain* represents the biggest departure from RPG conventions which most players are comfortable with and have come to expect from RPGs. The game itself represents more succinctly an interactive drama than a game, as expressed by *Heavy Rain's* director David Cage in development diary interviews (Dream, 2008). *Fallout 3* is a blend of both RPG and FPS genres that weaves game-play and role-play elements far tighter than the previously mentioned titles. As a result, its narrative is heavily embedded within the core game-play mechanics, differentiating it from other RPGs such as *Mass Effect* or *Heavy Rain.*

Mass Effect 2* was a late entry to the case study pool due to the game's release in 2010. It was crucial to include the game, however, because of its connection to *Mass Effect* (*Mass Effect 2* being a direct sequel) and *Dragon Age: Origins,* as both the *Mass Effect* franchise and *Dragon Age: Origins* are developed and published by the same company. As such, Mass Effect 2 presents an example to compare and contrast with both *Mass Effect* and *Dragon Age: Origins.*

Mass Effect* and *Mass Effect 2* fall into the category of action RPGs. The game-play offered by the franchise situates the player with an over-the-shoulder 3rd person POV. Game-play is orientated toward short- and mid-range gun battles with an emphasis on using environmental cover to mitigate damage. Dialogue and NPC interactions in the franchise use a system of conversation based on tone and direction. When speaking to an NPC, the player directs the tone and direction of the conversation rather than selecting what they wish to say. Moreover, the player does not create their own character, but modifies the game's protagonist, Commander Shepherd, who can be either male or female, with a customizable background and profession.

Dragon Age: Origins* is a traditional computer RPG. The game's emphasis is on narrative and exploration. The player is provided with a wide and detailed array of options to create their own character with their own narrative. The game, when played on a computer with an isometric camera, allows the player to scroll down until the camera becomes an over-the-shoulder 3rd person POV. Game-play allows the player to control a party of four characters with an emphasis on using all four characters in concert during combat. The combat uses swords and sorcery styles similar to the franchise *Dungeons and Dragons*. The game places heavy emphasis on the actions and consequences of the player's decisions in both game-play and dialogue. In dialogue, the player is provided with a list of lines they may choose to say to an NPC. Additional lines of dialogue become available to players as their relationship with the NPCs waxes and wanes.

Fallout 3 is a survival RPG. It differs from most RPG templates with its use of FPS game-play mechanics. The game,at its core, is a balance between item and inventory management and FPS game-play. The game situates the player in a first person POV with the option of scrolling back until it is a 3rd person POV. The game places less emphasis on player and NPC interaction and more on manipulating and navigating the game narrative through game-play.

Heavy Rain is an unconventional RPG with emphasis on atmosphere and role habitation. The game-play for *Heavy Rain* allows the player to control one of the four protagonists in a manner which mimics their on-screen gestures and movements. Emphasis is placed on the consequences of succeeding or failing certain tasks that the game presents to the player. This emphasis on displacing or reconfiguring the narrative and its privileging of experience and atmosphere over conventional game-play mechanics differentiates this game from others in the same genre. The game uses a variety of POVs ranging from fixed POVs to over-the-shoulder 3rd person.

These case studies in particular highlight the importance of narrative in an RPG. An RPG is not solely a competitive game; its purpose is to deliver a narrative experience balanced by game-play. The core of the game is dull and incomplete without narrative; without game-play, an RPG also becomes less interesting.

For example, if the narrative were removed from *Heavy Rain*, it would leave a game-play architecture of gestures divorced from reason. When the game compels a player to move in a certain way, the move is reinforced by narrative. The narrative gives the player a reason to gesture a particular manner with our controller to move Ethan (one of the protagonists in *Heavy Rain*) left or right. If the narrative were removed, the player would lose his sense of agency, because the relationship between Ethan, or any of the other characters, would become distanced and uncanny (Burnett, 2004).

The character creation in *Dragon Age: Origins*, illustrates the importance of narrative in allowing a player to project part of himself onto the game world. If the narrative were removed, this absence would sever the link between player and player character, thus making it harder to see the relevance of play within this single-player environment (McGonigal, Gaming can make a better world, 2010). Multi-player games in contrast, do not require narrative built into the game because players build their own meta-narrative amongst themselves from their interactions with other players. In the single-player RPG, narrative becomes paramount as it provides the game with a purpose. Any division between game-play and narrative is a detriment to a game's ability to attract and engage a player because the flow of computational agency is disrupted (Murray, 1997).

The specific case studies I conducted gave me a far better understanding of narrative's role and its effect on both player and game-play than my earlier iteration of case studies. The second round of case studies contained more specific questions that dove deeper into the subject matter and helped me to identify

the actors within an RPGs network (Barney, 2004, p. 144). These questions investigated the importance of narrative, its perceived and actual effect on a player's experience, and if the narrative was crucial to the game, or was just padding. The literature review compared with the generalised case studies allowed for a precise focus on the ecology, locality, and specifics of the relationship between narrative and an RPG. In narrowing the focus, I began to recognize the elements or actors within the system as I slowly become aware of their presence from this iterative immersion process (Manzini, 1992).

II. AUDITS AND STIMULUS ANALYSIS

The second iteration of case studies included both audio and visual audits. The purpose of the audits was to identify which audio and visual cues or triggers each game used to elicit specific responses from the players. In addition, the audits identified the common triggers found across the case studies.

The audits indicated when and how audio and visual triggers were used to grab the attention of the player and which triggers were used for specific circumstances. These results informed the construction of the interview as well as the probe material given to the research participants.

From the visual stimulus analysis, I created a number of colour tests to experiment with the information. Examples of these tests are shown in Figure 3.3.3, Figure 3.3.4, Figure 3.3.5, and Figure 3.3.6. I also conducted character blackout studies (Figure 3.3.1 and Figure 3.3.2) to experiment and understand how developers keep the player character recognisable for players against a busy background. I then conducted early design sketches to visualise an alternative character creation process, as demonstrated in Figure 3.3.7.

Using stimulus analysis. I investigated how effective the audio and visual triggers were in achieving their objective. I examined how effective, for example, the use of audio was in a game's tutorial to explain game-play or plot. My purpose was to determine how useful certain triggers were in certain circumstances - whether they hindered or improved a player's performance, and if they added or subtracted from the player's cognitive load. As with the audits, the end purpose was to inform both the interview material and cultural probes.

FIGURE 3.3.1: INITIAL VISUALISATIONS OF CHARACTERS BLACKOUTS MK.1
These images, along with figure 3.1.8, served as early expansions of the stimulus analysis material. My purpose was to explore how players read figures on screen and to understand what developers are doing in terms of generating easily and quickly recognisable figures.
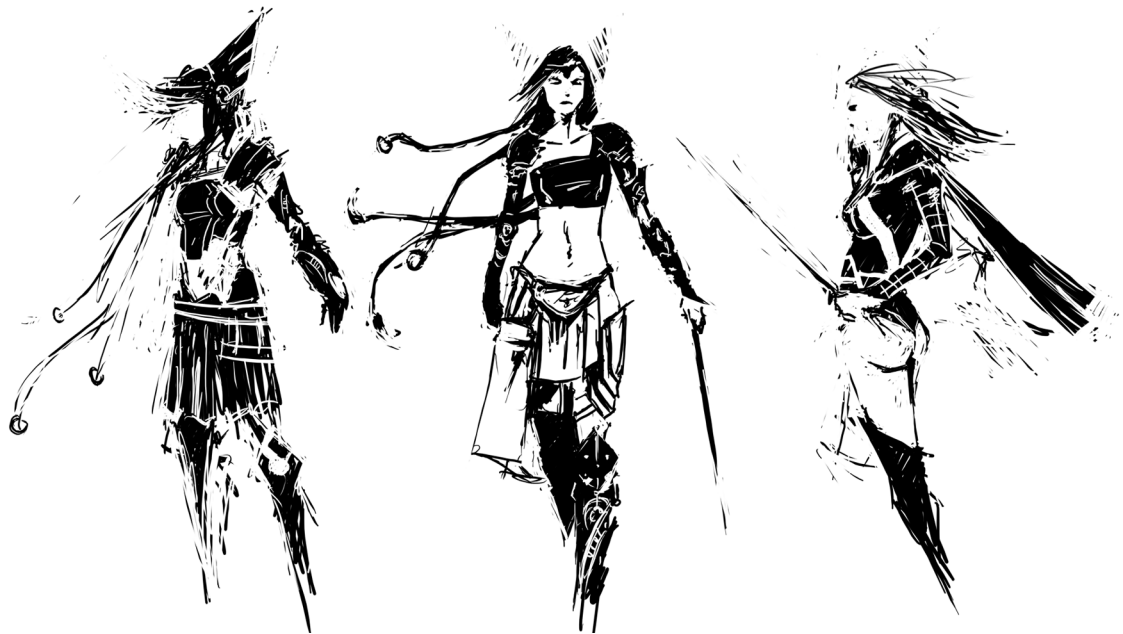
FIGURE 3.3.2: INITIAL VISUALISATIONS OF CHARACTERS BLACKOUTS MK.2

FIGURE 3.3.3: COLOUR EXPLORATIONS MK.1

I conducted colour tests during my examination of the material gained from the visual audits. The purpose of these explorations was to play with how colour and scale aid in creating the game illusion while also establishing where the player can or cannot go with subtle cues such as canyon walls or bodies of water.

FIGURE 3.3.4: COLOUR EXPLORATIONS MK.2

This was one of several colour tests to come out of a combination of the visual audits and participant studies. Some participants indicated that they found it difficult to recognise their characters on screen at the beginning of a game. This was one of several images created to determine how colour and shape (or any outstanding feature) can be used to ease player recognition.

FIGURE 3.3.5: COLOUR EXPLORATIONS MK.3
This visual image was one of several colour palette images that I created to establish the mood and tone of a game. I created several of these images with different colour palettes in an attempt to build up a visual colour language often found in games that I could later fold into the participatory design process.

FIGURE 3.3.6: COLOUR EXPLORATIONS MK.4

FIGURE 3.3.7: CHARACTER CREATION MK.1
This image illusrates one of my early attempts at generating a character creation system after correlating the information from stage 2 of the research process (before the participation of the players from the research study). These early attempts were the precursor concepts for introducing Personality and Trait into the character creation process.

III. USER OBSERVATIONS

At this stage, I began to include user observations, which I continued with in the participant research study. Initially, I estimated how players would approach and engage with certain games. At this iteration, the games in question included the games used for the specific case studies; in the latter iterations when the research study process was finalized and approved by the Research Ethics Board (REB) at Emily Carr University of Art and Design (ECUAD), only *Mass Effect 2* and *Dragon Age: Origins* were included.

I began with estimates of how players would engage with the games in order to set up a point of reference against which to compare the actual experiences of the players. These estimates allowed me to create questions for the interviews and probes that would act as points of conversation. My goal was to present a list of reasonable reactions and expectations that a player might experience and to see whether these assumptions were true or false and why these results either deviated or conformed.

3.4 STAGE NO.3

I. OVERVIEW

With the material from the case studies, audits, stimulus analysis, and user observations, I proposed a research study process to the REB at ECUAD. The research study involved human participants, had four phases and was voluntary. A participant could opt in or out of any phase.

Participants were invited to engage in cultural probes, interviews, hands-on play with two games, and discussions. They were chosen based on their knowledge and experience in narrative-driven games. Participants were recruited from online gaming forums, tertiary educational forums, and through direct approach. Each participant was provided with a letter of invitation, an information package, and relevant informed consent documents.

The letter of invitation outlined the objective of the project, the participant's role in the research study, and the potential benefits and harm that participating in the project could involve. The information package detailed the parameters of the project, under what auspices the study was being conducted, the minimal risks and potential benefits that participants could encounter from the research study, and the contact information of the principle investigator. The informed consent document reiterated the material contained in the information package in more detail. A second document requesting the participant's signature as an indicator of their willingness to participate was also included.

Part one of the research study consisted of an interview for each participant. The participants were invited to speak about their relationship with games, specifically with narrative-driven games. The conversation focused on the gaming history of the participants and included lines of questioning on how their interest in games had changed over time, as well as how they were introduced to computer games.

The intent of the interviews was to establish an understanding of a participant's perspective on games, in order to narrow down the questions and topics included in part three of the research study.

Part two provided the participant with two RPGs: *Mass Effect 2* and *Dragon Age: Origins*. Participants were given a suggested time limit to play the two games of ideally a minimum of 15 to 20 minutes per game, and up to a maximum of 2 hours in total.

The two games were chosen from the larger selection of games included in the case studies in previous iterations of the research process. The research study results can be measured against those of the case studies to ensure that no particular points of interest were overlooked or overly promoted due to my prejudices. In addition, *Mass Effect 2* and *Dragon Age: Origins* present an excellent opportunity for comparison because both were developed by the same company and released within a few months of each other. Consequently both games shared a similar development pipeline even though they engage the player differently in their play styles; the two games balance and complement each other.

Part three of the research study involved a feedback session regarding the participants' experience with playing *Mass Effect 2* and *Dragon Age: Origins*. The questions focused on immersion and agency. In particular, I asked questions regarding the relationship between the participant's interview responses and their responses in the discussion. This allowed me to compare the differences between the participants' recollection of RPGs, and what they felt immediately after experiencing an RPG.

The fourth part of the research study involved the participants in a cultural probe co-creation activity as part of a participatory design workshop. A participatory design workshop is a process involving both the stakeholder, in this case the research study participant, and the designer, myself, in a joint process of identifying an issue and designing for a solution. The co-creation activity acted as a generative tool allowing the participant to articulate the problem and their proposed solution.

Collectively, the material generated from the research study offered a framework for identifying problems through a system of observing systems (Board of International Research in Design, BIRD, 2007). The material gained thus enabled a synthesis between the explicit knowledge, that which is researched, and tacit knowledge, that which is gained by doing.

II. INTERVIEW IN DETAIL

Having compiled data from the previous iterations, I next constructed the interviews and probes and submitted the collected material to the REB at ECUAD for approval.

In order to ensure that the interviews maintained a clear direction and objective while also ensuring that probes maintained relevance to my thesis question, I constructed a skeleton from the participant interviews. This framework, which included the line of questioning as well as the content of the questions,

was based on a synthesis of the information collected in previous iterations including the case studies, audits, stimulus analyses, and estimates from user observations.

The interview questions were designed to be as specific as possible without eliminating the potential for unexpected answers. Each question was designed to be not only specific to the subject matter of the thesis (RPGs), but also general enough to accommodate participants with a range of exposure levels to games, in particular to RPGs. Depending on how the interviewee responded, I would follow with further questions asking for examples or specifics. The questions used for the interviews were as follows:

1)   What would make you play an RPG or any narrative game?

2)   What about an RPG attracts you to the game? Which elements of the game do you find
       most alluring?

3)   What is the hook that makes you buy an RPG? Is it the developer, franchise, attached names etc?

4)   What would break an RPG for you?

5)   What would ruin the experience of the game?

6)   How would you describe yourself in terms of your level of participation in playing games?

7)   On a scale between avid gamer across to casual gamer where do you see yourself?

8)   On a scale between competitive gamer to social gamer where do you see yourself?

III. CULTURAL PROBES AND CO-CREATION IN DETAIL

I designed the cultural probes as a co-creation activity. My goal was not to achieve a holistic textual understanding of the ecology, but specific elements within it. The co-creation activity acted as a generative tool for participants to illustrate and articulate their desired experience with an RPG. In addition, this activity offered each participant a venue to express and articulate any opinions and perspectives that were not included in the interviews and discussions. The purpose of the activity was to allow the participants an arena to articulate their experiences of playing RPGs and to contrast that with their ideal scenario of playing an RPG. As such the co-creation activity drew directly on information from the audits and stimulus analysis to construct a set of images, icons, and tools to give to each participant to assist them in visualising their ideal engagement with an RPG.

Each co-creation activity contained still images from the 2004 film *Troy* (Benioff, 2004). The stills from the film were taken from the confrontation between the characters Achilles and Hector. The

participants were provided with these stills, a collection of icons and images, blank paper, glue, pencils, scissors, and instructions. The instructions asked each participant to use the material provided and in addition to material of the participant's choosing, to reconstruct the sequence into an RPG. The participants were free to take as much or as little from both literature source and the film stills to construct their own game experience. The instructions were intentionally specific enough to result in the desired outcome, but vague enough to allow each participant to explore their own solution (Goodwin, 2009).

FIGURE 3.4.1: CO-CREATION KIT

The purpose of the co-creation activity was to see in a tangible way what the participants wanted in an RPG scenario and to measure that against what is generally assumed by the game industry to be wanted. The activity was a physical articulation intended to add depth to the cerebral articulations gathered during the interviews.

By emphasizing feedback from participants of the research study and supplementing this data with information gathered from the literature review, I was able to privilege the players' experiences with the games above other agendas. By promoting the players' experiences and feedback, and supporting this information with data authored by individuals with a background in game development and academia, I ensured that the game facet of the research would become the dominate stakeholder in the project (Goodwin, 2009). The combined results of the interviews and co-creation activity provided data to launch the next phase of the project: prototype development (Crilly, 2010).

FIGURE 3.4.2: RETURNED CO-CREATION KIT NO.1
This co-creation kit returned by a participant focused on designing the UI as it would be seen by a player.

FIGURE 3.4.3: RETURNED CO-CREATION KIT NO.2
This co-creation kit returned by a participant focused on describing what a player would feel when playing a game, rather than what a player would see.

3.5 STUDY OUTCOMES

I. OVERVIEW

Nineteen people in total participated in the research study. Of the 19, all participated in the interview and discussion portions, while 12 participated in part two of the study, and played both *Mass Effect 2* and *Dragon Age: Origins*. Of the 19, only 9 participants chose to begin and finish all four parts of the research study. From the 19 participants, 8 worked within the games industry: 2 as 3D artists, 2 as animators, 3 as programmers, and 1 as a game designer. I compiled the data collected from participants and removed elements based on repetition as well as, criteria such as relevance, hardware concerns, software concerns, and concerns that did not directly affect RPGs or computer games in general

Points of Interest	No. Of Participants
Plays for the narrative	13
Plays for an experience	12
Enjoys a PC's interactivity	8
Engages in selective play (based on time)	7
Engages in selective play (based on content - genre, style)	6
Attraction based on challenge	6
Believes that character/NPC interaction is crucial to play	6
Feels what they hear and see needs to work together or a game will break	5
Finds that bugs lead to breaks in a game	5
States that price of entry is an issue in determining how or what is played (money)	5
Plays because it is different from film	5
Finds the language difficult to understand, because of the type or style of language used	4
Enjoys affecting or changing the story	4
Feels the quality of game content becomes compromised through marketing	4
Finds the community behind a game important	4
Feels the bar of entry is raised due to visual language or conventions	4
Does not make time to play games	3
Attraction to play is based on a game's visuals	2
States that the community behind the game has to be present	2
Does not play because of content (violent, sexually explicit)	2
Does make time for games	2
Enjoys longer narratives	2
Feels there is not enough innovation	2
Feels it is irresponsible for developers to ask for more than an hour of a player's time	1

FIGURE 3.5.1: POINTS OF INTERESTED VOICED BY PARTICIPANTS

II. DATA ANALYSIS

I next listed and categorised the concerns and issues raised by participants during the research study. I determined the following categories: accessibility, commitment, content/design, effort versus. outcome,

interactivity, and narrative. Because these points were actively raised by participants, they are issues of importance to the participants.

Accessibility refers to how easily a player engages with a game. When controls become too complicated or game prompts occur in high density, it burdens a player's cognitive load. At other times, *accessibility* refers to the difficulty a player experiences in keeping up with characters and sub-plots.

Commitment refers to the physical commitment a player has to make in order to play the game at a reasonable level. This commitment includes not only cognitive load, but also the required time in hours needed to play a game. In my research study, I found that participants fell into two distinct groups: those willing to set aside time and those who are not willing to set aside time to experience a game.

Content and design refers to game-play and the material associated with game-play. It also pertains to technical issues like bugs which disrupt game-play. Bugs can range from misplaced textures to a PC becoming trapped by game geometry and collision. Additionally, content and design also refers to the content of a game where, for example, violent or sexual content determined whether or not a participant wanted to play.

Effort versus outcome deals with a player's ability to weigh the positive and negative outcomes of playing a game: when indulging in a particular game, the player will judge if they gain a worthwhile return for their committed time and effort. At its core, these concerns come down to the questions of "is this game worth my time?" and "what will I get out of this game that I can't get elsewhere?"

Interactivity was not raised as often as the other points. This criteria, however, separates the experience of playing a computer game from other forms of games or experiences such as watching television or film. *Interactivity* concerns itself with the multitude of options a participant can opt for in a digital game experience over other experiences which may offer a similar narrative or visual entertainment.

Similar to interactivity, *narrative* refers to the player's interest in becoming part of a narrative. This often takes the form of character creation, NPC interactions, and the ability to affect and be affected by the events that build the narrative of the game experience.

Of the 19 participants, 63% stated that engagement with an RPG rested on their desire for an experience that they may otherwise not have access to in everyday life, and in an environment with which they felt comfortable. Participant Tony stated that part of the appeal of an RPG was "spend(ing) time on a story, a bit like a book but you create what comes on the next page." Participant Steve commented on the thrill of playing as characters in an environment based on the fantastic, with challenges outside of the ordinary. Furthermore, participant Bruce noted that "games can create a unique environment" which is where enjoyment outside of the ordinary can be experienced and expressed. Participants Janet and Hank both commented on the fantasy and momentary escapism provided by RPG narratives.

In addition, 69% of the participants engaged with an RPG because of their desire to explore a narrative experience which lay outside the capabilities of film, television, or print publications. This concept was further supported by the participant interviews and discussions. Participant Clint commented that "if it gets too close to being a movie, I may as well be watching a movie." For Clint, the enjoyment of a game was based on the interactivity, which other entertainment mediums do not offer. This opinion was also shared by participant Steve, who stated that while each medium has something to offer, games offer an interactivity not currently present in television or print media.

I next compiled a short list of themes, based on the frequency with which these concerns were voiced by participants. In order to ensure that the points raised were relevant to my thesis topic, I also combined overlapping points of interest.

The short list consisted of the following themes:

i.   Enjoyed the interactive side of computer games

ii.   Played for a narrative experience

iii.   Desired agency to effect the course of the narrative

iv.   Required cohesion in the game experience between the narrative and
        filmic devices and the game-play

v.   Felt that the "language" used in the game should be more accessible

vi.   Required the game experience to contain elements of challenge and skill

vii.   Felt that players should not be punished based on play-time

As my project focuses on minimizing points of friction between game-play and dialogue during transitions from one to the other, the next phase of my study introduces mechanics (based on the results from my research study and literature review) that affect the outcome of a player's experience with these shifts. The purpose of these mechanics is to create smoother transitions between game-play and dialogue experiences, so that players do not necessarily notice the shift.

Based on my research study, I conclude that players derive more enjoyment from experiences where elements roll over into each other. Furthermore, the more elements overlap and bleed into each other, the more players feel connected to the game and, as a result, maintain their player purpose and position. By conducting the research study, I was able to engage participants in order to identify their values - cultural baggage which informs the imagination, as well as the prejudices, personalities, and creativity of the participants themselves (Porter & Sotelo, 2004). By understanding these values, I can make constructive suggestions and choices in designing games that blend elements.

The character creation process was an element which participants identified heavily with as a positive experience. It allowed them an easy point of entry for immersion. Participant Tony commented that character creation was possibly the most enjoyable part of an RPG. Some participants, however, felt over-whelmed by the choices the game provided, in both cosmetic and character statistic customization. In these circumstances, participants Donald and Wanda noted that a "quick-start" character helped them avoid becoming overwhelmed by information too early in the game. Three participants (Donald, Wanda, and Luke), however, indicated that they did not recognise their own character (both quick-start and customised) and that not enough information was provided to allow them to recognise the difference between their PC and the NPCs.

An additional issue identified by participants which had an impact on their entire game experience was that of language. Participants admitted that they found the level of English, terminology, and nomenclature difficult to understand. This problem was most prominent in the game *Dragon Age: Origins*, where participants found the archaic style of language used by NPCs difficult to understand without the aid of subtitles. Both participants Peter and Jessica stated that language used by the game was difficult to understand, with Jessica explaining that "I didn't get it (the game); they had the intro scene and there was so much jargon I couldn't quite fit it together." Peter further stated that as an ESL player, the language in *Dragon Age: Origins* became almost impossible to understand at times. As a result of their difficulty in understanding the language, participants felt that they had to step out of the game experience and slow down to decipher the messages. This is a particular problem which is common not just in games but in other design issues where users are unable to determine what they're supposed to do (Murray,1997).

Language as an issue does not limit itself to the style or terminology used, but also to game conventions that have become assumed knowledge. Participants unfamiliar with current games found the GUI difficult to navigate and hard to learn amidst the constant influx of new information. There were no provisions in either of the two games played to initiate participants unfamiliar with the conventions that have been established over the last decade. Many participants accustomed to other genres of games, including Peter and Luke, found it overly taxing to both immerse themselves in the game and learn a new GUI. This negative impact on the players' level of immersion mirrors the research of game designer Ian Bogost.

When cognitive load arose as an issue in the discussion, some participants stated that they felt the amount of incoming information in the game made learning and recalling information difficult. Two participants, Jessica and Luke, indicated that *Mass Effect 2's* interface, which includes a slower step-by-step and in-situation approach to teaching, helped the players to learn faster. Participant Jessica felt that what the game required of the player was far more intuitive in *Mass Effect 2*, which creates a smoother interface as "it put you in a scenario…to instruct you." This result is attributed to intuitive affordances, as the game allows the player opportunities to learn and process the information, making complex actions more intuitive as the player builds up an understanding of the GUI and game-play demands (faberNovel, 2010).

Participants also enjoyed it when game-play and dialogue experiences were closely tied together; this association led to a more satisfying immersive experience. I have extrapolated this to mean that players feel that their actions need to have purpose and be situated within a narrative rather than in a vacuum. For example, violence for violence's sake was not enjoyed by participants such as Ben and May regardless of their previous exposure to violent content in games. Moreover, narrative for narrative's sake was also frowned upon with participants believing that narrative alone was not sufficient reason for playing the game. Participants felt that when called upon to engage with violence in the games, the situation was more acceptable and palpable when it had a direct and easily identifiable relationship with dialogue.

Participants also identified that they were more comfortable engaging with the game and immersing themselves in the experience when they were able to see a direct relationship between what they were asked to do and what the intended result was. In essence, players were more comfortable when they were able to clearly identify their progress in relation to their next goal. If participants were unable to perceive what the intended result was, or what the game was asking of them, they were more inclined to feel disconnected and become disinterested in the experience - an effect noted by McGonigal in her 2010 presentation on adapting games for immersive education (McGonigal, Gaming can make a better world, 2010). This problem can be summarized as insufficient feedback from the game. The player experiences discomfort and confusion because of the lack of information; agency in this situation has failed the player (Murray, 1997).

The user testing phase of my research indicates that players have a desire to control and influence the player character and the character's actions. This desire for agency extends beyond how customizable a character is for effectiveness in combat, and encompasses a desire to customise how effective a character is in conversation with NPCs.

4.0 THE OUTCOME

4.1 DETERMINING THE OUTCOME

In order to synthesize game-play and dialogue, the designer must first understand why a player becomes invested in an RPG (McGonigal, 2007). My research indicates that players engage with RPGs in order to become invested in a narrative by becoming a part of the world in which that narrative is embedded, players find themselves living lives that are not their own, but in which they are nonetheless, invested. The driver behind this investment is the balance between game-play and dialogue - a symbiotic relationship in which each element complements the other.

Synthesis of game-play and dialogue means that these distinct game elements have identical cause-and-effect mechanisms. This synthesis can manifest itself as literally identical mechanics or conceptually identical mechanics as long as they share a recognizable point of origin. How a player approaches and affects game-play should be similar to how they approach and affect dialogue.

Additionally, as an RPG is a single-player experience, it is not a zero-sum scenario. The binary outcome of zero-sum scenarios of win or lose does not accurately reflect the purpose of an RPG. As such the player's motivation for engaging with the game is more complex than if they win or lose. Instead, the focus is on how they win or lose - so a strong synthesis between game-play and dialogue is crucial.

Algorithms determine the results of actions in an RPG. They are components of a cause and effect mechanism that is more prevalent in game-play than in dialogue. These components inform things such as character class and statistics, as well as the leveling-up process. Class, statistics, and the leveling-up process feed game-play responses and provide the player control, position, and purpose. Together, class, statistics, and leveling up are the common and shared cause-and-effect structures that players recognise. For example, players can easily recognise the relationship between their character's health and the numerical values assigned to the particular statistic which informs health. The importance of synthesis in this context is that "when facts (the statistics) become so widely available and instantly accessible (through menus and character statistics), each becomes less valuable. What begins to matter more is the ability to place these facts in context and to deliver them with emotional impact" (Pink, 2005, p. 103).

It is difficult to recognise a clear cause-and-effect process similar to game-play during dialogue in RPGs. My research study indicates that participants find it difficult to see the relevance and relationship between the game and the dialogue. Moreover, actions and choices present in game-play were identified by participants as absent in dialogue. These absences were also identified in the case studies of *Fallout 3* and *Mass Effect 2*.

The dialogue in *Fallout 3* is constructed in a way that limits the scope of characterization. The dialogue options are constrained by a system which privileges accessibility of information over

characterization. When a player speaks to an NPC, how the player has customized their character has little effect on either the dialogue or the narrative offered by the game.

My goal with synthesis is to present an avenue for personality to be incorporated into dialogue, which would operate in unison with existing game-play mechanics and conventions. As such dialogue would become more engaging, as its core process would be aligned with the existing practices of cause and effect found in game-play.

Character creation is a part of RPGs where players are allowed to create a character of their choosing. Typically, players are able to choose and customize their appearance, class, statistics, and their name. The breadth of options varies from title to title, but the majority, of games involve the selection of class and statistics.

Character class determines, in a loose sense, a player's occupation - skills that the player character possesses at a higher than average proficiency. For example, a soldier class character will have a skill set that reflects training as a soldier. A bard character will have an entirely different skill set. The purpose of the class system is to quantify a skill set which relates to an archetype or category that a player can easily recognise and understand.

Character statistics simplify a character's abilities to enable a player to quantify how well their character can complete a given task. Individual statistics are assigned numerical values, which are in turn used to determine certain results. For example the character statistic *stamina* is used to indicate the amount of damage a character can sustain until they expire. The higher the numerical value assigned to stamina, the longer a character can sustain damage.

Neither class nor statistics serve to represent accurate reflections of reality. They are an idealisation of real life made into a format that can be read by a player quickly and easily as a set of metrics.

To establish similar cause-and-effect models in dialogue, I propose a character class and statistics model for dialogue that mirrors that already found in game-play. The purpose of mirroring existing components is to ensure easy player recognition of the value and purpose of the new components and their relationship with dialogue.

4.2 DESIGN BREAKDOWN

Figure 4.2.1 shows a typical character creation process in an RPG. The player begins by customizing the cosmetic features of the character, such as gender, height, hair, features, and so forth. They then make choices about their character's class and statistics. As previously discussed, class and statistics do not affect dialogue in a cause-and-effect pattern. The proposed character creation as seen in Figure 4.2.2, adds character personality and trait.

```
┌──────────┐                    ┌──────────┐
│  GENDER  │                    │  GENDER  │
└──────────┘                    └──────────┘
      ⦾                               ⦾
┌──────────┐                    ┌──────────┐
│ COSMETIC │                    │ COSMETIC │
│ OPTIONS  │                    │ OPTIONS  │
└──────────┘                    └──────────┘
      ⦾                         ⦾          ⦾
┌──────────┐              ┌──────────┐ ┌──────────────┐
│  CLASS   │              │  CLASS   │ │ PERSONALITY  │
└──────────┘              └──────────┘ └──────────────┘
      ⦾                         ⦾            ⦾
┌──────────┐              ┌──────────┐ ┌──────────────┐
│STATISTICS│              │STATISTICS│ │    TRAIT     │
└──────────┘              └──────────┘ └──────────────┘
```
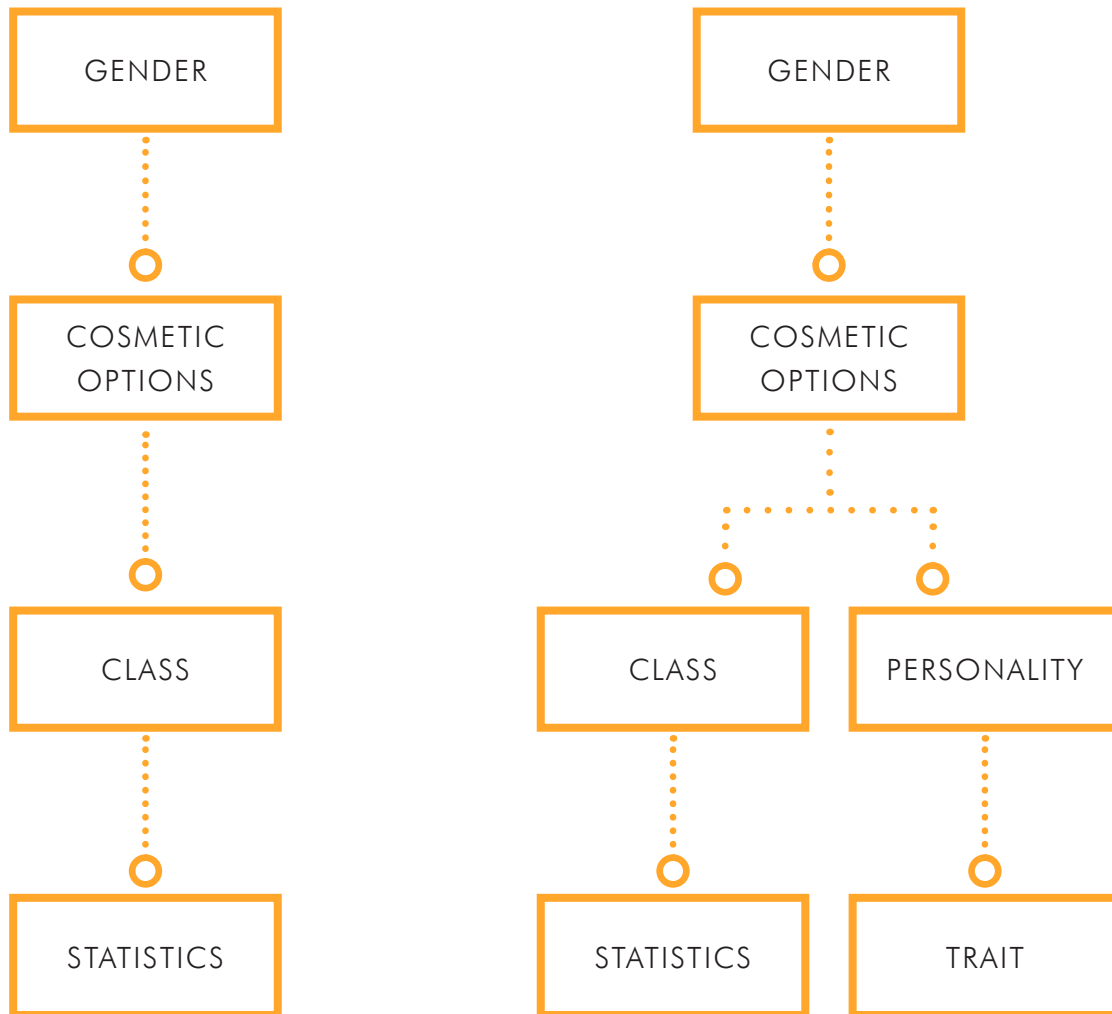
FIGURE 4.2.1: TYPICAL CHARACTER CREATION PROCESS (PAGE LEFT)

FIGURE 4.2.2: MODIFIED CHARACTER CREATION PROCESS (PAGE RIGHT)

In the modified character creation process, character personality mirrors his character class. This feature allows the player to customize his character's personality and affect the interpersonal skill set his character will have. Like class, though, personality places similar restrictions on a character so that a particular personality, just like a particular class, will possess advantages and disadvantages.

Conceptually,I developed the personality feature based on the Greco system of humors, Richard Bartle's player types, and basic RPG roles. For the Greeks, a person was governed by four humors (choleric, melancholic, sanguine, and phlegmatic); when he was angry or sullen, it was because his humors were not in balance. Richard Bartle tested players in multi-player online games and found a recurrence of four main player types. Just as there are four humors Bartle found four player types. Bartle's research lists the four types as achievers, explorers, socializes, and killers. Like the Bartle player types and Greek humors, most RPGs contain distinctive roles that complement each other. They take the form of damage-dealing,

healing, support, and damage absorbing. All three influences position entities in a similar cross axis.

Using a framework of four, with the humors and the Bartle Quotient as the base, I constructed a personality chart to mimic the relationships, whether complimentary or antagonistic, between different types of personalities. Since the descriptors of the humors have fallen from common usage, I renamed them optimistic, sensible, passionate, and pessimistic.

Optimistic refers to how positive or naive a character is while *pessimistic* refers to how negative or cynical a character's outlook is. *Sensible* refers to how level-headed or cold a character is; *passionate* refers to how hot-headed or impulsive he is. Each of these personality categories has an opposite, but maintains two compliments. For example, the optimistic personality lies opposite to pessimistic, and is complimented by sensible and passionate.
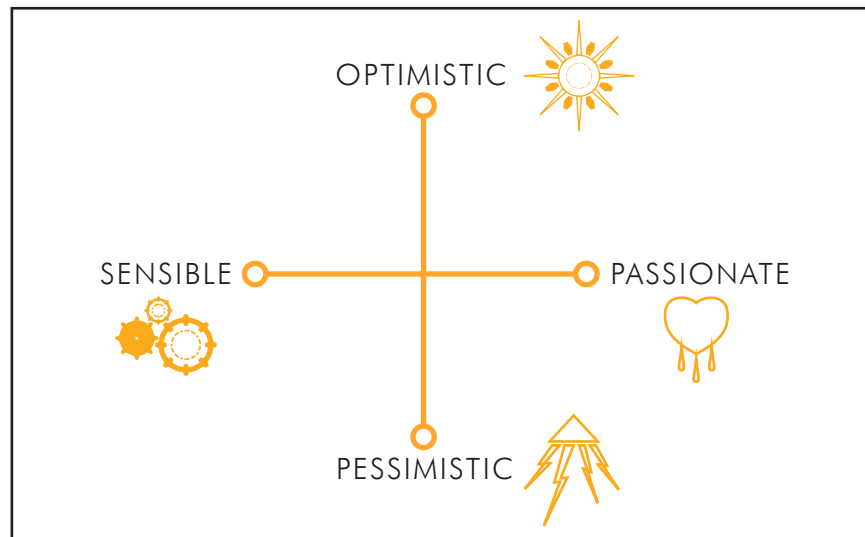
FIGURE 4.2.3: PERSONALITY CHART

When a player determines their character's personality, they allocate points into each of the four personality categories, similar to how the player levels up attributes or abilities during character creation. For example, a player could be provided with enough room to allocate 200 points in total. However, each personality could not exceed 100 points. For example, by the end of the game, a character could have 100 points in optimistic, 70 points in sensible, 20 points in passionate, and 10 points in pessimistic. In game terms, this is an indicator of how well equipped the character is in controlling these characteristics' particular aspects.
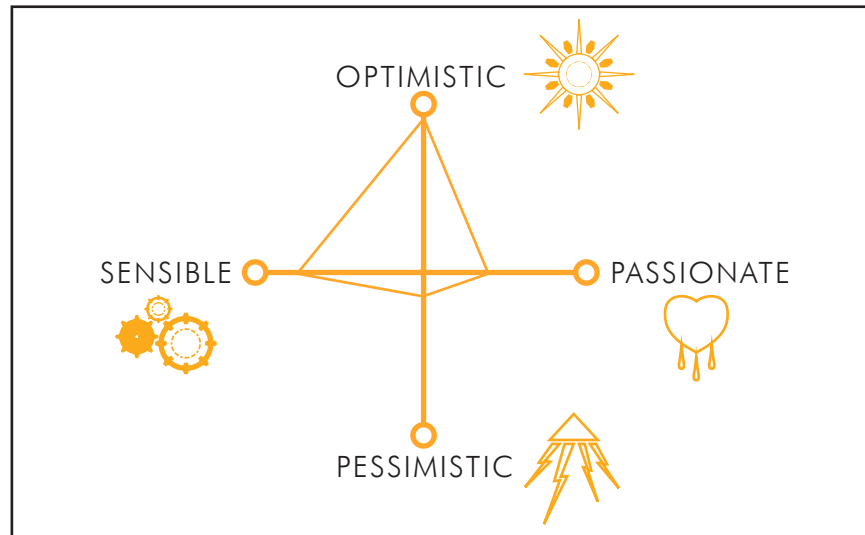
FIGURE 4.2.4: PERSONALITY CHART EXAMPLE

Each class contains advantages and disadvantages; this applies to the personalities as well. Personalities are metric reflections of the character's personality. As one can't be both optimistic and pessimistic at the same time, the choice of personality restricts outcomes. For example, an optimistic character may receive a bonus for motivating NPCs. This would be reflected in an increase in the bonus as more points are poured into the optimistic personality. Because such a bonus is tied to the character's optimism, however, such a bonus would not exist for the pessimistic character. The pessimistic character, though, might gain a bonus form manipulating NPCs through cynical and negative dialogue.

Character traits are determined by a set of assigned values, just like character statistics; while statistics are linked to class, traits are linked to personality. The four proposed traits which operate similarly to statistics such as stamina or agility, and are represented to the player by numerical values. As the character levels up, points are awarded which can be poured into individual traits. The four traits are boldness, aggression, sensibility, and energy.

Boldness represents how straightforward a character is. *Aggression* represents how intimidating NPCs find the character. *Reason* represents how well a character can reason and convince NPCs. *Slyness* represents how deft a character is at manipulating NPCs. As with personality, traits are arranged on a cross axis, with opposing and complimenting positions.
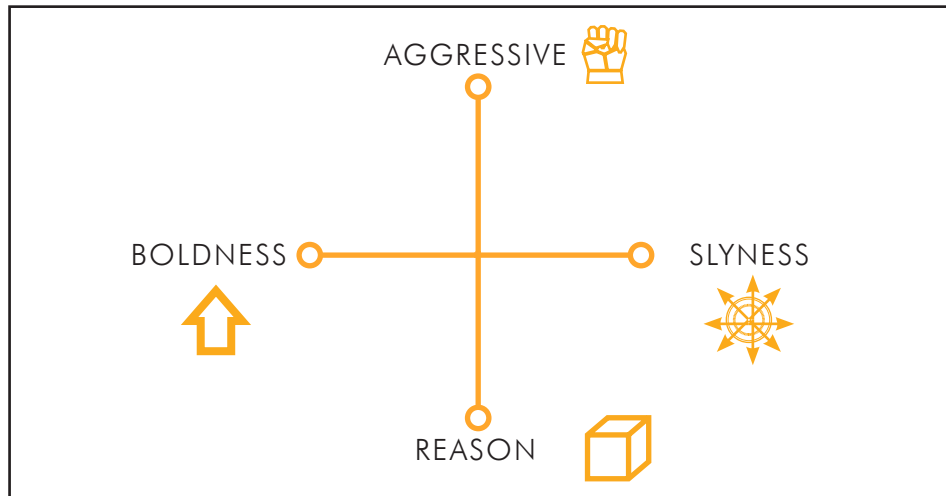
FIGURE 4.2.5: TRAIT CHART

Regardless of the combination of personality and trait, NPC interactions will still yield the necessary result to further the game narrative. The nature of the interaction, however, will differ. Where class and statistics determine the outcome of game-play, personality and trait determine the outcome of a conversation with an NPC.

For example, a player must locate a young girl. His point of entry into the scenario is with the girl's father. Regardless of the player's personality and trait combination, the player will eventually find the girl, however, how the player finds the girl, and the consequences of how he obtains information from the NPC, differs based on the personality and trait combination.

How the player finds the girl is determined by the personality and trait combination of the player's character and the options the player chooses during conversation with the NPC father. If the player acts like a thug towards the father, but lacks the personality and trait to support his aggressive and thuggish behavoir, the father may not be as helpful. If, instead, the player manipulated the father's love and concern for his daughter, and has a personality and trait combination that supports the character's manipulative line of attack, the father may divulge more information.

When the player returns to game-play, both the aggressive and manipulative characters will walk away from the NPC knowing the girl's location. With the limited information the aggressive character received, however, this player may have to spend additional time questioning other NPCs or may find that the path between he and the girl is littered with enemy combatants. The manipulative character, in contrast, who has been supplied with additional information, stands to bypass the enemy combatants and avoid having to question additional NPCs. If the players obtain this information by lying to the NPC, however, there may be consequnces, especially if this NPC plays a larger role later in the game. This example demonstrates how dialogue can influence the game-play experience and how personality and trait can be just as influential as class and statistics.

Behind the game, what we witness in terms of mechanics is as follows:

CHARACTER CREATION

Character creation is typically the first point of entry into an RPG for a player. It is a section of the game which allows a player to create their own character. The player often chooses things such as their character's appearance, gender, occupation, skills, and abilities.

Typical Character Creation Process

Character name

Character appearance

Character class

Amended Character Creation Process

Character name

Character appearance

Character class   Character personality

A standard character creation process can be roughly divided into categories such as appearance, class, and abilities. The personality mechanic fits into this process at the same level as class. The player chooses which personality they would like their character to have in the same way that they choose which class they want to play. If these categories were arranged in an hierarchy, then personality and class would sit next to each other in terms of importance, as both allow the player to choose how their character will affect the game world.

Typical Character leveling up Process

Character levels up

Points awarded

Points allocated towards statistics and abilities

Amended Character Leveling up Process

Character levels up

Points awarded

Points allocated towards statistics and abilities   Points allocated towards traits

The traits mechanic is not presented during character creation. It appears during the leveling up process. Each time a character levels up, they are awarded points which they may allocate to certain statistics or abilities in a typical RPG. Just as points are awarded for players to invest in certain abilities, points are also awarded for the player to invest in certain traits. The purpose of presenting traits during the leveling up process rather than during character creation is to ensure that when the character is first created, it presents itself as a relatively blank slate. As the character progresses through the game, the traits of the character act as a metaphorical expression of the character's growth. As the character experiences more of the world, the traits chosen reflect how those experiences have affected the character.

Character Personality and Traits in Scenario

The following page contains a short description of two characters with the same personality following two distinct trait paths.

CHARACTER PERSONALITY AND TRAITS IN SCENARIO

The following chart illustrates how personality and traits affect the outcome of a dialogue game-play. Using the same scenario as the co-creation activity earlier in this study, this example uses two characters from the film *Troy*, with Hector representing the player's character and Achilles representing an NPC.

In his epic poem "Troy", Homer recounts the engagement between Hector and Achilles as a result of the death of Patroclus. Achilles, enraged and grief stricken, sought out Hector in combat. According to Homer, Achilles bests Hector in battle and unceremoniously drags Hector's body behind his chariot back to the Myrmidon camp.

This scenario demonstrates potential outcomes of Achilles' and Hector's interaction based on the personality and traits of Hector. To prevent over complicating the scenario, Hector is represented in two variations. Both variants of Hector possess the sensible personality, however, each possesses different traits. Hector mk.1 possess traits which emphasize Slyness while Hector mk.2 possess traits which emphasize aggression.

HECTOR MK.1

Playing in Character (Manipulative character)

In this scenario containing Hector mk.1 playing in character, Hector does not attempt to reason with or placate Achilles, but rather tries to manipulate Achilles' rage and grief away from himself and toward Achilles' already growing dissatisfaction with Agamemnon and the failure of his Myrmidons in protecting Patroclus.

Playing out of Character (Manipulative character)

In this scenario involving Hector mk.1 playing out of character, Hector attempts to intimidate Achilles. Because of the personality and traits possessed by Hector, however, the player is unable to intimidate or frighten the Greek hero.

Hector mk.1, playing in character, successfully negotiates with Achilles. This means that the player is able to decrease the threat posed by Achilles by weakening the Greek hero's resolve and determination to lay blame at the feet of Hector. The player s uccessfully deflects the bulk of Achilles' rage toward another. In this scenario the player is able to affect game-play through dialogue that exists as a result of the choices he made in customising his character. These customisations are chosen by the player, in the same way that the player customises his character statistics and abilities, to open or further particular methods of combat. When Hector mk.1 plays out of character, however, and attempts to intimidate Achilles, he fails. Failure results because the character does not possess the required traits which would have allowed Hector to successfully intimidate Achilles. Consequently, the player will have to face off against Achilles at his most threatening. This path of failure is not different than the path to failure involving a particular method of combat which relies on abilities or statistics the player has not invested in.

HECTOR MK.2

Playing in Character (Aggressive character)

In this scenario, Hector mk.2 playing in character is able to intimidate and cast doubt on Achilles by using the support of the Trojan spectators and inflaming Achilles' distraught mind about his inability to protect Patroclus.

Playing out of Character (Aggressive character)

In this scenario, Hector mk.2 plays out of character and attempts to reason with and placate the enraged Achilles. Hector fails to calm the Greek hero and becomes both desperate, and exacerbated by Achilles determination. The final outcome is that Hector loses his own temper and becomes engulfed by frustration.

Hector mk.2 playing in character, just like Hector mk.1 in character, is able to influence an outcome where he is able to encounter Achilles with an advantage. In the case of Hector mk.2 playing in character, he is able to face Achilles with the advantage of having weakened the Greek hero's resolve and determination. This parallels a character with significant investments in particular statistics or abilities, being able to best opponents in the same field of combat by simply being better. For example, Achilles' weakened resolve mirrors Achilles' weakness for spear over sword. The result of failure, in the case of Hector mk.2 playing out of character is that Hector loses his temper and becomes frustrated. Hector now suffers from weakened resolve and determination, is unable to focus and has his judgement clouded by frustration. The game outcome manifests itself as Hector engaging Achilles in combat with a distinct tactical disadvantage.

In the end, both Hector and Achilles will fight. How they fight and, more importantly, why they fight is the result of influences of the personality and traits possessed by the player character.
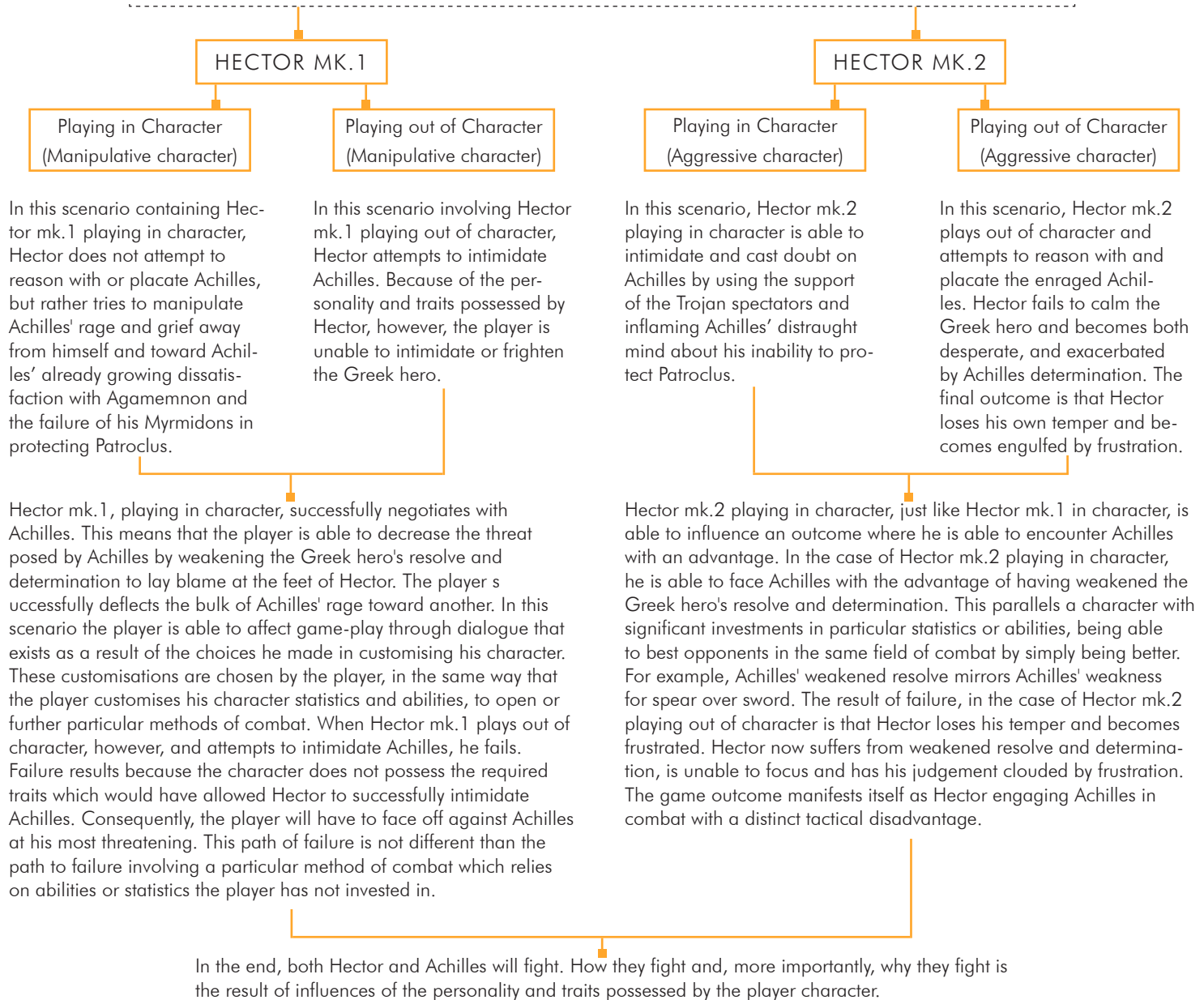
FIGURE 4.2.6: SOLUTION WALKTHROUGH EXAMPLE (CONTINUED)
See attached PDF "Character Creation Walkthrough" for additional detail.

The comparison in game-play between the aggressive and manipulative character parallels the difference between a warrior class and a rogue class character. A warrior is a much stronger character than a rogue. They are able to sustain and absorb more damage, though their damage output is lower as a result. A rogue, however, has a much higher damage output than a warrior, but consequently they can't sustain or absorb as much damage. Thus these characters' techniques of defeating an enemy are different, much in the same way that the aggressive character and the manipulative character's approach to dialogue differ. Neither path is the correct one, but are rather different avenues of cause-and-effect.

This process emphasizes in the replay value of the experience, rather than the result. The player is able to replay the game with a different narrative experience depending on their choice of personality and trait, coupled with how they chose to engage with NPCs.

If we view successful RPGs as maintaining a symbiotic relationship between game-play and dialogue, then how compelling and immersive an RPG is depends on how well these two elements interact and engage with each other. Synthesis of the two is paramount as a potential future avenue of development and growth for the genre.

Mathematics plays an important role in developing RPGs. But in the context of this project, I have privileged the design framework and the conceptual synthesis of game-play and dialogue. In this case, synthesis took the form of embedding a cause-and-effect factor, familiar from game-play, into dialogue. With this conceptual architecture in place, the equations and algorithms behind a game can be developed in a manner that ensures the game-play retains personality and character. By embedding storytelling into game design, analytical thinking, is supplemented with new perspectives, thus improving immersion by infusing qualities of personality and traits into the game (Pink, 2005, p. 108).

5.0 CONCLUSION

In order to find out if the propositions put forward by this thesis generate positive experiences for players, I would need additional time and resources. Without the time or the money, I can only hypothesize that certain components would improve an experience; until the game is made and played, I simply cannot know. It remains critically important, however, to consider possible improvements and changes and not take the status quo as a given. Questions like "should RPGs exist?" or "Do RPGs offer more depth and immersion than other genres?" are important to the survival of the genre.

RPGs may no longer exist in a decade - the growth of the RPG we have come to know and understand has stagnated. But I contend that this genre is not dying, but rather evolving. The RPGs of yesterday should in no way be the same as the RPGs of tomorrow. RPG powerhouses such as BioWare who specialise in RPGs no longer make RPGs according to the 1990s definition of an RPG. Rather, they make hybrids: action games with role playing elements. Square Enix from Japan, known for its Final Fantasy franchise, with a long, established history of developing RPGs released *Final Fantasy 13* in 2010 to financial and critical scorn. Many reviewers and critics claimed that it was old and out of date, and that the RPG genre had moved on, where our understanding and ability to generate immersive experiences for a player has evolved.

BioWare and Square Enix have not released poor games, but games which consumers are no longer as interested in as they were a decade ago. These games are like cinema epics - larger than life experiences with lavish sets and costumes, and a wide range of exotic and interesting heroes and villains. But like epics they are expensive to make, edit, cast, and market.

The traditional RPG is simply too expensive, with too little financial return for most studios to consider developing. They cannot advertise in an RPG, nor can they generate revenue from e-sports with an RPG. There is also no multi-player component in RPGs to generate additional revenue. RPGs are not an automatic loss for a studio - they still represent a portion of computer game sales. That portion, however, may not be significant enough - in 2009, the gaming industry generated approximately $10.5 billion USD, but of that only $0.5 billion was attributed to computer game sales, compared to $9.9 billion from video games (ESRB, 2009).

With RPGs seemingly on the decline is it worth it to attempt to implement or to develop research further to the point where it can be empirically assessed. The data gathered and ideas I've proposed here, however, are viable if adapted to other genres as well. The future of RPGs should not rest on the generation of one game after another, but rather by diversifying, and integrating into other genres or new genres. These new hybrids or new genres have an increased chance of success if they build on successes in RPGs, and incorporate new ideas that research indicates will improve immersion and therefore the game's success.

If it is possible to create hybrid games and still have critics and players alike describe them as RPGs, then it is possible to trial these RPG improvements in other genres which may be cheaper to develop or in greater demand by consumers. *Mass Effect 2*, which received both financial and critical acclaim, used cover-base mechanics from existing action games, which allowed the Mass Effect franchise to blend dialogue and game-play in a new way that generated a positive experience for players.

This research indicates that a player may enjoy both the prospect and experience of engaging character to character dialogue interaction in the same way as they do with character to character combat. If players find it enjoyable to customise their ability to inflect pain on their opponents: they might find it fun to customise their ability to converse with their opponents or other characters in the game.

I have established through this project an architecture where a player customises how they converse with their opponents. What I have not proven is if this process works. My proposed method should not be approached as a single entity requiring the development and creation of an RPG for proof of success. Rather, my proposed method should be placed in alternative and hybrid genres to determine if it improves player experiences. At that point, we can conclude that it would indeed add positive experiences for players when placed back into a modern RPG which contains portions of mechanics from different genres of games.

"Design Research… (is the) systematic enquiry [whose] goal is knowledge of, or in, the embodiment of…value and meaning in man-made things and systems" (Board of International Research in Design, 2007). This project is based on the above principle. It is not the big problems that burden us from day to day, but small problems that by themselves mean nothing, but accumulate over time to become devastating. Dialogue by itself in an RPG is not the crux of the experience, nor is any of the other individual components of an RPG. It is the sum of all the parts which contribute to and allow for an immersive experience. But even though it is the sum of these parts that makes an RPG great, it only takes the failure or poor performance of one part to derail the entire experience.

As we improve game-play mechanics by splicing in elements from other genres or create whole new genres as a result, the dialogue element of games will suffer as the strain of keeping up with new game-play mechanics begins to expose the age and failings of our dialogue designs. Over time, dialogue in an RPG risks losing meaning. Without dialogue, an RPG very quickly becomes just like any other game. If RPGs are not only to survive but thrive and evolve, then investments, financially or scholarly, must be made in order to identify new methods of delivering intimate and convincing engagements between characters in an artificial environment.

6.0 APPENDICES

6.1 LETTER OF APPROVAL FROM THE EMILY CARR UNIVERSITY OF ART AND DE-SIGN'S RESEARCH ETHICS BOARD

emily carr
university of art+design

1399 Johnston Street, Vancouver, BC, Canada V6H 3R9

Office of the Director of Industry Research

Emily Carr University of Art and Design
Research Ethics Board

October 24, 2010

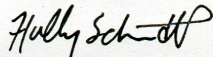**MEMORANDUM TO**: Charles Lin, MAA Candidate, Design

Re: Receipt of Application for Ethics Approval

This letter acknowledges receipt of your applications to the ECUREB. The Committee met on September 28, 2010 and considered ethics approval for your application for the project, **Digital Content Management for Non-Linear Narrative Drive Games.** Formal notice of the Board's recommendations regarding you're application are attached to this letter.

I appreciate your patience as we implement new procedures intended to streamline the application process. Please, contact me if you have any specific queries relating to your application. The Chair and members of the Board would also be most happy to discuss general matters relating to ethics provisions if you wish to do so.

Please, note in future all correspondence with the ECUREB will take place through the email address ethics@ecuad.ca or the ECUREB mailbox.

Sincerely,

Holly Schmidt
REB Coordinator
Emily Carr University of Art and Design

CC'D Ian Verchere, Faculty Supervisor
        Deborah Shackleton, Faculty Supervisor

6.2 LETTER OF INVITATION

Date: _____

Dear Prospective Participant,

I would like to invite you to be part of a research project which I am conducting. The project is part of the requirement for the Masters of Applied Arts (Design) at Emily Carr University of Art and Design. My name is Charles Lin and my credentials with Emily Carr University can be confirmed through the Faculty of Graduate Studies at Emily Carr University (604-844-3800) or my thesis supervisor Ian Verchere (dverchere@ecuad.ca).

The project title is **Seeking Immersion in Video Role Playing Games: an exploration in unifying game play with the narrative**.

The thesis explores the intersection of action and dialogue in role-playing games where instead of players choosing avatars and adventures in environments where dialogue interrupts action, the content is managed more as a "spontaneous movie" in which action and dialogue co-evolve through player interactions and story generation.

In addition to submitting my work to Emily Carr University in partial fulfilment for the Masters of Applied Arts (Design), I will also be sharing my research findings with the Faculty of Design + Dynamic Media within Emily Carr University.

The research study will consist of two interviews, one game play session, and one co-creation story development session to identify how the GUI could allow for a more intuitive and natural interaction between the contemplative and kinetic moments of game play.

The first interview will probe the place that Role Playing Games, digital or otherwise, play in the participant's life.

This is followed by a game playing session of between 30 minutes to 2 hours. The games selected are Mass Effect 2 and Dragon Age: Origins.

Following the game play you will be asked a number of questions which focus on immersion and agency.

The final phase is a co-creation activity in which participants are asked to illustrate their actual and ideal experiences of playing games in which the action and dialogue are perceived as seamless.

Example interview questions are:

•   What would make you play an RPG or any narrative driven game?

•   What about an RPG attracts you to the game? Which elements of the game do you find most alluring?

- What is the hook that makes you buy an RPG? Is it the developer, franchise, attached names etc?

- What would break an RPG for you? What would ruin the experience of the game?

- How would you describe yourself in terms of your level of participation in playing games?

- On a scale between avid gamer across to casual gamer where do you see yourself?

- On a scale between competitive gamer to social gamer where do you see yourself?

You were chosen as a prospective participant because of your interest and experience in games, digital or otherwise, specifically in narrative driven games.

Information will be recorded digitally as still images, video recordings, audio recordings, and observational notes, and where appropriate summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to any individual unless under separate written agreement before hand.

Please feel free to contact me at any time should you have additional questions regarding the project and its outcomes. If you would like a debriefing session, whether it pertains to the research data from your participation or the project as a whole, once again, feel free to contact me and I shall endeavour to provide you with any information and feedback you may want.

You are not obligated to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. If you choose not to participate in this research project, this information will also be maintained in confidence.

If you would like to participate in my research project, please contact me at:

Charles Lin

Clin3278@ecuad.ca

Sincerely,

Charles Lin

Masters of Applied Arts (Design) Candidate

6.3 LETTER OF CONSENT

Informed Consent by Participants in a Research Study

The University and those conducting this research study subscribe to the ethical conduct of research and to the protection at all times of the interests, welfare, autonomy, safety, and equal moral status of participants. This research is being conducted under the permission of the Emily Carr University Research Ethics Board. The chief concern of the Board is for the health, safety, and psychological well-being of research participants.

Should you wish to obtain information about your rights as a participant in research, or about the responsibilities of researchers, of if you have any questions, concerns, or complaints about the manner in which you were treated in this study, please contact the Director, Office of Research and Industry Liaison by email at rinkster@ecuad.ca or phone at 604-630-4560.

Your signature on this form will signify that you have received a copy of this document which describes the procedures, possible risks, and benefits of this research study, that you have received an adequate opportunity to consider the information in the documents describing the study, and that you voluntarily agree to participate in the study.

Any information that is obtained during this study will be kept confidential to the full extent permitted by the law. Knowledge of your identity is not required. You will not be required to write your name or any other identifying information on research materials, the signed release forms will be maintained in a secure location.

Please keep a copy of the informed consent form for your reference.

Project Title: Seeking Immersion in Video Role Playing Games: an exploration in unifying game play with the narrative.

The thesis explores the intersection of action and dialogue in role-playing games where instead of players choosing avatars and adventures in environments where dialogue interrupts action, the content is managed more as a "spontaneous movie" in which action and dialogue co-evolve through player interactions and story generation.

Principal Student Investigator:

Charles Lin

Masters of Applied Arts Candidate

Emily Carr University of Art and Design

1399 Johnston Street, Vancouver, BC, V6H-3R9

Email: clin3278@ecuad.ca

Co-Investigators:

Deborah Shackleton

Associate Professor

Faculty of Design + Dynamic Media

Faculty of Graduate Studies

Email: dshack@ecuad.ca

Ian Verchere

Artist/Designer/Scholar in Residence

Office of Research and Industry Liaison

Faculty of Graduate Studies

Email: dverchere@ecuad.ca

Investigator Curriculum Area:

Briefly describe the purpose and background rationale for the proposed project, as well as the hypothesis(es)/ research question(s) to be examined:

The purpose of the project is to explore the space between game play and the narrative in video role playing games in order to advance the concept of immersion in non-linear storytelling by creating a seamless user interface between the kinetic and contemplative driven environments.

Having been asked to participate in the research study identified above, you acknowledge that you have read the procedures specified in the Study Documentation described below. And that you understand the procedures to be used in this study and the personal risks in taking part in the study as described below:

Risks to the participant, third parties or society:

The risk to participants is minimal or no greater than those encountered in those aspects of his or her everyday life. Those who have a history of seizures or who are otherwise negatively affected by playing video games should decline participation in the research study. The participant's signature on the Informed Consent Documentation and Model Release Agreement will denote that she/he has no known history of seizures that the participant is willing and able.

Benefits of the study to the development of new knowledge:

The study objectives are to gather and contextualize data that would benefit the management of game content for non-linear narrative driven experiences. Specifically the data gathered could enable further development of our understanding of managing a narrative experience in an environment which is subject to fewer restrictions such as Massively Multi-player Online games. In addition, data gathered would benefit the understanding of the transition phase in Role Playing Games between a primarily kinetic driven environment and a contemplative driven environment.

This project as such aims to gather data related to computer game content to better understand the context in which people engage with virtual artifacts and personalities. Specifically, how such experiences can be made more seamless and intuitive when people converse with simulations.

Such as they are, the project seeks to understand how design can aid non-linear storytelling in a computer Role Playing Game environment through managing in-game content. The purpose of which is to create seamless user interfaces between kinetic and contemplative environments to further enhance computational agency.

Procedures:
Part One: Participants will be invited to speak about their relationship with games, digital or otherwise and specifically with narrative driven games. These questions are geared towards gaining an understanding of what elements make a narrative driven game immersive for the player and what elements are perceived to break a player's agency given that agency is essentially improvisational? What are the attractors and detractors? The participants will be recorded with digital still images, video, audio recordings, and hand written notes.

Part Two: Participants will be provided with a computer containing a set of two pre-installed narrative driven

games: Mass Effect 2 and Dragon Age: Origins. Neither are rated higher than MA 15+. The two games were released by Bioware within a year of each other and present very different interfaces. The play environment of Mass Effect 2 employs more cinematic GUI features than Dragon Age: Origins. Dragon Age: Origins employs a more edutainment like interface. The contrasting interfaces present both exploratory and descriptive research opportunities in identifying user responses to dialogue being interrupted by action and vice versa, and if there is potential for content to be managed more as a "spontaneous movie" in which action and dialogue co-evolve through player interactions and story co-creation; rather than what currently happens which is akin to "stop motion animation".

There will be an imposed time limit as to how long each participant may play either of the two games. For reporting purposes participants will need to play for a minimum of 30 minutes up to a maximum of 2 hours.

Part Three: The participant will be involved in a one on one discussion about their game play experiences. The researcher will use an interview guide. The questions will focus on immersion and agency? What elements of the game design contribute to immersion and agency? What limits the player's capacity to experience immersion and agency? How can design intervene to create a more seamless transition between action and dialogue? Participant responses will be recorded with digital still images, video, audio recordings, and hand written notes.

Part Four: Participants will be invited to take part in a participatory design workshop. The workshop will employ co-creation and generative tools for the participant to illustrate their actual experience of playing the games and to contrast that with their ideal scenario of playing the games where action and dialogue are seamless and the players are co-creators in the story.

Confidentiality:

If you agree to participate with this study you have the option of remaining anonymous or to have your identity revealed in publications. At any stage of the study you may choose to change your position on the accessibility of your identity. Moreover, you will have access to review the interview transcripts, images, and other material before use in publications regardless if you have elected to remain anonymous or not.

Participants are given a number of options regarding their participation in the study; please see the Model Agreement

Your participation is entirely voluntary and you may refuse to participate or withdraw from the study at any moment without concern.

Remunerations:

There is no remuneration.

Further information

If you have any questions or require further information with regards to the study, the principal investigator Charles Lin can be reached via email at clin3278@ecuad.ca

Informed Consent/Assent Form:

I understand that I may withdraw my participation at any time. I also understand that I may register any complaint with the Director of the Office of Research and Industry Liaison at oril@ecuad.com

My participation in this study is entirely voluntary and I may refuse participation or withdraw from the study at any moment without concern for whatever reason. My signature below indicates that I have received a copy of the consent form for my records. My signature also indicates that I understand by agreeing to participate I acknowledge that I have no known history of seizures.

My signature indicates that I consent to participating in this research study, which includes two interview

sessions and two hands-on sessions, including digital and video camera photo documentation and audio documentation for research publication purposes. I will be shown the images and audio upon a later date for final approval. This choice is separate from choosing to participate in the research project.

Having been asked to participate in the research study identified above, I certify that I have read the procedures specified in the Study Documentation as described. I understand the procedures to be used in this study and the personal risks to me taking part in the study as described.

Area of Faculty   **Dean**

Dean, Graduate Studies   Dr. Cameron Cartiere

Faculty of Graduate Studies

I may obtain copies of the results of this study, upon its completion by contacting

Rachelle Sawatsky, Administrative Assistant, Graduate Studies Program

rsawatsky@ecuad.ca

Ph. 604-844-3800

I have been informed of my options regarding my participation in this study and certify that I have read the Model Agreement.

I understand that my supervisor or employer may require me to obtain his or her permission prior to my participation in a study of this kind.

I acknowledge that I have no known history of seizures or otherwise been negatively affected by playing video computer games.

I understand the risks and contributions of my participation in this study and agree to participate:

The participant and witness shall fill in this area. Please print legibly

Participant Last Name: Participant First Name:

_____   _____

Participant Contact Information

Email: _____

Contact Ph: _____

Other: _____

Participant Signature: Witness

_____   _____

Date (use format DD/MM/YYYY)

_____

7.0 REFERENCE LIST

Aarts, E. & Marzano, S. (2003). *The New Everyday: Views on Ambient Intelligence*. Rotterdam, The Netherlands: 010 Publishers.

Alexander, L. (2010, February 1). *Romance With Disabled Girls: How (And Maybe Why) An Unusal Video Game Came To Be*. Retrieved February 21, 2010, from www.kotaku.com: http://kotaku.com/5461619/romance-with-disabled-girls-how-and-maybe-why-an-unusual-video-game-came-to-be

Baertlein, L. (2007, March 23). *Wii Game Console Bowling over Retirees*. Retrieved April 1, 2010, from www.reuters.com: http://www.reuters.com/article/idUSN2223209020070323

Barney, D. (2004). *The Network Society*. Cambridge: Polity.

Peterson, W., Rathbun, D., Wilson, C. (Producers), Benioff, D. (Writer), & Peterson, W. (Director). (2004). *Troy* [Motion Picture]. Warner Brothers Pictures.

Bennett, A. (2006). *Design Studies: Theory and Research in Graphic Design*. Princton: Princeton Architectural Press.

Bethesda Game Studios. (2008, October 28). *Fallout 3*. Fallout 3 . Bethesday Softworks, ZeniMax Media.

BioWare Edmonton. (2010, March 16). *Dragon Age: Origins* - Awakening. Electronic Arts.

BioWare Edmonton. (2009, November 3). *Dragon Age: Origins*. Electronic Arts.

BioWare Montreal. (2010, January 26). *Mass Effect 2*. Electronic Arts.

BioWare, Demiuge Studios. (2007, November 20). *Mass Effect*. Microsoft Game Studios, Electornic Arts.

Board of International Research in Design, BIRD. (2007). *Design Research and its Meaning to the Methodological Development of the Discipline*. In W. Jonas, & R. Michel (Ed.), Design Research Now: Essays and Selected Projects (pp. 187-206). Basel, Switzerland: Birkhauser Veriag AG.

Bogost, I. (2007). *Persuasive Games: The Expressive Power of Video Games*. Cambridge: MIT Press.

Buchanan, R. (2001). Design research and the new learning. *Design Issues* , 17.

Buchanan, R. (1992, November). Wicked problems in design thinking. *Design Issues* , 5-19.

Burnett, R. (2004). *How Images Think*. Cambridge: MIT Press.

Chirag, D. (2009, September 9). *We Were All Born Game Designers*. Retrieved January 8, 2010, from www.gamasutra.com: http://www.gamasutra.com/blogs/ChiragDesai/20090919/3070/We_Were_All_Born_Game_Designers.php

Collins, H. (2010). *Creative Resarch: The Theory and Practice of Research for the Creative Industries.* Lausanne, Switzerland: AVA Publishing SA.

Crilly, N. (2010). The structure of design revolutions: Kuhnian paradigm shifts in creative problem solving. *Design Issues*, 26, 54-66.

Dinehart, S. (2009, June 25). *Dramatic Play.* Retrieved February 18, 2010, from www.gamasutra.com: http://www.gamasutra.com/view/feature/4061/dramatic_play.php

Dream, Q. (2008, December 12). *Heavy Rain: Interview in depth.* (Gametrailers.com, Interviewer) Gametrailers.com.

Dykes, T. H., Rodgers, P. A., & Smyth, M. (2009). Towards a new disciplinary framework for contemporary creative design practice. *CoDesign International Journal of CoCreation in Design and the Arts*, 99-116.

ESRB. (2009). www.esrb.org. Retrieved July 6, 2011, from ESRB - Entertainment Software Rating Board: http://www.esrb.org/about/video-game-industry-statistics.jsp

faberNovel: Ideas with Legs. (2010). *Apple: 8 Easy Steps to Beat Microsoft (and Google).* Paris: faberNovel.

Goodwin, K. (2009). *Desigining for the Digital Age: How to Create Human-Centered Products and Services.* (K. Mohr, S. Shlaer, L. Britten, C. M. Jones, & M. B. Wakefield, Eds.) Indianapolis, Indiana, United States of America: Wiley Publishing Incorparated.

Kolko, J. (2010). Abductive thinking and sensemaking: The drivers of design synthesis. *Design Issues*, 26, 15-28.

Krzywinska, T. (2009, October). Blood scythes, festivals, quests, and backstories: World creation and rhetorics of myth in World of Warcraft. *Games and Culture*, 383-396.

Leedy, P. D., & Ormrod, J. E. (2010). *Practical Research: Planning and Design* (9th Edition ed.). Boston: Pearson.

Manzini, E. (1992). Prometheus of the everyday - The ecology of the artifical and the designer's responsiblity. *Design Issues*, 9 (1), 5-20.

Marshall, A. (2009, April 27). *Online 'Blood Plague' Offers Lessons for Pandemics.* Retrieved April 1, 2010, from www.reuters.com: http://in.reuters.com/article/idINIndia-39281020090427

McCullough, M. (2004). *Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing.* Cambridge: MIT Press.

McGonigal, J. (2007). *Connecting Games + Reality.* Palo Alto: Institute for the Future.

McGonigal, J. (2010, February). *Jane McGonigal: Gaming can Make a Better World*. Retrieved from ted.com: http://www.ted.com/talks/lang/eng/jane_mcgonigal_gaming_can_make_a_better_world.html

Murray, J. H. (1997). *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York: Free Press.

Nardi, B. A., & O'Day, V. (1999). *Information Ecologies: Using Technology with Heart*. Cambridge: MIT Press.

Narvaez, L. M. (2000, November). Design's own knowledge. *Design Issues*, 36-51.

Nutt, C. (2010, January 15). *Opinion: The Cultural Clash of Bayonetta*. Retrieved January 16, 2010, from www.gamasutra.com: http://www.gamasutra.com/view/news/26820/Opinion_The_Cultural_Clash_Of_Bayonetta.php

Pink, D. H. (2005). *A Whole New Mind: Why Right-Brainers Will Rule the Future*. New York: Riverhead Books.

Plowman, T. (1999). *Ethnography and Critical Design Practice*. Cambridge: MIT Press.

Porter, L., & Sotelo, S. (2004). *Design by Narrative*. Propuesta Aceptada Para El Congreso Interncional Ierg. Vancouver: Simon Fraiser University.

Quantic Dream. (2010, February 23). *Heavy Rain*. Sony Computer Entertainment.

Remo, C. (2009, November 13). *IGDA Forum: Asking 'Why' Will Keep Games Out Of The Ghetto, Says Hecker*. Retrieved from gamasutra.com: http://www.gamasutra.com/view/news/26077/IGDA_Forum_Asking_Why_Will_Keep_Games_Out_Of_The_Ghetto_Says_Hecker.php

Rheingold, H. (2002). *Smart Mobs: The Next Social Revolution*. New York: Basic Books.

Rusch, D. C. (2007, April 14). *Case Study: Emotional Design of Videogame "Silent Hill - Restless Dreams"*. Retrieved September 16, 2010, from http://web.mit.edu: http://web.mit.edu/comm-forum/mit5/papers/Rusch.pdf

Schell Games. (2011, January 3). *Jesse Schell - 2010 Unite Conference Keynote*. Retrieved January 24, 2011, from vimeo.com: http://vimeo.com/18407613

Schell, J. (2010, May). *TEDxUniPittsburgh - Jesse Schell - The Future is Beautiful*. Retrieved January 26, 2011, from youtube.com: http://www.youtube.com/watch?v=0tg55pdNMxw

Thackara, J. (2005). I*n the Bubble: Designing in a Complex World*. Cambridge: MIT Press.

The Serious Games Initiative. (2004, March 13). *Serious Games Initiative.* (Woodrow Wilson International Center for Scholars) Retrieved January 19, 2011, from seriousgames.org: http://www.seriousgames.org/about2.html

Tonkinwise, C. (2008). Knowing by being-there making: explicating the tacit post-subject in use. *Studies in Material Thinking*, 1 (2).

Treble, P. (2010, February 1). *I Graduated from Lost University.* Retrieved February 21, 2010, from www.macleans.ca: http://www2.macleans.ca/2010/02/01/i-graduated-from-lost-university/

Vidler, A. (1994). *The Architectural Uncanny: Essays in the Modern Unhomely.* Cambridge: MIT Press.