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The Play's the Thing:
The Quest for Understanding Narrative Experience in Interactive Digital Games

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The Play's the Thing[1]:

The Quest for Understanding Narrative Experience in Interactive Digital Games*

Christopher Michael Yap

Abstract

Game designers often struggle with balancing an effective narrative experience with engaging gameplay in their games. This difficulty arises because player interactivity with the game creates a potential for the player to directly and freely impede or deviate entirely from any narrative experience intended by the developer. The phenomenon of interactivity and narrative coming into direct contention with each other in modern digital games is referred to as Ludonarrative dissonance(LND), and this problem constitutes an obstacle towards the enjoyment of a game on both the gameplay and narrative levels, respectively.

In order to address the problem of LND, it is firstly necessary to understand how both narrative and interactivity exist and function in and of games, as well as how both of these inherent and potent forces behave in each other's presence. In this dissertation, I seek to elucidate the phenomenon of what constitutes a comprehensive interactive narrative experience in a game in order to better understand ways to maintain a beneficial harmony between interactivity and narrative in games. By attempting to understand both narrative and interactivity in terms of their essential qualities separately, then as a synergistic system which also requires player input and subjective interpretation, I propose a concept of

[1] Regarding the title ("The Play's the Thing"), this is a direct reference to William Shakespeare's timeless play *Hamlet* (Act 2, scene 2, 604–605). In that play, the protagonist Hamlet intends to use drama (the "play") in order to coax visible and true emotion from the audience, which is what I am contending occurs in games as well. In using this line in particular to refer to this work on Game Narrative, I am also invoking the dual meaning of both drama and gameplay as integral part of the narrative experience.

"Player-side Emergence" as a potential solution for instances of LND. Lastly, I propose the idea that an overall narrative experience in a game is not simply the existence of narrative and interactive systems/mechanics of a game, but rather a synergy or phenomenon which forms only when a player actually plays and interprets the game. Based on our findings, I conclude that such a narrative experience exists not simply in one part of a game software, system or player interaction/interpretation, but rather, it exists as a connective phenomenon which pervades all of these components and systems. I propose a new model for conceptualizing this overall narrative experience which is called the Narrative Experience Trinity, and I contend that this narrative experience model can be utilized by game and narrative designers to better conceptualize the narrative in an interactive game as a whole system as opposed to a compartmentalized part of development (that which potentially leads to narrative and interactivity colliding, and thus, the occurrence of LND).

Keywords:
Game Studies, Narrative, Ludonarrative Dissonance, Emergent Narrative

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Chapter 1. Introduction: The Medium of the Video Game

"Every age has its storytelling form, and video gaming is a huge part of our culture. You can ignore or embrace video games and imbue them with the best artistic quality. People are enthralled with video games in the same way as other people love the cinema or theatre."

-Andy Serkis

The medium of the video game is a curious one. What roughly began in the late 1970s as a niche industry dedicated to the creation of electronic digital oddities has exploded in growth and development the last 40 years into an entertainment industry to rival and contemporarily outperform both the conventional print, music, and cinematic media which came before it [1] [2] [3]. Simply in terms of output, at the annual Game Developers Conference in 2013, Mark Cerny of Sega has estimated that as of that year, the game industry is seeing a production output of roughly 1000 titles per week [4].

Games of all sorts--whether they be the games children play in the schoolyard, board games, or digital games--are all fundamentally based in the ethos of entertainment. That much has remained constant despite the dramatic changes in the modern video game industry. It is, however, more intriguing to note that the dynamic success of the video game industry alludes (rather dramatically) to a significant need in modern human society for interactive entertainment [5]. In that sense a mere "game" can be a paradoxical thing--on the one hand, the act of playing a game has often held the societal stigma of being a meaningless pastime, while on the other hand, modern society is collectively paying staggering amounts of money to both consume and encourage the growth of an industry dedicated to a meaningless pastime. Considering this, I believe it is time that we as a society dispense of such stigmas and finally admit that games are significant.

1.1. The Maturation of Narrative in Video Games

Despite the obvious economic success of the game medium, it is in understanding why games are significant--in dimensions and perspectives other than merely those of the economic indication--that the true meaning of the success (and benefit) of the medium can be gained [6]. In particular, the game medium is one in which technology and storytelling have both existed and developed alongside each other. As a technological platform, the game industry has helped to encourage growth of many audio-visually-related technologies, and in recent years has pushed the boundaries of both Augmented and Virtual Reality. The consumer need for more realism in games has spurred development in the computer graphics sector as well as in the areas of Artificial Intelligence/Behavior.

In addition to such technological advances, the ability of games to tell stories has also been a phenomenon inherent to the game medium which has further matured with age. Even the earliest and oft-cited example of the world's first video game, *Spacewar!* [7] (See Figure 1 and Figure 2 below), comes with some base narrative context:

> Russell had just finished reading the *Lensman* series by E.E. Smith and thought the stories would make a good basis for the program. "His heroes had a strong tendency to get pursued by the villain across the galaxy and have to invent their way out of their problem while they were being pursued. That sort of action was the thing that suggested *Spacewar!* [8].

Figure 1. *Spacewar!* Developed as a side project by Steve "Slug" Russell, Martin "Shag" Graetz, and Wayne Wiitanen for use on the DEC PDP-1.

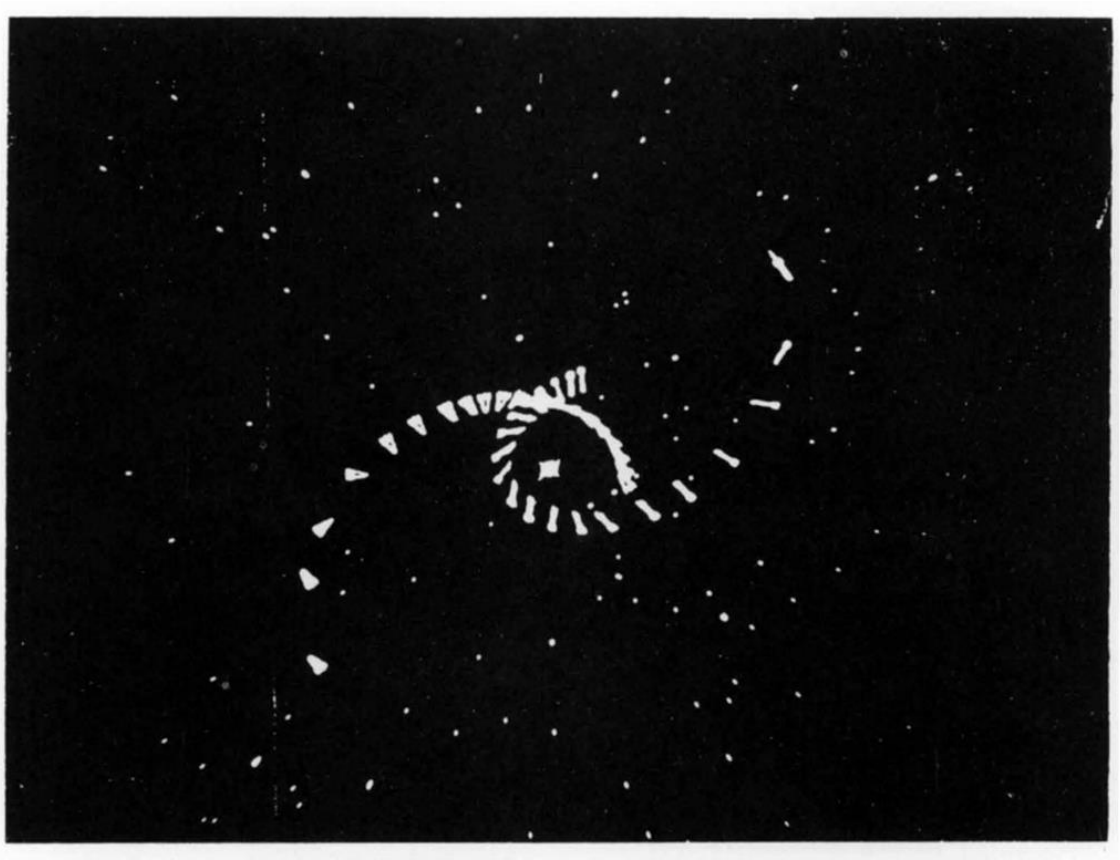

Figure 2. *Spacewar!* Screenshot. Players took the role of dueling spaceships, shooting at each other while also navigating around a star with gravitational effects. (© [1961], [Steve Russell, Martin Graetz, and Wayne Wiitanen]. Used under Fair Use.)

Yet, despite there being a stated narrative context for *Spacewar!* which came straight from the mouths of the developers, the gap between the stated story and the actual graphical representation of said story (literally, monochrome 2D polygons spinning cyclically around a center point and emitting pixels at each other) was understandably wide and vague. This phenomenon summarizes the way in which narratives in games existed in the early days of the medium and industry and is especially evident in the Atari- and Nintendo Entertainment System-era games of the 1980s (Figure 3).

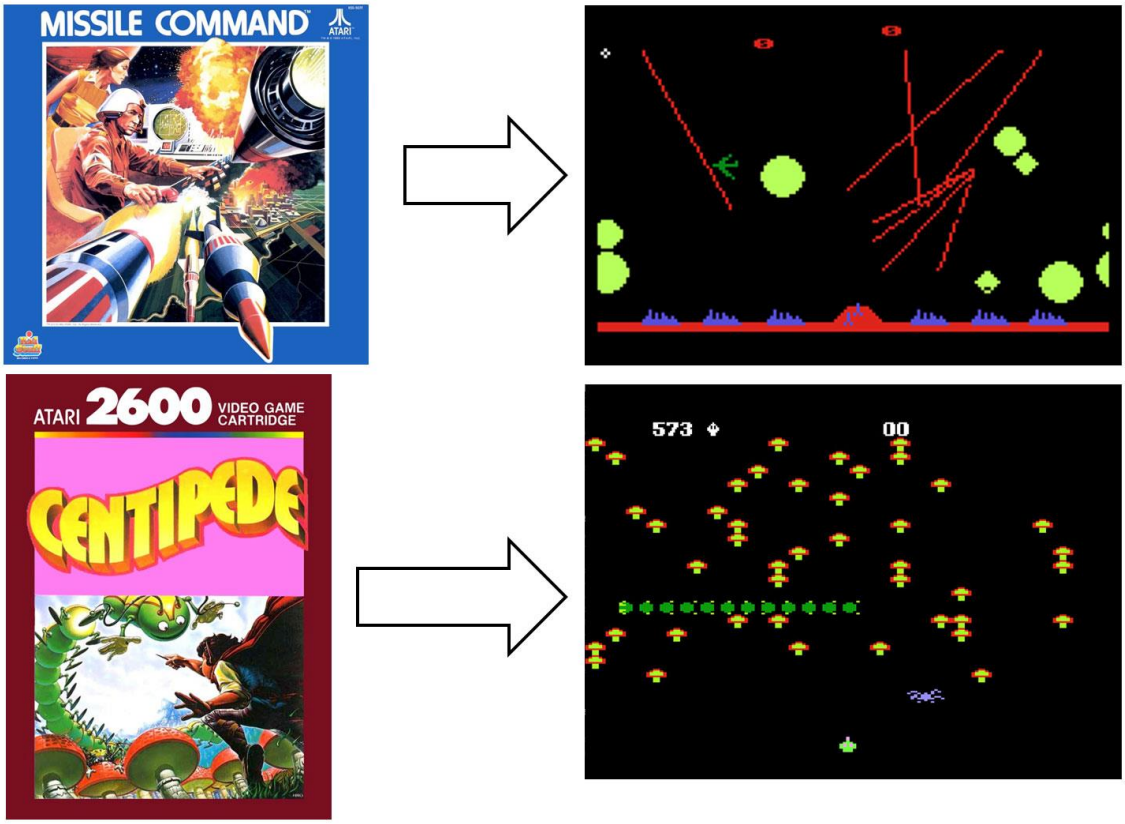

Figure 3. The gap between cover art and game screen. Game cover art (especially in the Atari-era of the 1980s) lent an imaginative narrative context to the digital abstraction which constituted the actual gameplay and screens. The gap between both visual depictions is considerable, and there is a dangerous possibility that players may not even associate the box-art (externally-imposed narrative context) with the actual game (inherent function and rendered gameplay of the program). Still, this constitutes the zone in which game narrative inhabited in early video games.

Of course, it should also be noted that the above examples of recontextualizations and narrativizations predominantly existed for those early games as material external to the actual game. As Figure 3 shows, these often took the form of arcade box art, or a small narrative textual blurb written somewhere in

the accompanying materials which came with the sold versions of a given game. For example, these stories are often found within the instructional manuals of many Atari-era games [9]. Despite the fact that modern technology has enabled the bulk of the narrative responsibility to exist within the gameplay itself, this practice still remains even today.

By the time Nintendo began to experience commercial success in the home video game market in the United States in the 1980s, video game technology had progressed to the point where narrative and context could be told within and as part of the gameplay of a given game [10]. With the advent of the modern digital role playing game (and arguably the first commercially-successful Japanese role playing game outside of Japan, 1987's *Final Fantasy* [11] for the Nintendo Entertainment System), story-centric games began to more closely resemble conventional narrative media such as film. Another example of an early story-centric game from the Nintendo-era was *Dragon Warrior* (titled *"Dragon Quest"* in Japan) [12]. In the case of Dragon Warrior, the character dialog was translated into a kind of antiquated, pseudo-Elizabethan English form (see Figure 4 below), which gave the game a Shakespearean feel, thereby (perhaps accidentally) evoking both the fantasy imagery that the genre of RPG is known for often adopting, and implying ties to the older, more classical storytelling medium of classical literature. Unfortunately for *Dragon Warrior*, this localization anomaly only served to alienate Western audiences [10].

Figure 4: A screenshot example of the pseudo-Elizabethan English dialog in *Dragon Warrior* [12]. Many games released during this period began to take a narrative shape. While the dialog in *Dragon Warrior* was evocative of the older, more conventional storytelling medium of literature, the translation choice proved strange to Western players. (© [1986], [Enix]. Used under Fair Use.)

Since the advent of the home-console era in the 1980s, story-centric games have only continued to evolve and grow in popularity. With the debut of next-generation home gaming systems such as the Sega CD [13] and the Sony Playstation [14], games media transitioned to the Compact Disc format and there was a strong trend toward the development of games in 3D. In particular, with many Playstation-era games, developers had a habit of relying on the storage capacity of the new CD format to incorporate full-motion videos into games (albeit crudely), thereby furthering the evolution of storytelling games and resembling the medium of cinema even more, as displayed in Figure 5 below.

Figure 5: A screenshot from the game *Warhawk* [15]. Like many of its contemporaries, *Warhawk* made very liberal usage of pre-recorded full-motion, live-action cinematics in order to convey the majority of any embedded narratives the game had to offer. The effect was that games were trending towards and evolving further into being considered a narrative medium. (© [1995], [Sony Computer Entertainment]. Used under Fair Use.)

Currently, game technology has allowed for an intriguing amalgam of varying storytelling techniques which can potentially employ narrative mechanisms from both literature and film, alongside the ever-evolving technology of digital 3D animation. However, while this very technology enables the storytelling power of the game medium to excel in modern society, it is also important to further examine in what ways modern games emphasize their storytelling methods.

Perhaps, in part, because of advances in technology, there has been a noticeable increase in the phenomenon of storytelling in the medium of games in recent years. However, this storytelling has possibly borrowed too heavily from the medium of conventional cinema/film. Modern blockbuster hits such as Naughty Dog's The *Last of Us* [16], Quantic Dream's *Heavy Rain* [17], as well as the world-renowned *Final Fantasy* series from Square Enix have utilized the latest in

cutting-edge technology to render considerably cinematic experiences for players. While the existence of a cinematically-inclined game is no actual sin against the progress of creative arts, such an over-emphasis on the cinematic method in storytelling succeeds in perhaps inadvertently ignoring the one inherent feature which sets games apart from conventional precedent static media such as literature and film--that of interactivity.

1.2. Interactivity and Narrative in Games

> *"I believe that even today we can only tell a simple story without really interfering with gameplay. But in the future, I think it will almost be a requirement of all storytellers when they create games, how they can tell a more complex story without conflicting with the gameplay."*
>
> *-Hideo Kojima*

Fundamentally, games of all sorts require some form of player participation in order to function as games. This participation constitutes the interactivity which distinguishes games from other storytelling media. For example with both literature and film, the extent of one's participation in the act of enjoying that media is simply that that person read or watch said medium, respectively. With such static precedent media, simply passively taking in the medium is sufficient for the reader/viewer/audience member to have an experience rendered for them. By contrast, with games, the actual rendering of the experience is dependent upon that player actually investing what Espen Aarseth calls "non-trivial effort" in order to traverse the terrain of that game. Consequently, it is in that level of interactive participation that the player can actually experience the game medium [18].

The interactivity of a game allows the player to not only experience the narrative content of a game, but also in many cases to influence the outcome of that

narrative as well. This is especially true in games which feature multiple endings, where players can determine a different narrative ending depending on the choices they made in the game. By allowing the player (by design) to influence the narrative content of the game in this fashion, the player fundamentally inherits some of the authorial agency and burden for the narrative. This is what sets games apart from other storytelling medium--the ability to allow the player to create their own tale and share in the authorship of that narrative medium [18] [19] [20] [21].

While this feature distinguishes the narrative potential of the video game, it also represents a fundamental problem for understanding (and by extension, creating/designing) narrative in games. If, for example, interactivity grants the player some authorial power over the story, it also serves as a mechanism by which authorial agency is also potentially taken away from the original authors of the game narrative, namely that of the game designers/developers (Figure 6 below).

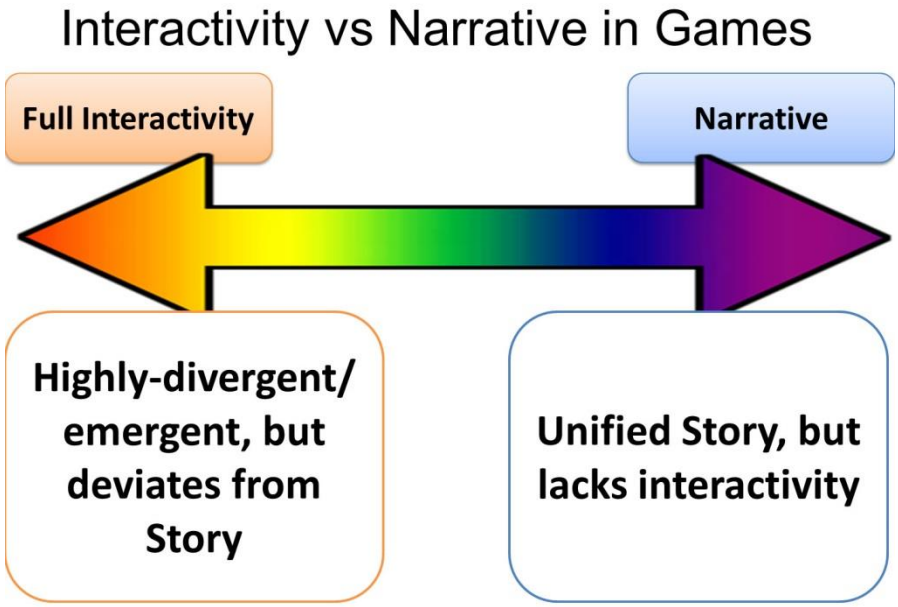

Figure 6: Interactivity vs. Narrative in Games. While both of these forces exist in games, a tendency toward one can potentially result in less of the other. More interactivity allows more freedom for the player to deviate from the original narrative, whereas overly-narrative games may be potentially linear, static experiences.

As games inherently invite player interaction, there will always be some basic degree of interactivity present within any given game. However, with games that exhibit some discernable narrative[2], a higher degree of interactivity--whether that be expressed via branching narrative choices, player performance/score resulting in a nuanced outcome, a selection of player character traits, etc.--contains the potential to allow the player to deviate from the original core (central) narrative.

[2] It should be noted that not all games necessarily contain narrative by intended design. A commonly-cited example of a game which does not contain narrative traits or an easily discernable narrative is that of *Tetris* [113]. This is not to say, however, that such a game could not later exhibit narrative traits post-gameplay, as will be discussed in Chapter 5.

In such cases, there is a considerably chance that a player may find themselves having a narrative experience which is wildly different than the one the game's creators had originally intended. This, in and of itself, may not necessarily be a bad thing, as the experience the player creates may in fact prove to be more entertaining to that player than the originally-planned content [20]. Despite that potential, the question remains: if the interactivity of games allows players to create their own nuanced narrative experiences, how can game developers strive towards the any consistency of the creative process?

This phenomenon of interactivity and narrative in games and how best to balance both factors constitutes a critical concern for game designers. Ideally, a good game would theoretically utilize some fine-tuned balance between both interactivity and narrative (especially since one factor is not necessarily "better" than the other). Achieving this balance is also important for game design as it would allow a good game to offer both a freedom of choice and interactivity without compromising the core narrative vision of the game designers [22].

As it stands in actual practice, achieving the ideal balance between interactivity and narrative in games has proven to be an extremely elusive goal. In a cursory examination of games (contemporary to the writing of this dissertation), examples which represent both ends of the spectrum are readily apparent. Historically, it is easier to observe and cite narrative-heavy games in such a survey, since interactivity seems to also benefit from the maturation of technology. Sierra's *King's Quest* [23] and Delphine Software's *Another World* [24] stand as successful examples of the "story game" where choice and interactivity are limited, especially with regard to influencing the final outcome (of which there is none for the two aforementioned examples). In both of those games, the story is rigidly linear and the extent of player activity is that the player simply navigate or talk their character out of perilous situations in order to reach the end of the game. Again, in both of the above examples, there is only one ending, and the story structure resembles something much more traditional and akin to that of Freytag's Pyramid in literature [25] or the more well-known Three-Act Structure of film [26].

On the other end of the spectrum, there are games such as Mojang's

Minecraft [27] or the ever-infamous *Grand Theft Auto* [28] series from publisher Rockstar Games which are heavily characterized by near-total player freedom, so much so that the game mechanics infer that a central narrative may be wholly unnecessary. In these examples, player interactivity and freedom are prioritized. By design, in *Grand Theft Auto: San Andreas* [29] for example, the game is quick to emphasize to the new player that the game world is considerably large and composed of several missions whose objectives are achievable in any number of ways. The means by which players may achieve mission objectives are left entirely to the player's own discretion or play style. In *Minecraft*, the game is quite upfront with the player about the lack of narrative direction or context. There is no guiding narrative or even instructions. Players of *Minecraft* must simply experiment and muck about in their digital surroundings until they find some activity which is interesting and somehow worthwhile. While this sounds completely bewildering to anyone who has not played Minecraft, this open-world game mechanic--the total absence of conventional limits and the maximization of player freedom--has proven wildly successful for both of these game franchises [30].

Finding successful distinctive examples of games which are either categorically narrative-centric games or highly-interactive, open-world games in the current market is relatively easier than finding games which exhibit both of those traits in ways which preserve both characteristics and (more importantly) do not allow one to compromise the other. In fact, this trade-off between interactivity and narrative in games has led to a very specific and problematic phenomenon in the field of game narrative, one that is defined by the very act of narrative and interactivity somehow getting in each other's way. This problem has been dubbed, "Ludonarrative Dissonance" [31].

1.2.1 The Problem of Ludonarratve Dissonance

Ludonarrative Dissonance (henceforth referred to as "LND") is a problem in which the game's narrative and interactivity (the gameplay mechanics, rules, agents/objects, etc.) come into direct contention with one another. In stronger

expressions and instances of LND, game narrative and mechanics actually directly contradict each other and lead to fragmented and potentially broken experiences for players in terms of both narrative and gameplay. One particularly jarring example of LND can be found in the game *Grand Theft Auto: San Andreas* (*GTA: San Adreas*), as cited by Simon Brislin: "For example, 'GTA: San Andreas' is a redemption story which necessitates a headcount of thousands. The story is about CJ making a new start while the player must commit genocide to get the redemptive ending" [32].

GTA: San Andreas is an extreme example of how the form and function of gameplay and narrative in that game has served to work against each other to render an experience that is fundamentally confusing and contradictory for players. On the one hand, there is an embedded narrative about the main player character, CJ, who at the start of the game has just gotten out of prison and is looking to leave his criminal past behind, and on the other hand, the game itself (mechanic- and rule-wise) demands and rewards players for engaging in criminal acts (which ironically become the means of CJ's redemption in the game's narrative) [29].

Another more well-known example of LND occurs in the Square Enix game *Final Fantasy VII*, where Aeris (one of the characters integral to the main narrative) dies [33]. This in itself is not problematic, but as is par for the course with *Final Fantasy* games, players are taught through the game mechanics that battle with enemies will occur often, and that death in battle is not permanent. If one of your player characters should die in a battle in the game, one simply needs to use an item called a "Phoenix Down" to revive that fallen party member. This revival technique is a tactic of common knowledge amongst players of this game, and a fact of life when going through this 60+ hour RPG, where temporary death (and subsequent revival) on the battlefield is somewhat common. Bearing this common game mechanic of character revival in mind, it then becomes very disjointed and perplexing to players when, for the purposes of the game's narrative integrity, one of the major party members (Aeris) must die and remain dead (for the purposes of the narrative of the game). In this scene in the game, players are never given the opportunity to use a Phoenix Down on the dead Aeris, thus taking any control or agency away from the player without warning and without context, other than that which the narrative is

providing (and ostensibly forcing) upon the player [33].

In the above instance of LND in *Final Fantasy VII*, a truth which has been established by the game's mechanics is being abruptly (and temporarily) subverted. The message is clear: it is only in this case that one cannot revive the dead with a mere Phoenix Down, but summarily after the part where the party mournfully lays Aeris to rest, fallen party members can once again be revived after death with the use of Phoenix Downs. Just as in the *GTA: San Andreas* example, the gameplay (interactivity) and the narrative of the game are telling players two different and contradictory things simultaneously, and in doing so, the overall integrity of the game (both in terms of narrative and gameplay) suffers.

So long as games remain an inherently interactive medium in which stories are told, the fundamental problem of LND will remain. At this point in the growth of the medium, no surefire ways of remedying LND have yet been found by either industry developers or researchers at large. That is, however, not to say that LND is entirely without countermeasures. In fact, since the phenomenon of LND has come to the mainstream attention of game developers and researchers, both parties have been experimenting with different ways to reconcile gameplay and narrative in their games while maximizing the inherent benefits of both [22].

1.3. The Problematic Landscape of Game Studies

Considering the importance and novelty of the issue of LND as it pertains to digital interactive storytelling, it is important to foster rigorous and positive academic investigation of new and interactive storytelling media, such as games. In much the same way that both the print and film media have cultivated an ecology of academic inquiry, the medium of games has also followed in this very tradition and has in recent years begun to gather researchers and scholars together who are all very concerned with the significance and implications of the game medium on many fronts. It is in this way that the fledgling field of Game Studies has coalesced [34].

Game Studies (not to be confused with mathematical Game Theory) is the critical academic study of the significance of games (digital and analog) with respect

to a wide range of significant fields, from technology and design, all the way up to issues of society and humanity [34] [35] [36]. Currently, the landscape of Game Studies is extremely diverse, and this diversity is actually a reflection of two factors:

1. **The diversity of the game market**: The game industry is among other things, an entertainment industry. As such, the need to keep consumers stimulated with seemingly new and innovative gameplay and title options has led to a high degree of unpredictability and diversity in the landscape of available game titles in any era. This, along with the sudden increase in title releases in recent years which was estimated to be approximately 1,000 titles per week being released globally [4], has exacerbated the issue of Game Studies being unable to keep pace with game production and diversity.
2. **The diversity of the fields utilized to study games**: as a new medium which can be thought of as the effective amalgamation of cinematic, ludic, and digital arts, ultimately realized in a myriad of different renderings, games can and have been consequently analyzed in just as many varying ways. Digital games are a new medium. As such, no singular field of study exist which is inherent to games. Rather, experts from other disciplines began to see in the emerging medium of games the indicators of significance endemic to their own respective fields. As a result, the people currently involved in Game Studies generally hail from different, but peripherally-related fields such as Computer Science, Sociology, Psychology, Literature Studies, Anthropology, and so on.

In terms of diversity of both subject material and approaches, one would be very hard-pressed to find a field that is more rocky, convoluted, and enigmatic as that of Game Studies, and there are documented precedents which lament this fact, such as in [37]. In fact, most of the currently available research in Game Studies reflects the hybridization of two or more existing fields of research. This is both fitting and proper, considering that games are themselves the co-functioning synergies of technology and the human arts [38] [39]. In short, in as many ways as the medium of games tries to innovate, so too numerous and multi-faceted are the

ways in which researchers of Game Studies attempt to critically examine games. Furthermore, considering the reasons above, it is highly likely that this diversity of approaches is inherent to the medium and will continue to be seen in subsequent research efforts.

As if that were not problematic enough, it should also be noted that the division of authorial agency between the developers (who are making concerted efforts to forge a directed narrative experience in their games) and players (who are by design invited to influence said narrative experience) is also a fundamental concern for this research which also adds significantly to the difficulty of studying digital games in particular. Who is actually in charge of the story in games? Is it the players, which interactivity invites and allows, or is it the developers who created the source material? The precedent media of literature and film have not had to deal with these creative questions simply because those precedent media are considered to be media in which the flow of experience is generally one-way--from author/director to audience. The creative output of these traditional media is generally thought to be brought to a "complete" state by the time of its public release (as it the case with publishing print media and releasing films for viewing), and there is little consideration for the alteration of such media after it has been officially released. By contrast with games, interactivity allows for that trajectory of narrative experience to flow both from the source and from the destination in varying parts (Figure 7 below).

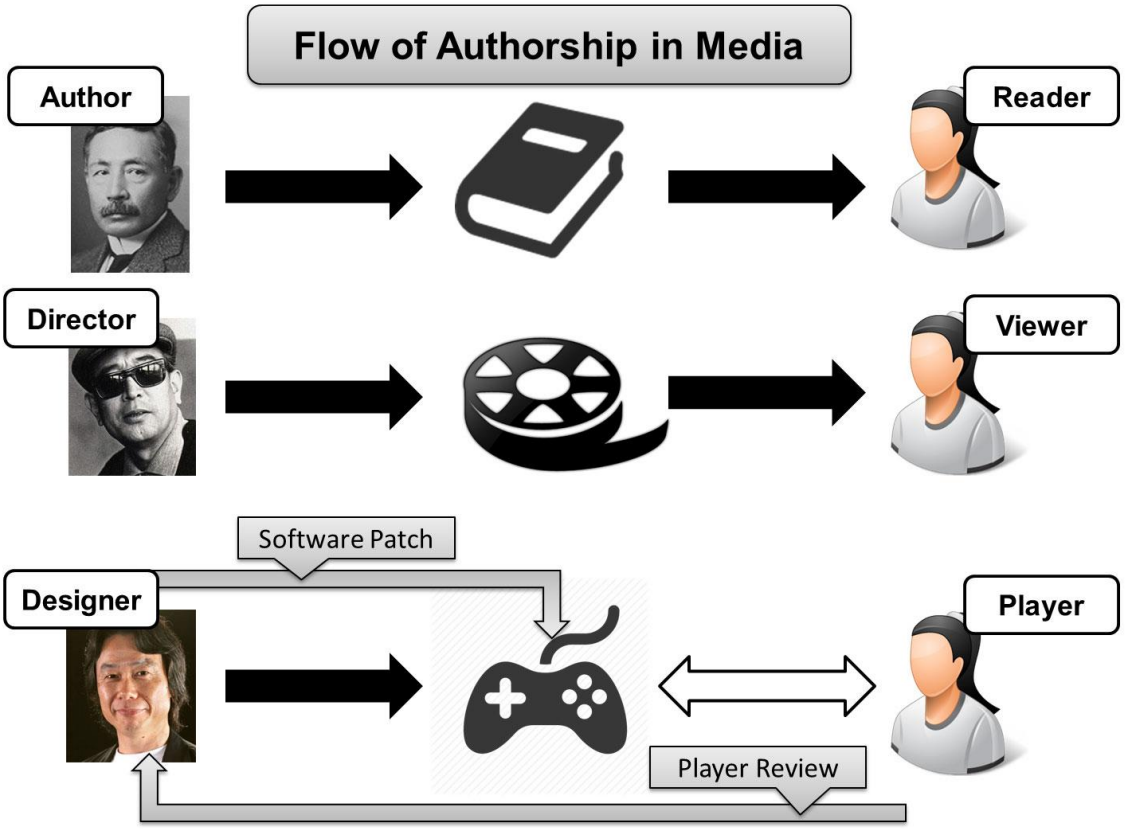

Figure 7: Flow of Authorship among various media. Note that games, unlike other precedent media, allow for a shared authorship between game designer and player (via the game software), and that game software can also be changed after release, based on player reviews on the internet and official software patches from the developer.

To complicate this even further, the software-based nature of the medium (especially in the internet era) has allowed video games to be incrementally changed and/or improved via downloadable software patches (Figure 7). In this sense, video games can be a problematic aesthetic media to analyze because they are essentially always in-process and in a state of flux--they potentially lack that state of static product completion which is inherent to prior media [40].

Having noted as much, it can be well-established that the new medium of the video game (especially as a narrative medium) is a thoroughly challenging one to

attempt to study using any conventional means. This very fact has necessitated the creation and proposal of new methods and tools for analyzing this amorphous and rewarding new medium.

1.4. Towards a Model for Narrative Experience in Games

To that end, this dissertation is comprised of multiple, varying efforts towards understanding how storytelling exists and functions in the interactive medium of games. Noting the diversity of both the target medium, the currently new and developmental state of the field, and the highly-plastic nature of the technology which comprises the medium of modern video games, our approaches should necessarily be multi-variate in both approach and extrapolation. Through incremental steps towards understanding narrative experience and phenomena in digital games, I contend that the benefit of this research is that we may then begin to improve the ways in which games tell stories, and equally, how games researchers can better understand game narrative. Additionally, this research effort has been conducted in the spirit of finding ways to make the best use of the interactivity inherent to games without compromising narrative integrity.

And so, this dissertation, which is the exposition of my Ph.D. work specifically in Narrative Game Studies (Interactive Narrative and Emergent Narrative in digital games), is about understanding the phenomenon of interactivity and narrativity and investigating ways to design games which allow both game designers and players to have authorship over a game narrative experience without making them come into conflict with each other, as is so often the case with instances of LND.

If the enigmatic problem of interactivity and narrativity in digital games is an egg that must be properly cracked, then my attempts to understand those phenomena with respect to each other, games, and players' experience has resulted in a body of work which involved trying to crack that egg in many different places and from many different angles. Specifically, the body of work I created in my Ph.D. period can be categorized as follows:

1. **Understanding Game Narrative in terms of Narrative:** this section of the

research attempted to understand how certain traditional narrative devices exist and function in digital interactive games, and their effectiveness in conveying meaning in an interactive medium. This research effort is represented by the conference paper entitled "Genetic Predestiny vs. Digital Free Will: An Analysis of Character Foils in *Metal Gear Solid*" which was presented at the Replaying Japan 2014 International Conference on Japan Game Studies [41].

2. **Understanding Game Narrative in terms of a System:** this section of the research attempted to understand the ways in which a game system--more specifically, the rules of a game--contribute to the telling of a narrative within a game. This research effort is represented by the conference paper entitled "Playing the Ocarina Across Cultures: Explicating Ludo-narrative Experience in the *Legend of Zelda: Ocarina of Time*" which was presented at the Replaying Japan 2015 International Conference on Japan Game Studies [42].
3. **Understanding Game Narrative as a relationship between the Game System and the Player:** this section of the research attempted to propose a new concept for understanding how the emergent systems/potentialities which are inherent to both game systems and human minds can be considered in order to create meaningful narratives with variable narrative contexts. This research effort is represented by the conference paper entitled, "Between Hard-coded Software and the Human Mind: Player-Side Emergence in *Papers, Please* and *Gone Home*" which was presented and subsequently won a Top Paper Award at the Meaningful Play 2014 International Conference on Serious Games. This paper subsequently went on to be published in the International Journal of Gaming and Computer-mediated Simulations (Volume 7, Issue 3) [43].

Based on the above summation of efforts, it can be quite difficult to understand exactly where the "narrative" in a game may exist. However, it is this very quandary which is integral to an understanding of the insights gained through these cumulative research efforts. According to the above body of work, the narrative experience and phenomena of modern digital games seems to exist simultaneously in the software platform, the game's rule systems, and the player's interpretation of the narrative as a resultant experience of a given playthrough. I contend that not

only is this possible, but that it is actual. This multi-dimensional existence of the narrative experience in games is the very essence of everything that can be referred to as "game narrative" or "narrative which can be both found in and resulting from gameplay." The game's inherent coding and technological platform delineate what is actually render-able on the display device, thus dictating the potential for audiovisual fidelity (or lack thereof). This essentially constitutes the initial physical layer of the game narrative experience. Additionally, the rules of a game, the difficulty and/or ease of certain tasks in a game color the experience of that section of the game for the player. Furthermore, the player's own subjective real life experiences and memories have the potential and the inherent function of lending an emotional subtext to that which is experienced during gameplay. This aspect can be thought of as extraneous to the game itself, but highly integral to the overall game narrative experience (Figure 8).

Figure 8: The phenomenon of Game Narrative Experience. I contend that game narrative exists and functions not simply in or as a single part of a game, or as a sum of those exhibited parts, but as a connective synergy that achieves its ultimate form and function when the player interacts with the game. In this model, the player, their interaction and their interpretation are just as integral a part of the narrative experience as the embedded narrative elements and the narrative mechanics.

It is through my research, outlined above, that I have investigated all of these aspects of game narrative, and in doing so, propose that game narrative exists as an experiential phenomenon, not solely contained in any one of these dimensions of gameplay experience, but rather, as an emergent, synergistic result of the interplay of all these dimensions, initiated and maintained by the player, existing between all parts and parties involved. Through the player's action of actually engaging in the play of a game, the narrative phenomenon coalesces from all the

varying dimensions both internal to the game software and external via the player interpretation. The play itself is both the connective tissue and trigger of the narrative experience as a whole. This central idea has been developed into a new proposed model of understanding narrative experience in games which I call the Narrative Experience Trinity (outlined in Figure 9 below).

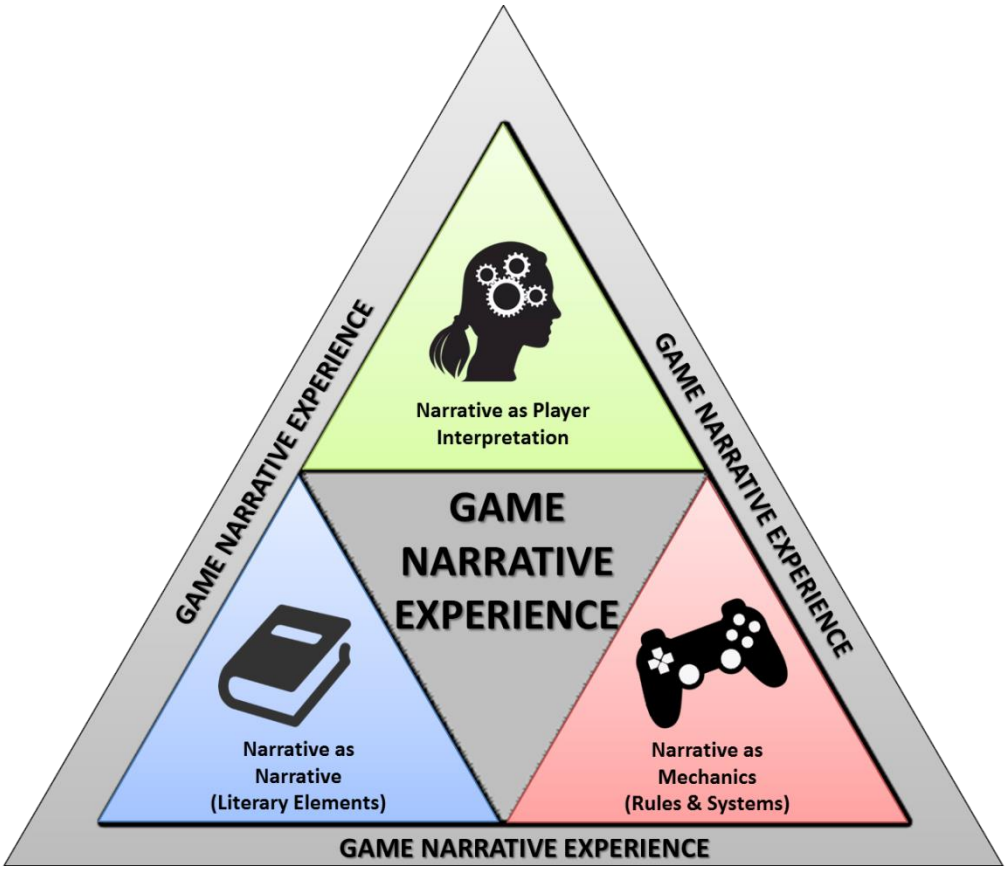

Figure 9: The Narrative Experience Trinity. In this proposed model of narrative in games, each of our major research efforts contributes to an understanding of one of the three major parts of narrative in interactive games (Embedded Narrative Elements in games, Narratives as Game Mechanics, and Narratives as Player-side Emergence/Interpretation). Out of the synergy of all these aspects forms the overall phenomenon of Narrative Experience, both resulting from the cooperation of all parts, and exhibited as a connective force of all parts as well. Please note that this figure will be used to situate the work in this thesis with relation to the appropriate chapter.

The chapters and sections which follow will each be dedicated to explicating the work done in this research with regards to the idea of the over-arching narrative experience in modern digital games. Chapter 2 describes the work related to this topic. Chapter 3 will be explaining our approach towards understanding game

narrative in the terms of narrative itself, while Chapter 4 will be going into detail about how I approached game narrative with regards to the game system and rules. Chapter 5 details our proposition that game narrative is a phenomenon which arises out of both game system and player interpretation, while Chapter 6 concludes the work by readdressing all of the findings in terms of narrative dimensions. Chapter 7 then details the potential future directions of this research.

Chapter 2: Related Work

"...[T]he play's the thing
Wherein I'll catch the conscience
of the King."

-William Shakespeare's Hamlet
Act 2, scene 2, 604–605

This Chapter will briefly introduce and discuss the research landscape of Game Narrative Studies. Though the field itself is relatively young, there still exist significant efforts towards understanding narratives in a digital interactive game.

I will begin by introducing the two main/seminal schools of thought regarding narrative in games, namely that of Narratology and Ludology. From this point, I will discuss the lacking areas in order to lead into a discussion of how I propose to address the gap.

2.1. Narratology and Ludology

The birth of Narrative Game Studies in the late 1990s saw the formation and academic-sparring of two semi-competing philosophies regarding stories and narratives in games: Ludology vs. Narratology.

Put simply, Narratology was a general approach to investigating the ways and possibilities of storytelling using digital games [36], whereas Ludology developed as a response to Narratology, contending instead that games should be understood not by the narratives found within them (which Ludology argued were merely incidental), but by the formal systems and rules which made the medium games in the first place [44].

In appropriate terms, Narratology is essentially the academic study of narratives. The definition of the field is intentionally broad, as the media which simultaneously utilize and are constituted by narratives is forebodingly broad as well. In terms of this thesis, the type of Narratology that is of particular importance is that of Literary theory, criticism, and interpretation. For instance, in much the same ways that the works of Plato or Shakespeare might be studied, analyzed and

interpreted, so too may video game stories be similarly deconstructed in order to search for potential dual meanings hidden in the layers of any given narrative. That is to say, the reader is always inherently free to interpret a story in any way they wish [37].

It then follows that as video games and the narratives contained therein are produced as creative endeavors, it seems logical to want to apply similar analysis methods to games in order to search for and understand any deeper meanings which may be present there. However, as video games are fundamentally different from static media in that they require a significant level of user interaction of participation in order to experience them, the current methods used for understanding and interpreting narratives in static media are admittedly both insufficient in their current forms and requiring some amendments before they can be meaningfully applied to game narratives [18]. This is one of the reasons why Ludology came into being.

Ludology contends that simply using the toolset from a different field (that of Literature Studies, as early Narratological efforts attempted to do) to understand a new digital medium is both insufficient for the task of understanding that new medium [36] [44] and, to some degree, an act of academic imperialism, where one field attempts to expand its territory and reach by including new types of media in its research scope, thereby ”colonizing” and assimilating it [45]. Where Narratology would look critically at the stories of the games, Ludology focuses primarily on the formalism of games. That is to say, where a Narratologist would study a game as though it were a story, a Ludologist would analyze the game as a game, where a game is comprised of a formal set of rules, to which any perceived narrative may in fact be emergent or simply incidental [18].

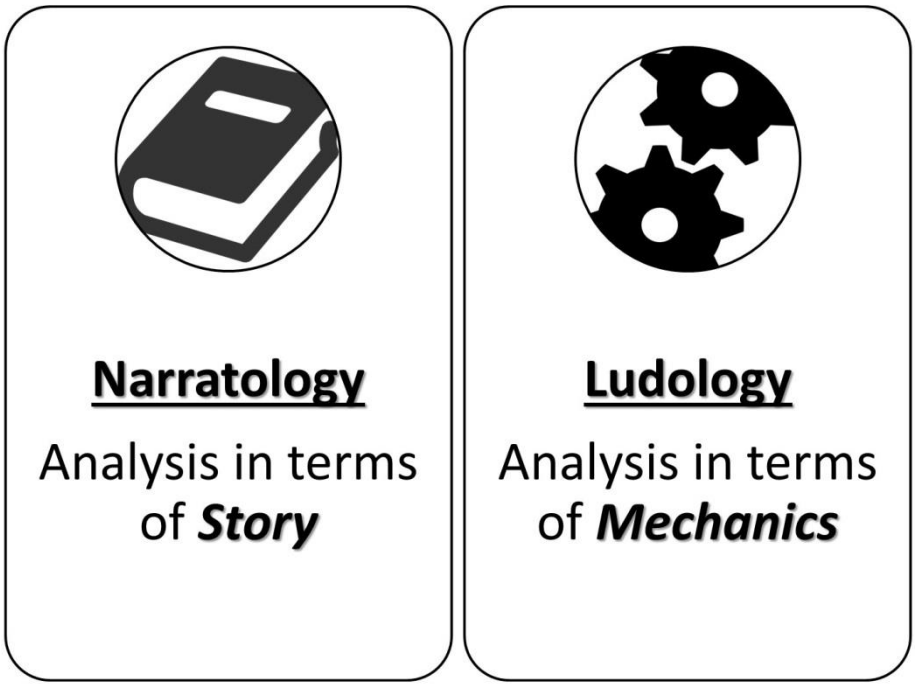

Figure 10: Narratology and Ludology at a glance. Where Narratology borrows heavily from Literary Studies and focuses on a story in terms of itself, Ludology has attempted to distinguish its novelty by focusing on story in terms of game mechanics.

2.2. Current State of Narrative Game Studies

By the late 2000s, this academic "debate" had all but died away, as experts on both sides seemed to agree that there was still room for both disciplines to expand without impeding the progress of the other, or in other ways, both parties seemed to regard the other as distinct, no longer in direct contention, and for all intents and purposes recognized the conflict as a mutually-beneficial "non-debate" [18] [22] [46] [47]. This notion is further reinforced by the decrease in academic work which dealt directly with the so-called battle between Narratologists and Ludologists. Still, this historical development in the study of narratives and stories in games leads us to the meat of the study presented here, in which the chief concern is how best to research and understand narratives which exist in games.

2.3. Towards More Comprehensive Methodologies and Theories

Based on both the complexity of the hybrid story/gameplay nature of digital games and the still plastic nature of the field of Game Narrative Studies, in order to understand and research narratives present in and rendered through games, it will be equally important to adopt a multi-disciplinary approach. Furthermore, I contend that a multi-pronged approach to understanding story in games which references the strengths of Ludology and Narratology from Game Studies is needed for an understanding of the embedded narrative of a given game. Additionally, as digital games are by form and function a medium borne by and consisting of technology, an objective, quantitative approach should also be insightful.

Furthermore, it is interesting to note that while both Narratology and Ludology have made sufficient strides in understanding game narratives in terms of the story itself and in terms of the game mechanics (respectively), there is a somewhat ominous lack of discussion regarding understanding the narrative experience of a game as it is experienced by the Player, as is displayed by Figure 10.

This sentiment has been echoed in the Game Studies community by [48], which contends that:

- Games are not a static phenomenon. Rather, they are a process that can potentially render a different experience upon every single play iteration. Singular, unified experience between players, while not impossible, cannot be assumed. Every play through is potentially a different experience.
- Considering this, it will be then necessary to collect various player experiences when it comes to methodologies surrounding narrative in games. [48] offers various sources for data collection such as official game websites and player forums as potential sources of data for understanding the experience of a game narrative.
- Furthermore, these external data sources are to act as multivariate supplements to the core analysis, which [48] contends should be the researcher's original playthrough experiences.

For the purposes of our study in this thesis, I also felt it necessary to consider all of these factors in formulating a methodology for analyzing game

narratives.

2.4. A Hybrid Study which Avoids Singular Classification

A common observation which occurs when considering game studies (particularly that of video games) is that, "if video games are a technological medium, then why is this investigation not conducted in a primarily technological way?" While I concede that there are a variety of different ways to understand and gain insights into the medium of games by studying them strictly as a system of software and hardware, I contend further that the story of any narrative which can be found there--whether that narrative be intentionally placed their as some context by the game designers themselves, or if that narrative was in some fashion an emergent context which arose from the player's own interpretation of their actions through gameplay--is a phenomenon which has a singular and very specific target for its effect. The narrative of any medium is really there for the human who engages with the medium.

Having noted as much, I contend through this investigation that it is the narrative effect on the player, and how that player reacts to a given interactive narrative in a game that is the most significant aspect of narrative in games. Of course, the way in which the product-side system is constructed and allocated to produce that narrative experience for the player is also extremely important, but since this study deals with the investigation of a system which involves the beautifully volatile human who should necessarily be emotionally affected by the narrative, the tools and theoretical perspectives used to study this phenomenon cannot be those which are exclusive limited to the study of technological systems. They must include the target audience, that of the human being, for that is also the target of the game narrative's emotional payload.

Therefore, a strictly engineering-based study of the effects of a game's narrative on human emotion and thematic interpretation of those subjective elements would be fundamentally hard-pressed to produce meaningful answers towards basic questions regarding narrative in general, such as why a particular game symbol would potentially represent certain kinds of emotions as was the case

in *Ocarina of Time*, or equally how the clash of opposing character types would constitute a philosophical debate over the nature of genetics versus the influence of upbringing as was the case in *Metal Gear Solid.* I would not claim that traditional engineering approaches could never yield insights on such factors. Rather, I contend that there are other theoretical perspectives which are far better suited to dealing with the human aspect of these ideas, which are originally born of the essence of the game stories, and processed by the CPU that is the human brain. A regular CPU could very easily crunch the logic of a philosophical debate, but can it comment on the actual thematic essence of that debate? In considering that hypothetical question, I contend that it would be much more ideally simpler to consult those sciences which have been concerned with human narratives for hundreds of years.

The study of narratives in games is inclusive to both the humanities and the sciences. It is the study of how inherently human elements are interpreted to run as an interactive program within software, rendered by hardware, and then interpreted by a human player. Considering this much, the study of narrative in games must invoke a discussion which involves both cultures of the empirical and the philosophical. Any study of game narrative which ignores or prioritizes one of these factors over the other runs the risk of simply missing the best of what games have to offer as a narrative medium.

Chapter 3: Game Narrative in terms of Narrative

"There is only one thing which can master the perplexed stuff of epic material into unity; and that is, an ability to see in particular human experience some significant symbolism of man's general destiny."

-Lascelles Abercrombie

For the purposes of trying to understand game narrative in terms of narrative itself, that is to say, using the tools of narrative analysis from precedent media such as Literary Studies and/or Cinematic Studies, it is firstly necessary and advantageous to select a single game for study. Preferably, such a game should be selected on account of its high degree of narrative content. This essentially means choosing a game for study in which either a large portion of the game is somehow dedicated to the telling of a narrative, and/or that such a narrative potentially exhibit some considerable traits of depth of meaning/interpretation. This notion of studying a text with substantial potential for interpretation hails from the long traditions of the precedent media studies mentioned above, and is easily seen when considering how such media studies select texts such as Shakespeare's Hamlet or Mary Shelley's Frankenstein as targets of critical inquiry. Through such activities are significant examples of the medium analyzed for depth of meaning, potential interpretations, commentary on the politics and society of the time, and writing traditions (just to name a few examples of potential research points with literature). It is through these methods that certain works may be understood to be part of a "canon" or a collection of works which demonstrate the significance of the medium at large [49].

With my background being originally in the study of English Literature, it was critical and natural for me to begin the research of game narrative with the same concepts and guiding philosophies as they are detailed above. Furthermore, there is some natural logic in attempting to understand narrative by referencing the body of narrative research which has come before. However, as Espen Aarseth and

Jesper Juuls have pointed out in their seminal works on game narrative in the late 90's and early 2000's, the simple one-to-one application of narrative theories meant for a particularly static media to a dynamic one pose inherent form and function problems [18] [20]. Consequently, any understanding which may be gained from applying straight Literary Theory to the interactive and malleable medium of games is going to inherently fail to consider those very aspects in games, as such theories and methodologies were developed without an awareness of interactivity in the first place.

Considering this critical point, that precedent narrative theories can only be applied carefully when studying interactive game narrative, it is then necessary to work towards an understanding of what parts and ideas from precedent media studies can still speak relevantly towards the understanding of interactive narrative. While that is indeed the end game of this research (forgive the pun), the endeavor must undoubtedly start somewhere, with some frame of reference and with some target text which exhibits those familiar traits of inherent narrative quality.

And so, for my first effort in this direction, I have designated the game *Metal Gear Solid* [50] (henceforth referred to as "*MGS*") as a target text which can be used to understand how narrative exists and functions in games, simply in terms of the narrative itself. This game has been selected because it is widely known to be, first and foremost, a heavily story-centric game. While its critical and commercial success in the decades since its initial release may indicate a surface significance, many players of *MGS* have reported a staggering depth of meaning and interpretation stemming from the game play of this game, and many of the unique game play traits of *MGS* have become reference examples for both game designers and fans alike. In fact, it was this very game which had inspired me to consider that the academic study of narrative in games was not only probably, but necessary.

In my study of *MGS*, I utilize methods common to Literary Studies in order to explicate the relationship of the characters in the story and how that relationship generates deeper meanings and social commentaries which exist as a thematic subtext to the surface narrative exposition. In a sense, what I have basically undertaken in this research on *MGS* is the analysis of symbols in the plot of the

game itself. Symbols can be thought of as pointers, or simply another layer of indirection, where a thing can represent both itself and other deeper meanings. It is in this initial study of how literary devices both exist and function uniquely in modern games that we can begin to understand what tools and ideas from precedent Literary Studies can still be applied to the study of interactive narrative, which of those ideas are not helpful, and most importantly, why that might be.

3.1. *Metal Gear Solid*--A Case Study in Character Foils in Games

Hideo Kojima's *MGS* is widely recognized by both gamers and industry professionals as one of the most influential games of all time. Woven into the greater plot of *MGS* is a discussion of the well-established, oft-debated concept of Nature vs. Nurture, framed within the game narrative around the real-life context of the modern Genetics/Eugenics debate at large. The narrative of *MGS* addresses this debate in a metaphorical way. Through the course of the story, it becomes evident that the characters of both Solid Snake and Liquid Snake (protagonist and antagonist, respectively) are character foils--contrasting analogs of each other in a myriad of ways (Good vs. Evil, Free Will vs. Fate, etc). With the two sides of this debate being represented as characters, the literal struggle between them becomes the debate itself, with the victor in this battle representing the supposed moral of this story.

In this initial effort to understand how a literary device can exist and function in an interactive game, I commit to a close critical reading of the narrative and plot of *MGS*, paying particular attention to the character foil of Solid and Liquid Snake, in order to explicate the ways in which this character foil establishes meaning on multiple levels, and to observe how such a foil behaves within an interactive video game. In this chapter, I contend that it is the practice of having a story constructed around and seeded with intellectual themes (such as that of Nature vs. Nurture) explicated via the literary device of character foils that allows *MGS* to transcend its common definition as a mere piece of entertainment gaming software to instead become a digital interactive narrative composed of clever metaphors which encourage further consideration even after the official gameplay has concluded. I further contend that as such benefits reflect the function and effect

of a well-written, well-received work of literature, a narrative must necessarily exist in this game, and in meaningful ways which have the same potentials--as in precedent literary works--to be interpreted for greater narrative understanding. It is however important to note that in this analysis, the limitations of the functions of literary devices in interactive media also become apparent. All of the above will be discussed in detail in the immediately subsequent subchapters.

3.1.1. The Background of *MGS*

In 1998, video game industry giant Konami released Metal Gear Solid on the Sony Playstation [50]. The brainchild of Hideo Kojima, *MGS* was the highly-anticipated third installment of the popular eponymous franchise established by the 1987 MSX2 computer game title *Metal Gear* [51]. The original Metal Gear game, also written and developed by Kojima, was one of the first major examples of a game in the so-called "Stealth" genre of games, characterized by an emphasis on having the player avoid conflict with and/or detection by enemy Non-Player Characters (NPCs). This very characteristic would go on to define the Stealth genre itself, manifesting in all the subsequent titles of the *MGS* franchise and would eventually manifest itself as similar game play elements in other popular games such as *Splinter Cell* [52].

The 1998 release of *MGS* builds on the story established by the two previous titles, wherein the player assumes the role of the protagonist Solid Snake, a member of the fictional American military Special Forces unit FOXHOUND. Many of the games in the Metal Gear franchise find the protagonist (either Solid Snake or some similarly-skilled doppelganger) tasked with a mission to prevent the development/deployment of a military super-weapon oftentimes codenamed "Metal Gear." *MGS* also generally follows this relatively rigid plot formula and the 16-year enduring legacy of the game *MGS* is evidenced by its various reiterations and spin-offs in to other media and games, as well as the continuation of the franchise itself [53]. *MGS* is widely considered by both the gaming community and video game industry at large to be one of the more commercially-successful examples of what a video game is capable of in terms of depth and execution of a story and entertainment, with the majority of the criticisms of this game centering on the

heavy-handed narrative structure of the game which makes liberal employ of non-interactive cinematic components to convey the majority of the game's embedded plot [54] [55] [56].

Very significant portions of the core plot of *MGS* are devoted simply towards the explication of the background and relationship of the protagonist Solid Snake, and the antagonist Liquid Snake, and the implications of their shared origins. Furthermore, the game narrative then uses a character foil, or an intentional character comparison, often between characters who are opposing opposites of one another in order to make an intellectual commentary on the concept of Nature vs. Nurture [57].

3.2. Analysis Method: Close Critical Reading

Originally from the field of English Literary Criticism, a Close Critical Reading[3] is a method employed by critics of literary texts which encourages the reader to focus on singular passages within the text, often to the point of examining key phrases or words, and the order of those words with relation to the meaning they convey, in order to help the critic gain both a better understanding of the meaning of that passage and to observe any new interpretations which that passage might hold either with relation to just itself, or against the entire work as a whole. In precedent Literary Criticism, close critical readings have yielded voluminous texts on the interpretations of particularly short phrases or even single words, as both the context and syntax of certain passages contain the potential for hidden meaning and reader interpretation.

With Close Critical Readings, the de facto authority of the meaning of a given text is not only the author, but also the reader, as any logical derivation of an interpretation from the text that is extraneous to the author's original meaning can be held as a viable interpretation after rigorous academic discussion. It is in this

[3] The Close Critical Reading is more often referred to as the "Close Reading" when discussed in the context of that field, but for the purposes of my study I am specifying the term as "Close Critical Reading" in order to make the meaning more evident for those games researchers coming from outside the field of Literary Criticism.

way that classical texts within Literature can potentially hold valuable and new interpretations for different generations of people, despite having been written and essentially unchanged since the time of their writing [58].

In this research on narrative in games, I contend (to an extent) that the Close Critical Reading can still be a very viable way of getting a foothold on a game narrative in terms of 1) highlighting those thematic aspects of the game narrative which hold the potential for meaningful interpretation and 2) and helping future researchers understand the language of storytelling that is particular to the interactive nature of the game medium. It is on this second point that Literary Studies has a historical advantage over contemporary Game Studies--much work has already been done in order to identify those tropes and mechanisms which writers employ to encapsulate and encourage meaning in their texts, but we as game researchers are still in the very early process of learning the various ways that an interactive tale can tell a story and encourage the same sort of meaningful interpretation.

And so, to that end, this chapter on reading *MGS* with a Close Critical Reading is essential for setting up our basic method of analysis with the games I analyzed in the subsequent chapters. Of course, although the Close Critical Reading remained the core analysis method I employed for initially understanding game narratives, this Close Critical Reading method will necessarily focus on different thematic and syntactic points of research interest (specifically, Character Foils in the narrative of *MGS*, themes of connection of people and place in *OoT*, intentional ambiguity of narrative in *Papers, Please* and *Gone Home*). At the start of each chapter, the points of interest which that Close Critical Reading has been focused on for that case study will be explained along with justifications.

3.3. Analyzing Character Foil via Close Critical Reading

As a focus of study, *MGS* presents an intriguing case study with a sufficiently-ample amount of material to inspect and analyze from a variety of angles. Specifically however, in this chapter, I commit to a close critical reading of the embedded narrative of *MGS*, and the goals of effort are two-fold:

1. To explicate the layers of meaning present within the character foil of the protagonist Solid Snake, and the primary antagonist Liquid Snake, and in doing so render an interpretation relative to both the foil itself and the overall narrative of the game
2. To examine how the character foil present in *MGS* behaves in an interactive video game, and in doing so, we can make some meaningful inferences about how appropriate such a kind of literary device is (or is not) for the interactive medium of games

Essentially, this study is asking "What deeper meanings can be found in this major character foil," and "Does this sort of thing even work in an interactive video game?" Addressing these questions using a popular game such as *MGS* as the focus of the study can potentially render insights into game design with respect to narrative and will contribute to an understanding of narrative design practices for interactive video games, especially those which are narrative-centric. Furthermore, with relation to the greater overall investigation of this dissertation as a whole, this first step in looking at how the more traditional notions of narrative abide within games is significant for understanding how games employ narrative as both a constituent of the game experience and a narrative force within the system of rules which constitute the interactivity of the game.

To that end, this endeavor begins with Metal Gear Solid, a significantly popular video game example that expresses itself strongly as a candidate for academic study due to its overt emphasis on story and narrative and its deliberate use of character foil metaphor.

3.3.1 Character Foil within the scope of the *MGS* Plot

In order to better understand the primary character foil, its multiple levels of meaning, and how that behaves in an interactive game, the narrative of *MGS* will firstly be discussed in terms of its overall narrative structure within the game. Subsequently, the thematic content of the game narrative will be discussed using specific examples of the game dialog which highlight the main themes present in the narrative. This approach of critically reading the original source text of the dialog in

the game has been borrowed from the field of classical Literary Studies. Lastly, the character foil of Liquid and Solid Snake will be examined, relative to the themes identified in the section prior. From this, design inferences can be made regarding how effective this sort of conventionally-literary device can potentially be in interactive game design at large, and it can also be seen how much of an influence the factor of interactivity plays in influencing the exposition of the narrative and its inherent themes.

3.3.2. The Narrative Structure in *MGS*

The Narrative Structure of *MGS*, that is to say, the way in which a story may be experienced during play, is conveyed primarily through in-game character dialogs and cinematic cutscenes of considerable length and frequency. Both of these types of narrative elements occur often throughout the course of the game, and are linked together by direct conventional gameplay in order to create the narrative landscape of the game. As expressed in Figure 11 below, it is upon this narrative landscape which a game player may experience the plot of *MGS*.

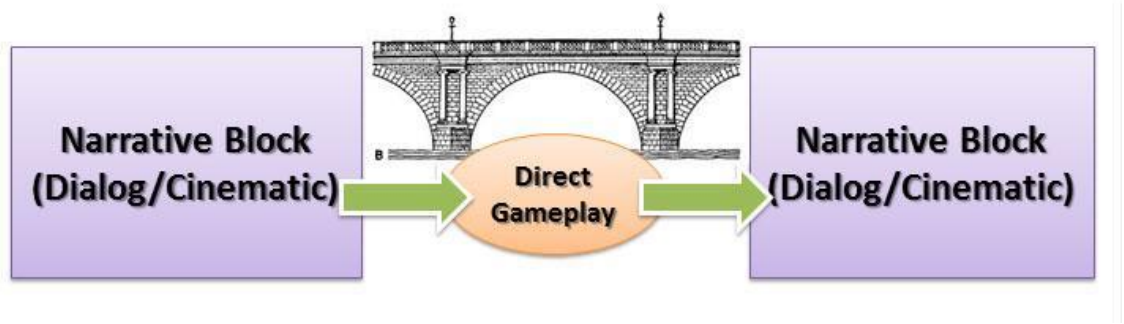

Figure 11: Narrative structure in *Metal Gear Solid*.

The portions of story-only dialog elements which cannot be altered or interacted with by the game player (save for being sped-through or skipped), easily account for a great majority of the total average gameplay time required to complete the game, which can average up to just over three hours, sans gameplay [50]. For any video game in general, this can be considered unconventional in terms of the

ratio between the time allotted to gameplay and story-only elements, and is often cited as one of the more criticisms of the game [58]. More specifically, many have argued that there is simply too much story and not enough play.

However, while the cinematic scenes are by no means mandatory (and may be skipped via button press), they do function as equally-integral to both the gameplay and the story. To put this in context, to a first-time player, skipping a dialog scene may preclude them from knowing how to solve the problem at hand, and additionally serves to create a gameplay experience that can potentially be a string of non-sequitur tasks, bereft of context. As it exists as a benefit to the gaming experience, the dialog-heavy structure of *MGS* places emphasis on the thematic, and at times didactic tone of the story in a way that most conventional video games are reluctant to do so.

3.3.3. Themes of Nature vs. Nurture

As a narrative, *MGS* is characteristically heavy-handed when it comes to introducing themes. The greater plot of *MGS* is saturated by a discussion of the well-established, oft-debated concept of Nature versus Nurture. That is to say, many of the characters openly discuss their motivations, which can be categorized with relative ease along a spectrum bookended by a concession to destiny on one end and a fierce free will on the other. Furthermore, this rhetorical discussion is framed within the real-life context of the modern Genetics/Eugenics debate at large.

> HAL EMMERICH: The truth is, my grandfather was part of the Manhattan Project. He suffered with the guilt for the rest of his life. And my father, he was born on August 6, 1945.
> SOLID SNAKE: The day of the Hiroshima bomb. God's got a sense of humor alright.
> HAL EMMERICH: Three generations of Emmerich men. We must have the curse of nuclear weapons written into our DNA.

The above quote from the game is one of the many examples of where the greater metaphor of Nature versus Nurture (and to an extent, Fate versus Free Will) evidences itself. Hal Emmerich, lead engineer on the Metal Gear Project, is told for the first time that the fruit of his scientific endeavors, originally intended to be used

for the defense of the nation, is to be re-tasked as the ultimate nuclear weapon. Emmerich ruminates on the irony of his current situation, as he has inadvertently become the newest member of his family to have intertwined destinies with the nuclear age. One may even be able to infer from the dialog that he seems to find it ironically fitting that he continue this morbid family tradition, even if he is aware of it or not. At its heart, the story of *MGS* poses the following question: "Am I only the sum of either my genetic code, or the sum of my experiences to this point?" For the character of Emmerich, the above cited lines and many other ones like it spoken throughout the plot of the game length indicate that he is a character who is considerably conflicted by the idea that he may be (even at the genetic level) doomed to repeat the mistakes of his forebears, despite his genuine wish not to participate in the development of weapons of mass destruction. His story within the greater plot of *MGS* is one which is echoed in significant part by other major characters as well.

In turn, each of the major characters in *MGS* is confronted by this over-arching notion of Nature vs. Nurture and throughout the course of the game they each have a chance to consider these questions in terms of their roles in the story. Particularly, this occurs in *MGS* during special post-boss-battle cutscenes in which Solid Snake listens to the valediction of the boss opponent he has just slain. Each of these pre-death confessionals is considerably lengthy and reminiscent of pseudo-Shakespearean monologues. Despite the profuse cinematic exposition of these cutscenes, the main message is evident--it is in these narrative encounters that Solid Snake (and consequently, the Player Character) learn about each of the bosses' perspectives, opinions, and personal philosophies on the Nature vs. Nurture debate.

Though each of the bosses' answers differ contextually, the common theme here is that all of them seem to be more on the Nature/pre-destiny side of the spectrum--they seem to concede or believe that their actions as soldiers and warriors stems from their very nature, and that such an idea also accounts for the darkness found in humanity at large. The boss character of Psycho Mantis cites that every mind he has ever read shares the same "atavistic need" to obey their inherent genetic imperatives and pass on one's genes. As a psychically-enabled character,

Psycho Mantis then subsequently reads Solid Snake's future, further indicating his preference for pre-destiny. The following boss character, Sniper Wolf, contends that her nature and principles as a soldier stem directly from her identification as a Kurd. Such an identification brings with it all of the cultural and historical context of that people, geographical region, and war-torn history which also underscore the harsh realities and necessities of living practically and without remorse--in her esteem, she is the very form and function of war. The shamanistic boss character Vulcan Raven seems to almost be a caricature of both Nature and the supernatural--speaking from the viewpoint of the essentialist qualities of the soul, he trusts in the immutability of his spirit to ensure that he will "return to Mother Earth" who bore him and watch Solid Snake from the spirit world. Ultimately, all of these boss characters represent slightly differing aspects of the same idea: that one cannot deny or escape who you essentially are.

3.3.4. Nature vs. Nurture via Character Foil

While this aspect of Nature vs. Nurture is evident with each of the main boss characters, this issue is addressed in the most direct way when it comes to protagonist and Player Character Solid Snake, and the primary antagonist Liquid Snake. Through the course of the story, it becomes evident that the characters of both Solid Snake and Liquid Snake are direct character foils --contrasting analogs of each other in a myriad of ways (Good vs. Evil, Free Will vs. Fate). Most importantly, both Snakes are thusly revealed to be genetic twins/clones at the climax of the narrative:

> LIQUID. Yes, twins, but we're not ordinary twins... we're twins linked by cursed genes. Les Enfants Terribles. You're fine. You got all the old man's dominant genes. I got all the flawed, recessive genes. Everything was done so that you would be the greatest of his children. The only reason I exist is so they could create you.
> SOLID SNAKE. I was the favorite, huh?
> LIQUID. That's right! I'm just the leftovers of what they used to make you. Can you understand what it's like to know that you're garbage since the day you were born?

This fact, when revealed to the player, further reinforces the character foil

and subsequently sets up a very direct and potent metaphor for the Nature vs. Nurture debate being addressed by the plot of this game. The antagonist, Liquid Snake, is perpetually tormented by the fact that he is merely a byproduct of an experiment intended to create another, and that he has no genetic purpose or reason to exist other than that he was the eventuality of the project--a means to an end, with no greater destiny outside of that function.

Furthermore, Liquid seems to be obsessed with the ideas of how a person's genes serve as a physiological fate-keeper of sorts:

> LIQUID. In Nature, family members don't mate with each other. And yet they help each other to survive. Do you know why? It increases the chance that their genes will be passed on to a new generation. Altruism among blood relatives is a response to natural selection. It's called the Selfish Gene Theory.
> SOLID SNAKE. You're telling me that your genes are ordering you to save the Genome Soldiers?
> LIQUID. You can't fight your genes. It's fate. All living things are born for the sole purpose of passing on their parents' genes. That's why I'll follow what my genes tell me. And then I'm going to go beyond. I'm going to break the curse of my heritage. And to do that, first I will kill you.

To Liquid, the issue is very decidedly one-sided: when it comes to determining one's fate at large, genes play a larger (if not the only) role. Genetics are a limitation to be surpassed. In this respect, the character of Liquid represents the polar extreme of the debate of the essentialist side of the Nature vs. Nurture gradient.

On the other hand, the protagonist Solid Snake does not appear to be affected as much by the idea that genes are a very potent governing force in a person's life. In fact, at one point in the narrative he denounces the importance of genes altogether:

> SOLID SNAKE. What's wrong, Naomi?
> NAOMI. Nothing... I'm just surprised you're willing to sacrifice yourself... you've got the genes of a soldier, not a savior.
> SOLID SNAKE. Trying to say that I'm only interested in saving my own skin?
> NAOMI. I wouldn't go that far but...
> SOLID SNAKE. I don't know what the hell my genes look like and I don't care. I operate on instinct...I'm going to save Meryl. I don't need an excuse.

Within the context of the greater metaphor, if Liquid Snake is the very manifestation of the idea that fate is genetically-bound, then Solid Snake represents the polar opposite of that metaphor. To Solid Snake, the very concept of genes and genetic fate do not even register as a consideration to his life or his mission. Where the very idea of any type of "genetic fate" would serve to drive Liquid Snake to acts of paramount malevolence, Solid Snake's treatment of that very idea as a non-issue emphasizes the underlying theme of opposing forces, particular those of Nature vs. Nurture. With the two sides of this debate being represented as characters, the literal struggle between them becomes the debate itself. One can then infer a meaning from the eventual outcome of the struggle, wherein considering the victor in this battle leads one to the supposed moral of this story.

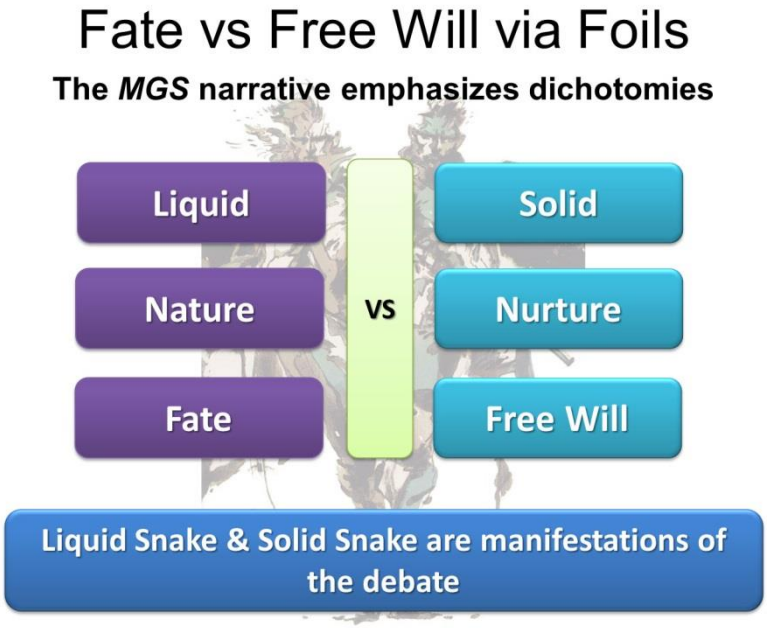

Figure 12: The character foil of antagonist (Liquid) and protagonist/player character (Solid Snake) is a direct character metaphor for the idea of Fate vs. Free Will on many levels.

Ultimately, after a series of game play combat bouts, Solid Snake wins out

over Liquid, constituting a commentary on how Free Will/Nurture has the potential to win out over Fate/Nature. Central to this victory, however, is FoxDie, a plot device which takes the form of a fictional, genetically-engineered retrovirus developed for subtle and precise assassination. As the character Dr. Naomi Hunter puts it:

> NAOMI. FoxDie is a type of retrovirus that targets and kills only specific people. First, it infects the macrophages in the victim's body. FoxDie contains smart enzymes, created through protein engineering. They're programmed to respond to specific genetic patterns in the cells.
> SOLID SNAKE. Those enzymes recognize the target's DNA?
> NAOMI. Right. They respond by becoming active, and using the macrophages, they begin creating TNF epsilon. It's a type of cytokine, a peptide which causes cells to die. The TNF epsilon is carried along the bloodstream to the heart, where they attach to the TNF receptors in the heart cells...the heart cells suffer a shock and undergo an extreme apoptosis. Then... the victim dies.

Through the course of the plot, the player learns that Solid Snake has been secretly injected with the FoxDie virus from the start of the mission, and has been unknowingly spreading the virus throughout the facility, infecting everyone he comes in contact with. As stipulated by Hunter, FoxDie is a selective killer and only kills those whose DNA profiles have been pre-programmed into it before deployment. As such, through FoxDie, Snake ends up infecting everyone he comes into contact with, consequently (and unwittingly) assassinating those who are on the FoxDie kill list, including DARPA Chief Donald Anderson and Armstech President Kenneth Baker. Also programmed into the FoxDie kill code is Liquid Snake, who presumably succumbs to its effects at the end of the game. This presents one of the more irreconcilable conundrums presented in the plot of *MGS*. The syllogism runs thusly: if Liquid Snake is on the FoxDie kill list, and Solid Snake is a genetic twin of Liquid Snake, then it follows that Solid Snake is also susceptible to the lethal effects of FoxDie.

With the realization that Liquid is indeed slain by the FoxDie virus, players and characters alike begin to immediately speculate on the implied fate of the protagonist. By all logic and reason, he should drop dead next to his twin brother. But something is out of joint and fundamentally unaccounted for: Solid

Snake does not die as a result of FoxDie. When he petitions Dr. Naomi Hunter for an answer to why he is still standing, she simply explains:

> NAOMI. Each person is born with their fate written into their own genetic code... it's unchangeable, immutable... But I was wrong... you can input all the genetic information, but that doesn't make them into the strongest soldiers. The most we can say about DNA is that it governs a person's potential strengths... potential destiny. You mustn't allow yourself to be chained to fate... to be ruled by your genes... Snake, whether or not you're in the FoxDie program isn't important. The important thing is that you choose life... And then live!

While this explanation constitutes a rather hasty *deus ex machina* and does arguably very little to account for why Solid Snake did not get killed by FoxDie, it does potentially express the stance of the game as a whole--that within the context of this debate on Genetic Fate vs. Free Will, it can be a combination of the two forces, with considerable influence coming from both ends of the spectrum, and the ultimate choice being left up to a given individual's personal discretion as to which of these is more or less responsible for the particular "fate." Furthermore, Naomi's response sets up the relationship of Nature vs. Nurture not in a mutually-exclusive binary way, but rather more like a system, where the Nature aspects of genetics and essence constitute a kind of system state space, and the Nurture aspects being representative of the degree of freedom an individual has within that space.

Though this explanation punctuates the game in a way that allows for a wide range of interpretations, interestingly enough the overall narrative of *MGS* seems to refrain from making a final overt comment or judgment. The game narrative wraps up not long after the above exchange, with Solid Snake and either Meryl or Otacon resolving to simply forge ahead and live. However, while the characters seem to have made up their own minds about what happened and the game itself concludes, as with all games, the player's life does not conclude and she is subsequently left to speculate on what has happened in light of what has been inferred. The potential cumulative effect of the story and game is one that seems to ask (without actually asking), "So, what do you think about all that?" In *MGS*, a game that is characterized by a reliance on standard, static narrative cutscenes and

a relative lack of interactivity, the final choice and determination about what to make of Nature vs. Nurture is ultimately and ironically left open and unanswered.

3.4. The Character Foil and Interactivity in Modern Video Games

From our close critical reading of *MGS*, it can be safely inferred that character foils can indeed exist in a sufficiently functional way in modern interactive video games and the narratives which they contain and express. Specifically, the character foil of Solid and Liquid Snake in this game at least adequately demonstrates that multiple layers of meaning can be potentially assigned to certain characters, and that through the interaction and juxtapositioning of that character's literary opposite, more interpretations can potentially be discovered.

However, in the case of *MGS*, the character foil is peculiar because it is a foil between the antagonist and protagonist of the game, and therefore between the game's two primary and most important characters. This has been done before in conventional literature, such as with the widely-known protagonist/antagonist character foil of Dr. Victor Frankenstein and his Monster [59], but in the case of *MGS*, it is important to note that the protagonist of Solid Snake is also the Player Character, which in an interactive storytelling medium such as games then means that there are other dimensions of narrative transmission which must be considered here.

With the modern video game, especially those which are narrative in nature, there can never be a true guarantee that the thoughts and motivations of the Player Character (and relative plot) are ever fully aligned with those of the Player. In *MGS*, the Player Character of Solid Snake is a genetically-engineered living legend of the Special Forces community, which by circumstance puts him in a class and lifestyle that few (if any) conventional gamers can meaningfully relate to. This point represents a fundamental disconnect between the Player and the Player Character at the first point of contact with the game. Gamers will likely not fully understand Solid Snake's intentions or motivations, and will know even less about Snake's background prior to the start of the game. At most, gamers can perhaps wish to be like the legendary Solid Snake. However, due to this fundamental disconnect, it is

difficult to say whether Players, which are essentially the true audience members/experiencers of this medium, will get the utmost meaning out of a character foil which is in this case, by design, meant to contrast the Solid Snake (and by extension, the Player) to Liquid Snake.

In this case, meaning is only important to the player in so far as they are willing to adopt the role of Solid Snake--to pretend to be him, to buy into the fictional world via the suspension of disbelief, and to ultimately adopt his fictional stance in relation to the events in the game (and more importantly, to the antagonist Liquid Snake). *MGS* exhibits a bit of a compromise in this regard--the protagonist and Player Character Solid Snake is a fairly blank slate who is as functionally ignorant of the current situation as the real life player who is controlling him, and because he is a tabula rasa, Players can potentially step into his role with a minimum of contextual clash. In Jordan Jackson's usage of the term perspectives, Solid Snake is in this case somewhere between an Avatar and an Assumed Persona perspective. With an Avatar, the Player Character is a proxy vessel lacking thoughts, opinions, or emotions (and in some cases, a voice or dialog) of his own which the player can inhabit in order to experience the contents of the story in the game. By contrast, Jackson's Assumed Persona perspective type actually does exhibit some of those personality and will traits [60].

Within the narrative context of the game, Solid Snake does indeed have his own dialog which belies his own feelings and opinions on certain matters in the game, but at the worst case in all other matters, he seems to be as functionally-clueless as a first-time player. In citing as much, it becomes evident that the character foil in *MGS* which foils the two main characters--one of whom is simultaneously the eyes of the player and an observed other--may not be the most effective usage of a character foil in an interactive game. It is a contentious phenomenon in *MGS* which is functional if the game is analyzed *strictly as a narrative*, but seems fundamentally misplaced in an interactive medium where the observer/Player assumes the role of the character which is actually being foiled.

3.5. Towards Understanding Narrative Devices in Games

In this initial effort, the game *MGS* was analyzed in terms of the major character foil of Solid and Liquid Snake in order to explicate the meanings and commentary on the theme of Nature vs. Nurture. Through this analysis, it could be seen that while character foils, a literary technique hailing from conventional literature, can exist and function in the narrative structures of interactive games, this technique becomes functionally negligible if the Player Character is one of the characters being foiled.

Having cited as much, our conclusion in regards to conventional literary devices in interactive games is that game designers wishing to incorporate the use of character foils into their narrative design should try to avoid foiling the Player Character, as that is functionally similar to attempting to foil the player, who could potentially be anyone. As the Player is essentially a variable element, a character foil involving a Player Character represents a situation that is also potentially variable and consequently not a situation which is conducive to constructing an effective character foil. Future technological advancements, specifically those related to the development of more user-input-driven game management systems, could potentially lead to a game system which analyzes the player character inputs/actions in order to procedurally generate a character foil NPC or antagonist, however the game industry at large is not yet at the time of this writing capable of releasing such a product (this particular issue of procedurally-generated content in response to player input will be addressed in Chapter 4 of this dissertation). This is not to say however, that the practice of incorporating character foils in order to highlight or address a narrative theme is unsuitable for the game medium--precedent shows that this is more than possible and potentially effective for underscoring both the plot and themes present within a given game narrative. More specifically, as this example of *MGS* shows, character foil can potentially function better if it is used only for NPCs. Future work regarding this analysis will involve examining other games with similar narrative devices and character foils in order to draw a more meaningful comparison.

In general, even with this limited character foil analysis, it can be seen just

how large of a role the games systems and interactivity actually play in the telling of a game narrative. In the next chapter, I will be addressing this very fact, and discussing how, despite often interfering with a game narrative, a game mechanic can actually enhance the depth of meaning of symbolic narrative elements for the players.

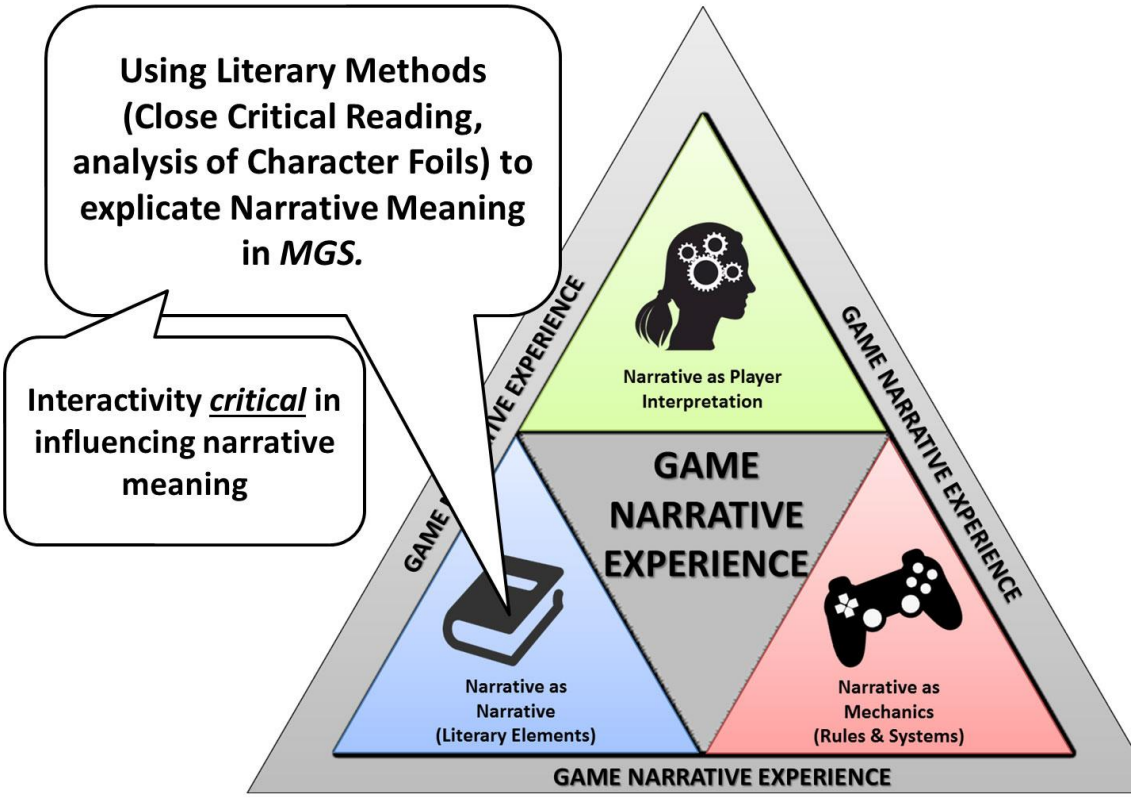

Figure 13: Understanding MGS's role in the study of Narrative Experience. The study of narrative meaning in a game (as it is placed there by the developer) is essential for an understanding of narrative experience as a whole, but in the process of doing this using Literary Studies methods, it became more apparent that the game's system and mechanics can highly and potentially influence meaning in a game narrative. As such, the next part of our study looks at how game mechanics influence the Narrative Experience Trinity.

Chapter 4: Game Narrative in terms of the Game System

"True music must repeat the thought and inspirations of the people and the time."

-George Gershwin

In this chapter, I transition from considerations of narrative in games as simply a separate-yet-coexisting component of the medium of games to a perspective which considers the way in which the game system (its mechanics and rules) constitute a way of telling a narrative of its own and further enhancing the interpretation of the existing, surface narrative.

In the previous discussion on the analysis of character foils in *MGS*, it was shown that while games can potentially contain a general narrative structure and employ literary devices, both the structure and the devices are fundamentally influenced by the game system which manages the overall game experience for the player. In this way, narrative in a game (particularly with *MGS*) can be considered an entertaining background which contextualizes the player's actions within a given game/system. Having noted that the system is very much at the core of what makes a modern video game a game by definition, it is now pertinent to consider how narrative is both influenced and works in concert with that narrative element present in narrative games. The illustration of this idea is framed by an analysis and discussion of the narrative mechanic of the *Legend of Zelda: Ocarina of Time* [61] (Nintendo, 1998; henceforth referred to as "*OoT*").

The following chapter presents and discusses a unique theoretical framework and methodology for the analysis of game narrative which considers narrative in games not as a separate piece functioning alongside a game system, but rather, as something which also results from player interaction with the system. The chapter will explore a new narrative concept called the Narrative Expression Model which delineates the dimensions of determined, personal, and collective narrative in games that speak to larger relationships between play, narrative, and experience

[62]. I have chosen to use this theoretical model primarily because it is based on ideas from the current literature and additionally considers the "meta" or outer layers of the player's narrative experience, that which does not come inherently embedded within the software, solely crafted by the developers. It is important to consider this outer layer due to the fact that when considering the entire system of a video game experience, the player's input is essential for both the doing of the actual game itself, and subsequently, for the rendering of any of the variable experiences which result from said game play. This exploration is supplemented further by the a Close Critical Reading of *OoT* which focuses on the theme of how music connects people, places, and time. This Close Critical Reading constitutes Step 1 of my proposed CIMI method [63], which lays out specific processes for the identification and analysis of ludonarrative mechanics. Future work with this preliminary narrative analysis of *OoT* will involve an application of the remaining steps of the CIMI Method, but those steps are still in-process at the time of this writing and are as such, outside the scope of this dissertation.[4]

To that end, this chapter focuses on *OoT* because it is one of the most critically-acclaimed games of all time [64] [65]. In fact, it is the titular Ocarina itself that represents the nexus of several important phenomena in game mechanics, narrative, and culture. As the ludonarrative mechanic designated for study, it constitutes one of the first uses of memory and rhythm in an epic fantasy adventure video game. As a semiotic narrative symbol, it accounts for the focal point of meaning in the greater plot of the game. Finally, through the collective player narratives of the digital communities and international acclaim surrounding the game, the ocarina becomes a truly cross-cultural object, whose symbolism (and the effect thereof on the player) potentially transcends international and cultural borders. Because the ocarina itself represent all of the above, it is an ideal object of focus for a Close Critical Reading of both narrative content and integrated game mechanics.

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[4] As the remaining steps of CIMI are being conducted as a joint research project with Michigan State University, the tentative schedule for the completion of the CIMI analysis of *OoT* is the Fall of 2016.

Considering the game system as another means of expressing narrative in interactive games has many important benefits as it pertains to both expanding the fledgling field of Narrative Game Studies and towards understanding games as a meaningful medium. By drawing the aforementioned elements of *OoT* together and exploring the relationships between them, both the presence of multiple narrative forces in the game and methods for analyzing them can be further understood. Further refinement of this approach not only enables the analyses of individual games, players, and stories, but also how they fit into larger social and cultural contexts. In this way the story of a single cross-cultural object, the ocarina in this case, can become part of a collective narrative of Nintendo on an international scale. This novel approach to the study of game narrative is not only useful on a scholarly or critical level, but could also help game designers in the imagining of new game mechanics and the potential creation of new cross-cultural objects.

4.1. Theoretical Concerns/Narrative Expression in *OoT*

Despite the growth of discussion on games and narrative in recent years, there has been a noticeable shift toward understanding how, where, and why games convey meaning to their players. In recent years, several books such as Tamer Thabet's *Video Game Narrative and Criticism: Playing the Story* [66] and Koenitz et. al's *Interactive Digital Narrative: History, Theory and Practice* [67], demonstrate the need for theoretical frameworks and methodologies for the study of narrative in games. In the same spirit, *OoT* will be analyzed via Close Critical Reading to explicate any ludonarrative points of interest. *Ocarina of Time* is one of the most critically-acclaimed installments of the longstanding *The Legend of Zelda* franchise. Both the game and the series continue to accrue cultural significance, and more importantly, cultural meaning that becomes truly cross-cultural in Nintendo's international success with the franchise. In order to understand both the success and the meaning bound up in and around the game, it is necessary to look to the game's narrative which is integrated with play and specifically utilized game mechanics. This Close Critical Reading of *OoT* as both narrative and game mechanic

represents one of the first steps toward understanding both its cross-cultural meaning and the insights it can provide for better design and development.

For this analysis, I will be examining the ludo-narrative mechanic of the Ocarina itself as the focus of the Close Critical Reading. Discussions regarding this reading will be conducted around the Narrative Expression Model [62] in order to explicate the ludo-narrative experience of *Ocarina of Time*. To begin this analysis, a brief explanation and exploration of the theoretical concepts of the Narrative Expression Model is necessary.

4.1.1. The Narrative Expression Model

I have found that the Narrative Expression Model (Figure 14) is an effective way of conceptualizing the different authorial components of game narrative, and furthermore, it comes from a lineage of theoretical criticism of game narrative. As narrative scholars Henry Jenkins and Richard Walsh have concluded, while certain parts of games can be narrative, they are not inherently or primarily narrative [21] [69]. Given the current plastic state of contemporary narrative game studies, it would be safer to argue that this is true as opposed to trying to contend or claim any unified theory of game narrative. However, as the Narrative Expression Model itself allows for a theoretical mapping of the different areas of authorship in a game narrative, it can be particularly elucidating when it comes to applying a Close Critical Reading to a game such as *OoT*. Furthermore, Ferretti, Roccetti, and Cacciaguerra's idea of Distributed Interactive Storytelling (DIS) adds to the idea that narrative authorship (expression) is one of burden-sharing amongst multiple players is a very functional way of interpreting authorial agency within games (especially those games which involve massively multiplayer components) [70].

And so, unlike precedent narrative criticism models, this model accounts for the fact that with games, there are multiple authorial sources-- the game developers, the single players themselves during the solitary gameplay, and that of the online or international community of players of the same game. These different author types are delineated amongst different narrative layers or dimensions which comprise an overall narrative experience, and they are defined within the Narrative Expression

Model as follows:

- **Determined Narrative:** Game narrative is the confluence of multiple narrative expressions proceeding from different authorial sources, the first of which is the development team who makes the game. The narrative laid down by the developers of a game is generally scripted and exists independently from player interaction, though players do have means of affecting it and pushing it forward (in fact, players are meant to interact with this layer of narrative and gameplay by design). In the Narrative Expression Model, this pre-scripted layer is known as Determined Narrative. This narrative layer consists of the lore and backstory embedded in the virtual world of a game by the developers, such as the history and current events of the world of a game, the different game mechanics, and any varying paths and consequences within the game system itself. Determined Narrative is distinct from, but intricately tied to, the stories that the players can produce for themselves within games via actual interaction/play with the game.
- **Personal Narrative:** In the Narrative Expression Model, the stories created by the gameplay of players when they interact with the game is called Personal Narrative. Personal Narrative emerges through the stories and experiences players receive from the characters they play, as well as the choices they make in exploring and playing in a given virtual world. Personal Narrative also refers to the unique narrative experience which is generated in games which have multiple narrative paths/choices throughout the game itself. To put it another way, no two players encounter a game in exactly the same way, but rather they can potentially have different (if similar) experiences as they work to progress and beat the game.
- **Collective Narrative:** This layer of the model describes what happens when players come together in groups and create group narratives either within or outside the game. Common real-world examples of Collective Narratives can be seen in online communities which are concerned with a given game (online player forums, both official and unofficial), and very readily on online video streaming sites such as YouTube, Twitch.tv, or NicoNicoDouga, where

players congregate, share their respective gameplay videos, and comment/discuss freely, thus culminating in a group narrative experience which springs from the original game text. Collective Narrative can also be seen in offshoot phenomena such as fan art and fan fiction.

Determined, Personal, and Collective Narrative are interrelated and codependent; during gameplay, there is no moment within a game when any of them exists purely unfettered from the other two.

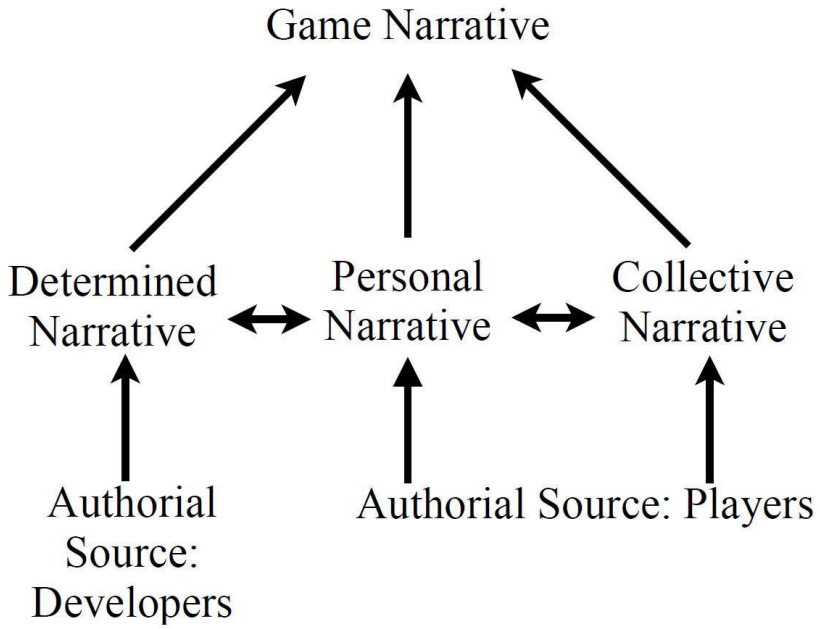

Figure 14: The Narrative Expression Model. Game narrative can be considered the confluence of three major forces: the Determined Narrative, which originates from the Developers, the Personal Narrative, which is comprised of the individual play experience of the player, respective to each playthrough, and the Collective Narrative which is made up of the shared personal narratives of players [62].

4.2. Close Critical Reading: Ocarina Analysis

The Ocarina itself is the cornerstone of this installment of the Zelda franchise, the

titular, defining characteristic of this sequel, and (with respect to the narrative of the game fiction) the most important magical item in the game. In fact, the Ocarina is arguably more important than both the Master Sword and Triforce in this game in particular due to the ubiquitousness of the Master Sword and Triforce in several of the Zelda games, and also due to the unique and significant function that the Ocarina has in this game. As symbols in the mythology of the Zelda game and series at large, both the Master Sword and the Triforce are readily recognizable symbols for fans of the series. That the Ocarina is itself more important than either of those symbolic fictional artifacts is, in and of itself, extremely telling of its significance as a symbol in this game. If the Master Sword and Triforce are the mythological constants in the Zelda mythos, then the introduction of the Ocarina of Time in this game serves to create a new branch of the tale, completely characterized by the magical potency of the Ocarina and further developed by the Ocarina's use as an indispensable hero tool. Having considered that the Ocarina is essential and effective as both a game mechanic and an narrative element, the Ocarina can then be treated as a ludonarrative mechanic which can serve as a central point of interest with the first step of the CIMI Method with respect to the Narrative Expression Model.

The ocarina stands out as a significant and meaningful element of The Ocarina of Time and its narrative for several reasons, one of which is its prominence in the game's Determined Narrative, which is the story of a boy (Link) who awakens to a destiny that is much greater than he is, and he embarks on a journey to save the land of Hyrule from the treacherous machinations of the evil Ganondorf. Early on in this story Link receives an ocarina from his friend Saria, and throughout his journey he uses either this ocarina or the Ocarina of Time to progress beyond obstacles that would be insurmountable without them. Here one might note that Link acquires a sword and a shield before an ocarina, but these items do not persist throughout the story and time in the way the Ocarina does. Thus the Ocarina takes on special importance and meaning within the game as that which persists with Link throughout the Determined Narrative. The Ocarina represents an immutable part of a larger story that plays itself out endlessly in Hyrule, a story of Courage, Wisdom,

Power, and the struggles between them. This Determined Narrative does not change and exists quite independent of a given player or their actions within the game.

However the Ocarina is not merely a significant object/symbol in the Determined Narrative, rather it is also a crucial game mechanic without which the player cannot progress in the game. In many instances in the game, such as confronting the guard in Kakariko Village on the way up Death Mountain, Link is presented with an obstacle that can only be surmounted by playing a particular tune on the Ocarina. In such cases (of which there are many), the Ocarina functions as an intersection between narrative and play in the game, revealing how the two are intricately bound up in one another. As an instrument the Ocarina makes this point especially apparent--music itself is both narrative and performance, it is variable in its play even as it is bound to particular notes and orders. The game itself is designed to recognize this fact, and by making the Ocarina an important interactive game mechanic, the game invites the player to participate in that narrative performance. The Ocarina is neither narrative device nor game mechanic--it can only be understood as both, simultaneously.

In a similar fashion, the Ocarina stands at the confluence of Determined and Personal Narrative. It is the point at which the Determined Narrative gives way to the Personal Narrative through the act of actually interacting with the game. While the Ocarina is an inevitable feature of every Personal Narrative in the game because of its prominence in the Determined Narrative, exactly where, when, and how it is played can vary from player to player. This is especially true of songs like Saria's Song and the various dungeon songs that can have their effects anywhere they are used. The Ocarina thus exists as narrative expression of both the developers and the players, involving creative acts on the parts of both parties. Here the Ocarina's nature as a sign becomes apparent. As a sign, the Ocarina is created and used by the different parties that use it to communicate or play, but it also takes on a life of its own independent of any given individual. This is not limited to the game itself, but as we shall shortly see the Ocarina becomes a cross-cultural object outside the game as part of Collective Narratives much larger than itself.

Hereto the discussion has focused on the nature and structure of the

Ocarina, but good analysis must eventually turn to its meaning. The meaning of the Ocarina proceeds logically from what it is and what it does–it is an instrument (albeit a magical one) that plays music. What it is used for throughout the game hints at its true meaning; at the very primary level, the Ocarina is representative of relationships. In almost every instance where the Ocarina is played, its music is used to establish and further relationships between the player and other characters, characters and locations, or characters and time itself. The earliest example of this is in Saria's gifting of an ocarina to Link, which was mentioned earlier, an example built upon later when Saria teaches Link Saria's Song. Here the Ocarina itself and the music it plays continues, resonates with, and is reminiscent of the relationship between these two friends. A similar relationship is built through the use of Zelda's Lullaby between Link and Zelda or the royal family through the Ocarina of Time. All of the different dungeon songs build relationships between Link (and consequently/hopefully the player as well) and particular locations, allowing the player to quickly return to them. In building these relationships, the Ocarina and the music it plays take on meaning which can be communicated through the universal language of music. It is important to remember that though the Ocarina and music have the universal effect of building relationships, this does not mean that they have the same meaning in all situations or to all people. The variable nature of the sign remains.

The Ocarina's meaning of building relationships is not limited to the Determined and Personal Narrative within the game. Rather, the Ocarina has become a central figure in a plethora of much larger collective narratives built up around the game. Nintendo's success with Ocarina of Time is well documented, and the game along with its series remains wildly popular internationally (Metacritic still lists Ocarina of Time as the highest rated game of all time). Within this setting, the Ocarina (along with a few other iconic items such as the Master Sword and the Triforce) has become a truly cross-cultural object in the sense that it is immediately recognizable in gaming cultures across the globe. This success and recognition is not accidental, but stems directly from the meaning of the Ocarina and its ability to construct meaningful experiences and relationships. The Ocarina allows players to

relate to narratives, myths, and legends much greater than themselves, and in so doing becomes a focal point through which players can relate to each other. The ability to construct similar objects in other games has the potential to become a powerful game development goal because objects that lend themselves readily to cross-cultural meaning can engender the Collective Narratives that make games enduring to players and subsequently successful in the market.

4.3. The Ocarina as a Cross-cultural Object

Within the context of this study with narrative in games, the term "Cross-Cultural Object" can be defined here as any narrative symbol, mechanic, or even character, which exists within and can extend outside of a game to become adopted by the fan community on the international level. A cursory survey of many games of modern acclaim will reveal several such ubiquitous cross-cultural objects which are an integral part of a given game's ludonarrative world. A couple of prominent examples are the cardboard box from Konami's *Metal Gear* franchise, or the desert cape from thatgamecompany's *Journey* [68]. The Nintendo intellectual properties have several long-standing cross-cultural objects of their own which have incredible staying power: the pokeball from *Pokemon* or the cult of all things Mario. Furthermore, the *Super Smash Bros.* franchise utilizes the marketing potential of cross-cultural objects to potentially maximum effect by placing all of their most recognizable franchise characters into a single game and allowing players to choose from a veritable pantheon of memorable hero characters, now unrestricted by the bounds of their respective games and game worlds.

As it pertains to the *Legend of Zelda* franchise, there are indeed several citable cross-cultural objects, most notably the Triforce and Master Sword, and the triumvirate of Zelda/Link/Ganon as constant characters who persistent through all games in the series. Every single one of these game-borne artifacts and characters have been adopted positively in the popular culture of modern gaming society. They all enjoy a considerable degree of ubiquity and are easily recognized by the gaming community at large. Furthermore, not only are such symbols merely recognized, the meanings they carry by association through narrative and gameplay experiences is

what truly qualifies such objects as cross-cultural. In other words, the contextual significance of the game object exists and can be interpreted (and felt) by the gamer, regardless of their particular cultural identity. In this research effort, I contend that not only do such cross-cultural objects exist in and from games, but also that games are an ideal medium for creating such symbols which achieve a fascinating degree of universality amongst gamers of all cultures. It would appear that the ubiquity of play across cultures is similar to the ubiquity of music (both of which are bound up in the Ocarina), and the communicative effects of both reach beyond the boundaries of language in significant ways.

Considering this, I contend that it is very much within the interests of game development teams to consider and cultivate means for the potential creation of cross-cultural objects within their own games. By striving to create a ludonarrative mechanic which has dual-functionality as both symbol and mechanic--as in *OoT*--developers can create potentially meaningful signs within their games which inspire a cycle of myth-building centered around that cross-cultural object. Fandom feeds the context and tale of a cross-cultural object through the collective narrative of the player community. According to Jenova Chen for example, fan art can be an ideal place to look if one wants to understand what parts of a game were the most memorable for the player [5]. I would further propose that such art can indicate what is valuable to fan communities as collectives of players and their stories.

This was precisely the case with the Ocarina of *OoT*. The Ocarina itself has reached a status of international recognition as the signature item of this particular installment in the Zelda franchise. The contention here is that when developers can strive to create such a cross-cultural object with the potency to reference an associated mythology and build further meaning via the traded Personal Narratives of the collective game community, then they can potentially succeed in not only creating a good game, but also in creating an enduring new digital mythology through cross-cultural objects. The overall objective of this research into the Narrative Expression Model and the CIMI Method is to help developers to gain insights into how developers can create cross-cultural objects in subsequent games.

4.4. Future Work for the *OoT* and Cross-Cultural Objects

With a game as vast and deep as *OoT*, much more work remains to be done in order to further explicate the narrative experience in terms that echo effectively back to both game developers and the true stakeholders of the medium at large--the gamers themselves. Put simply, the true scope of this game is currently unknowably vast, and as such, our efforts in studying the ludonarrative experience rendered through this game is preliminary. In this research endeavor, although I was able to take those first important, yet tentative steps towards understanding how a game can utilize a mechanic that functions simultaneously as a symbol, more analysis and discussion are needed in order to gain further insights into how the phenomenon and meaning around the Ocarina of *OoT* both 1) exists in the Collective Narrative of the game, and 2) creates that meaning within the varying contexts of said communities of Collective Narrative.

To that end, based on the Close Critical Reading of *OoT* using the Model of Narrative Expression undertaken in this research effort, the next step for the investigation would be to better understand how these narrative insights 1) function in a system and 2) if what was analyzed and interpreted was also observed or experienced by other players of this game. The aforementioned Narrative Expression Model constitutes a feasible way to conceptualize the dimensions of game narrative inherent in a game and the people that activate and surround it. But as games are interactive systems in flux, how can one begin to observe the narrative phenomenon which the Narrative Expression Model defines? What are the methods and practices that would make such a study possible? In response to that very quandary, the CIMI Method provides a feasible solution.

4.4.1. The CIMI Method

Games are an amorphous, ever-changing beast–such is the nature of play. More than precedent media such as film and literature, the medium of the video game is one in which constant innovation, redefinition, and re-genre-fication seem to characterize the progress and development of the medium itself. With such a high volume of output, frequency of change and iteration, researchers in Game Studies have also

found it equally difficult to devise and agree upon methodologies to utilize when analyzing games from any given aspect [37]. Put simply, it is very difficult to draw a picture of a creature whose form is growing and shifting each and every second. Considering this, it is necessary to devise and propose methodologies with the modularity and flexibility necessary to observe the target medium in flux.

To address this point, the CIMI Method (pronounced "see-me") was proposed and tested [63]. This method--which is comprised of a Close Critical Reading, an Isolation of Mechanic, and Player Interviews--is designed from the start to retain a degree of methodological and analytical flexibility which can account for the ever-changing landscape of video games. The CIMI Method is outlined in detail below as follows (and in brief in Figure 15):

1. **Close Critical Reading:** In this phase, a singular Candidate Text (game) is designated for study, and a Close Critical Reading (the same analysis method which was introduced and detailed in Section 3.2). The criteria (thematic points in the plot to be explicated via the Close Critical Reading) for game selection can be tuned and selected by the researcher. Our initial Close Critical Reading which utilized the Narrative Expression Model can and will be used in this phase.
2. **Isolation of Mechanic (Future Work):** In order to better understand the target mechanic and resulting experiential phenomenon in a time-feasible manner, the second step of CIMI involves creating a prototype mini-game which is essentially the target game mechanic of the original Candidate Text, stripped down and rendered as an experimental facsimile. It is not feasible to collect player data from only players of *OoT*, which is a considerable investment of time. Instead, in this step of CIMI I would design and build a smaller game that only takes an average of 5-minutes to complete. This mini-game is then followed by a research survey used to collect the necessary data. While this step is occurring, researchers can concurrently begin Step 3 of CIMI, which is composed of Player Interviews.
3. **Player Interviews (Future Work):** While Step 2 of CIMI is designed to isolate the target mechanic for more expedient, wholesale data collection, Step 3 of

CIMI is focused more on in-depth, exploratory textual analysis of actual player experiences with the original Candidate Text. In other words, it is quite necessary to grab the opinions of the actual players of *OoT* and explore their opinions of their gaming experiences. Analysis of player answers in this regard will be helpful in addressing dimensions of Player Experience with respect to the Model of Narrative Experience introduced earlier in this chapter.

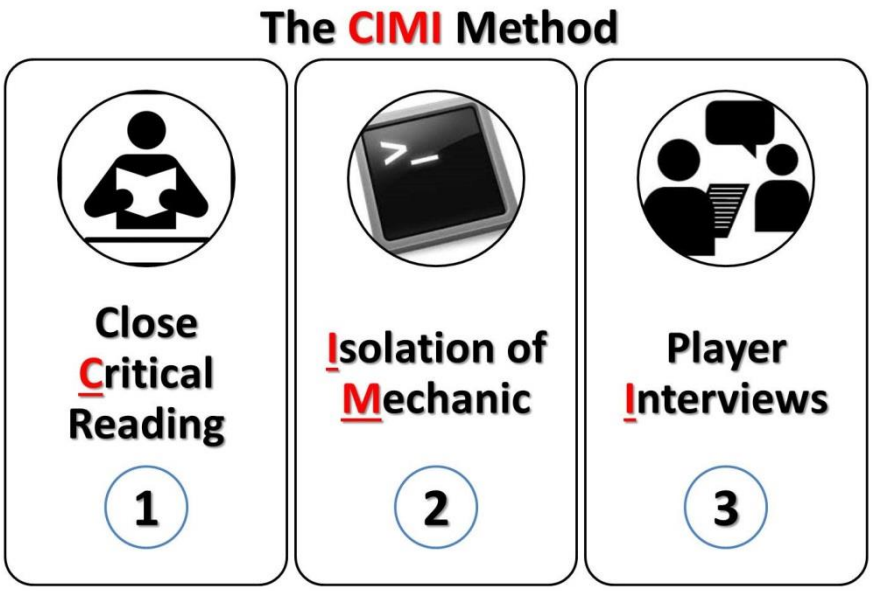

Figure 15: The CIMI Method Explained. In Step 1, a Close Critical Reading is conducted on a Candidate Text, and it is analyzed using Narratological methods in order to designate the target study phenomenon. In Step 2, the target phenomenon/game mechanic is isolated in the form of a short, time-feasible mini-game prototype which can be distributed on the internet for data gathering using a custom research survey. In Step 3, Players of the original Candidate Text are interviewed for their opinions and experiences of the Candidate Text.

4.4.2. CIMI and The Ocarina Study

It is important to note that the steps of the CIMI Method are modular in that the steps can generally be done in the order which is most appropriate for the candidate game. This was an intentional design consideration based on the fact that the current selection of game titles at large reflects an extremely diversified range of topics, genres, and subsequent game mechanics. While genres delineated by gameplay systems can be seen in games, it would be monumentally difficult to try and find a method of study which could fit all games universally. Instead, I contend that the CIMI Method should necessarily remain modular and flexible in order to study individual cases deeply as opposed to several cases/games in a category.

In CIMI's initial application [64], the steps took on the form and order depicted above in Figure 15. For the purposes of this study of *OoT* however, I have chosen to start by applying the Close Critical Reading Step of the CIMI Method to *OoT* in order to select an appropriate ludonarrative mechanic for study: the Ocarina itself. From this point, the Player Interview Step can be conducted in order to gain a sense of what was most experienced and retained by the actual players in relation to Ocarina mechanic. After gaining that insight, it will be then easier to proceed to the Isolation of the Mechanic Step of CIMI, as I am basing the isolation of the game mechanic prototype on the player interviews. As Steps 2 and 3 of CIMI are at the time of this writing being conducted as collaborative research with Michigan State University, they are currently still in-process and are therefore considered future work and currently outside the scope of this dissertation.

OoT represents an intriguing opportunity to examine a game artefact which is simultaneously a semiotic symbol *and* a game mechanic. With this preliminary application of the Close Critical Reading based around the Narrative Expression Model, I hope to gain some insights as to how *OoT* succeeds in both telling its Action RPG narrative and creating a myth that transcends borders both digital and cultural.

The work is indeed arduous and the undertaking by no means trivial, but any game which has been able to establish a legacy such as Ocarina of Time is more than deserving of such depth of academic inquiry. The benefits of such a quest are

many: to help to further establish the quality of the game medium at large, to show how the game medium also has “classic texts” which can be considered a kind of canon, and to better understand how these interactive digital classics help our modern current society to collectively create their own meaning and meaningful experiences.

Through the study of both the inherent narrative forces present and active within a game (both in the software and those which exist between the player and the game as a dynamic result of interactivity), the designation between actual narrative and interactive gameplay blurs. That which can be considered "purely narrative" within a game (as it was in the analysis of *MGS*) can also be seen as a confluence of other factors (Determined, Personal, and Collective Narrative, as was the case with *OoT*), and the mechanics and systems of the game itself which deal intimately with interactivity play a crucial role in both the telling and the interpretation of any narrative present within a narrative game. And so, at this point in this dissertation, it would be more than a fair question to ask "So, where is this narrative experience in games, exactly?"

The next chapter will deal specifically with this question, and it proposes a novel approach to understanding variable, interactive, and emergent narratives in video games. In both proposing and discussing a new concept for the interpretation of variable, emergent narratives in games, I hope to show that narrative in games, as an experience and phenomenon, is not simply limited to particular constituent parts of a game or the dimensions of play which also constitute a game, but rather, narrative experience in a game exists as a result of (and between) all of the aforementioned factors and layers.

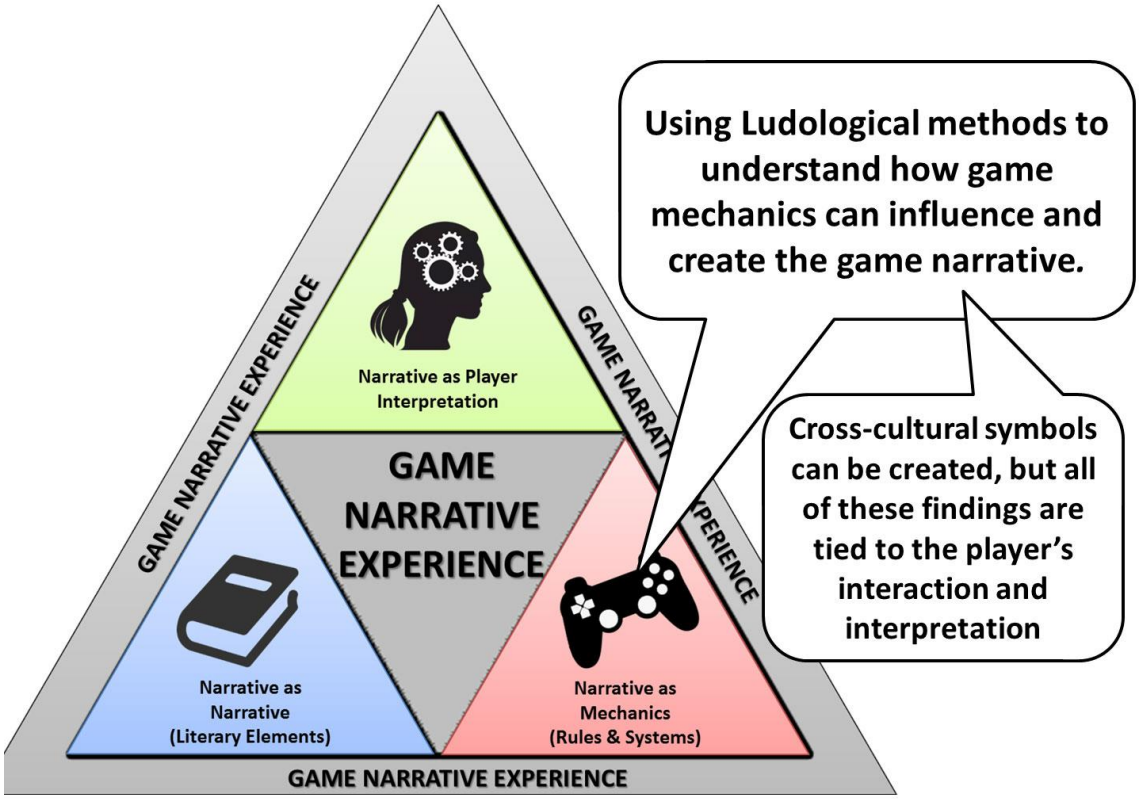

Figure 16: Understanding *OoT*'s role in the study of Narrative Experience. Our work showed that game narratives can indeed be told by both the inherent narrative elements (as was seen in *MGS*) and by the game mechanics themselves. In the case of the latter in *OoT*, the game mechanic of the Ocarina also enhances the meanings that can be gained from a critical game symbol. Through this work, I recognized, however, that all these aspects of the Narrative Experience Trinity were still intimately related to the interaction and interpretation of the player.

Chapter 5: Game Narrative as a Relationship between the Game System and Player

"When you put the subjectivity of the art together with the context of the science, you have this very powerful conjunction of opposites and together they are greater than either one could ever be."

-James Balog

"To say it another way, thinking, however abstract, originates in an embodied subjectivity, at once overdetermined and permeable to contingent events."

-Teresa de Lauretis

The previous chapters have dealt primarily with understanding narrative in games as a standalone story element (*MGS* analysis) and as a function of the game's system and rules (*OoT* analysis). Consequently, this chapter now seeks to explore the relationship between the player and the game, and how through the act of play, a narrative can come into existence emergently, as the result of embedded narrative elements and how a player interprets that narrative. Before I get into a discussion about narrative as an emergent experience, however, it will be necessary to first discuss what emergence is and what potentials it has presented to the field of game design.

The idea of emergent gameplay (and likewise, that of emergent narrative) in games has been floating around both the game industry and game academia for years. This idea has been especially prominent as a proposed potential solution to the LND which plagues narrative games, at least in theory. The very concept that one could create a "story engine," fully procedurally-generated and fully reactive to the player's inputs has been a lofty technological goal of the industry at large. From the technical standpoint, that would be tantamount to creating a game engine which could, for all intents and purposes, pass the Turing Test (and ideally render an

entertaining experience in the process).

At the time of this writing, no such *video* game actually exists, in strictly technological terms. That is not to say, however, that emergent experiences in games have not been had by players in the modern era. In fact, the above example, of a video game engine which could pass for a human intelligence is an unnecessarily abstracted way to conceptualize the problem of emergent gameplay/narrative in games, if the scope of considered games is opened to include analog games as well. In such a case, there does indeed exist an example of a non-digital game whose gameplay and narrative experience can be generated in an improvisational manner, whose game world and rules are generally set, but remain sufficiently fluid in order to adapt the game to any given player's actions and input.

That game is tabletop *Dungeons & Dragons* (*D&D*) [69].

In *Dungeons & Dragons* (and other similarly-styled tabletop roleplaying games), a human Dungeon Master (DM) creates the game story and setting and administers the game rules and outcomes to the players. Instances of chance are determined by dice rolls and further modified by character and situational statistics, and the results of said rolls are then dictated back to the players by the DM in a narrative context. This is admittedly a lot to keep track of, even for the players, but the payoff in with tabletop RPGs such as *D&D* is that with a human at the helm of the game administration, improvisational recontextualization of narrative experience is generally easier to accomplish than with any machine. Despite the fact that modern video game RPGs such as *Dragon Quest* and *Final Fantasy* were a technological design response created in order to simplify the overhead of the minutiae of statistical calculations and hidden, random dice rolls [70], the cumulative effect over the years is simply that the narrative context in such digital games can no longer be as plastic and adaptive as with a human game master.

This is an understood and expected tradeoff, but one that I contend does not have to remain so until the invention of a true gaming AI. As it was seen in previous chapters, both narrative elements/dimensions and those of gameplay, mechanics, and rule systems inherently coexist and interact with each other in order to create an over-arching gaming experience. Any narrative context which results from that

process can be considered a narrative experience (i.e. any meanings gained from symbols, Cross-Cultural Objects, at either the Personal or Collective Narrative levels). Considering that much, this chapter then poses the question, "Can there still be an emergent narrative experience in a game without the assistance of either a Turing-certified AI or a human DM?" This chapter dares to answer in the affirmative, and proposes that through clever design considerations (as opposed to technological ones), it is possible to trick the human mind into creating a cohesive and emergent narrative experience. This is, in short, our new proposed concept of Player-side Emergence--to create a flexible narrative state space within a game for the player which leverages on the pattern-finding tendencies of the human mind in order to create a narrative experience which can potentially be infused with that player's own subjective inflections.

In this chapter, I engage in a critical discussion about what it means for an interactive video game to have emergence, that which stands as a potential ideal solution for the contentious nature of interactivity and narrativity existing within the same digital game. Firstly, I will be briefly discussing what emergence means to other scientific disciplines, and in doing so delineate specifically how we will be using the term "Emergent" in reference to interactive video games. I then frame the discussion of Emergence in games by considering a range of recent video game examples by applying a Close Critical Reading to the critically-acclaimed indie games *Papers, Please* [71] and *Gone Home* [72]. In these Close Critical Readings, I observe focus on the intentional ambiguity of these games (as opposed to the tendency for conventional stories and other game narratives to specifically explicate all the details of their narrative to a full extent) constitutes the primary storytelling potency of these games. From these analyses, I propose a concept of "Player-side emergence in games," in which emergence in the form of narrative is expressible and observable in games as the result of the current technological capabilities of games, which relies not on the game software itself, but rather upon the complex system of the human mind for reconstruction of the game experience and a subsequent expression of emergence.

In this proposed concept of Player-side Emergence, the constituent

narrative pieces offered by a game can be expressed emergently as a unified, overall game narrative experience by the player mind. Based on this concept, I propose that emergence in a game need not wait or rely upon the advent of a truly, technology-based procedurally-generated platform, but rather can be an expression of player-side experiential reconstruction. I conclude that emergent narrative between video game and player can manifest so long as a human player can be encouraged via the game's mechanics towards an overall narrative reconstruction whose blueprint does not wholly originate from the source game, and I also contend that such an emergent design consideration can be potentially useful for designers who are trying to address the trade-off of Ludonarrative Dissonance in their games.

5.1. The Concept of Emergence at Large

In order to understand how emergence could potentially manifest in video games, it is firstly important to understand what it is in terms of how it has been used prior in other fields. From there, it can be seen just how apt a medium the video game is for encouraging emergence in terms of both gameplay and narrative, and how one might be able to identify and address emergence in other games for future study.

The concept of emergence is referenced in many fields, such as Computer Science [73], Philosophy [74], and Art [75]. Essentially, emergence is conceived as a process in which larger entities, patterns, ideas, or images arise out of the interaction of the relatively smaller constituent parts (of a thing or system), which often do not exhibit those characteristics [76]. Noting this behavior of emergence, the images or larger entities which coalesce out of the system are often times considered separate and/or greater than the sum of the parts it came from, and this synergistic effect is considerably unintended and/or unanticipated by the original designers of that system. Put simply, emergence is the idea that a surprising and novel thing can "emerge" from a complex system. Definitionally, as that new emergent entity is unique in relation to its predecessor parts, it cannot easily (if at all) be traced or reduced back to those prior components. Figure 17 below displays a popular example of emergent behavior in the natural formation of snowflakes, which are all composed of the same physical constituent materials and formed in the same

conditions, but which all develop unique and unpredictable patterns.

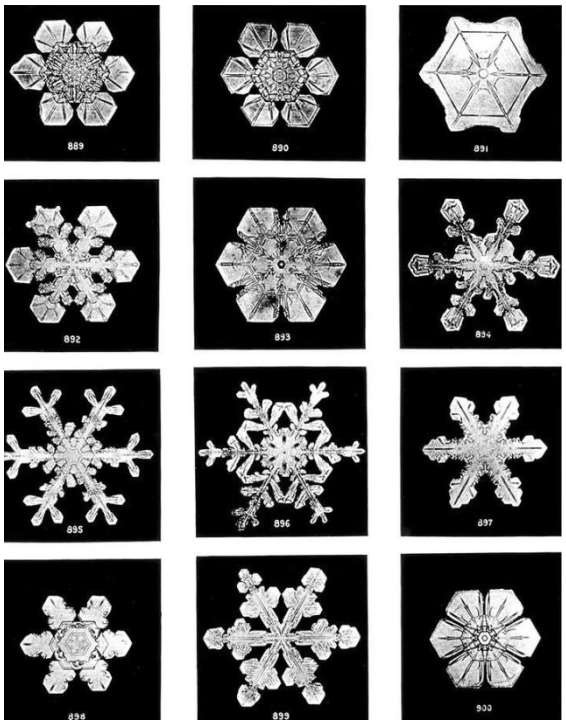

Figure 17: Natural emergent behavior in snowflakes.

This idea has also lead to the concepts of weak and strong emergence, respectively, where weak emergence can be demonstrated in a computer simulation, and strong emergence is characterized by a resistance to observation under computer simulation [77].

As an example, emergence itself can be applied as a theory about abiogenesis, or how life originated on planet Earth--in an environment of several lone amino acids, the congregation and interaction between those amino acids resulted in the emergent formation of the first protein, and consequently precipitated the basis of the living organism [78]. Aristotle alluded to the idea of emergence in Philosophy, which was then re-articulated by Lewes who basically put forth that emergence is the phenomenon of cooperation of unlike kinds and is also incommensurable, or that the emergent/resultant entity cannot be accounted for by

an inspection of its predecessor components [74]. In the Computer Sciences, emergence manifests in complex systems, most often as unintended effects, results, or phenomena of a given complex system, as in applications in artificial computing networks [79]. In all of these cases, one of the key defining characteristics (which I contend also carries over to emergence in games, albeit in a distinctive way) is that the resultant emergent behavior is inherently unplanned for.

As the modern video game is also a complex system of hardware components and software processes working in concert with each other, which in itself requires the non-trivial input from the user/player [18] in order to render an interactive entertainment pseudo-experience, games are a potential platform for emergent behavior. In fact, based on our observations and analyses of certain popular games, it seems that games--which encourage and require user interactivity in order for their 1) systems to function and 2) narratives/experiences to be both completed and experienced--actually represent a medium in which emergence can potentially flourish, and to good effect.

5.2. Emergence in the Modern Video Game

Considering the aforementioned definitions, emergence in games--which specifically, for the purposes of our investigation, are that of emergent gameplay and emergent narrative, respectively--appears to historically require a couple of key ingredients in order to provide the right sort of environment to manifest:

1) a sufficiently high or complex degree of technology and
2) a careful attention to intentionally ambiguous design.

Firstly, I contend that the high-degree of technology is required for there to be a sufficiently complex system for emergence to occur, as has been demonstrated by precedents in the other fields mentioned above. Systems with limited computational power and complexity will consequently also be sufficiently limited in terms of the number of constituent parts and the scope of interaction of said parts. The higher the complexity of the system, and the increase of constituent parts and actors in the system will increase the chances of emergent behavior. Having cited as much, it can be generally said that games with a higher degree of technological

processing power are better for emergence. Approaches to creating emergence on the technological end often refer to the creation of a game artificial intelligence which is capable of procedurally-generated content (both gameplay and narrative).

Secondly, what I mean by "intentionally ambiguous design" is that game designers seeking to coax emergence out of their games must take special care to design a game that is not overly direct or specific in its discourse and processes--doing so will lock the game experience down to a very limited range of meanings and interpretation, which is essentially the opposite of what is required for emergent behavior to manifest. In other words, designing a game with special attention to creating and encouraging a range of interpretations of the game experience by the player is fruitful towards enabling emergent behavior in (perhaps, more accurately, "out of") a game.

A cursory survey of game titles through the decades will attest to these observations of emergence through technological and design considerations in games. For example, the games of the classic era of arcade games of the early 1980s--namely the era ushered in by *Pong* [80], *Space Invaders* [81], and *Donkey Kong* [82]--could not be considered sufficient (in terms of both technology and design) for emergence in games. Both hardware and software space was relatively limited, and gameplay design was characterized by iterative and limited level design smoothed out by a linear progression in difficulty. For the most part, for instance, *Space Invaders* was a game that was easy to learn to play but difficult to master. In Game Studies terms, with reference to Jenova Chen's application of Mihaly Csikszentmihalyi's notion of Flow in games [83], these classic arcade era games can certainly be associated with that sort of ideally fun-yet-challenging habitation zone of the video game experience that lies between sufficiently challenging so as to maintain player engagement, but not so difficult that it becomes a discouraging experience. What they lacked, in terms of an emergent environment, however, was the technological and design space in order to render either a procedurally-generated outcome, completely independent of the original designer's vision, or at least the semblance of any experience akin to that. The technological constraints of the games of that era favored hardcoding and a reliance on linear progression.

Furthermore, as it was noted in in Chapter 1.1 and illustrated by Figure 3, games which hailed from the early years of the video game industry (1980s, Atari-era) seemed to lack a sufficient level of technological rigor in terms of graphics and game systems. As a result, context (narrative or otherwise) within games like *Pong* or *Centipede* [84] existed in the interpretive space between the game's primitive graphics and the accompanying box art/instruction manuals which typically contained some kind of story or exposition. In those examples, the technological capacity of the game software itself was insufficient, and as such, the level of complexity was equally low. This resulted in a state space for interpretation between software and box art that was far too wide and abstracted to create a cohesive narrative.

As games historically progressed through to the home console era of the early 1990s, certain game examples began to appear which demonstrated some of the characteristics, or at least, the beginnings of emergent game environments in terms of both technological complexity and a wide-range of design options. By definition, the games of this era cannot be considered true or essential examples of emergence in games, for despite the first noteworthy appearances of games with multiple endings such as *Chrono Trigger* [85] and *Star Ocean: The Second Story* [86], these multi-terminal narrative RPGs were still essentially a branching collection of hardcoded play outcomes, and therefore not true examples of emergent gameplay or narrative. However, they do serve to indicate that the level of technology was now progressing toward a point where the game systems themselves (that is to say, the complexity and capacity of the software systems of the games) were reaching a point of technological complexity and sufficiency which could potentially lead to a game system complex enough to allow emergence to occur.

The technological aspect notwithstanding, it starts to become evident that around this era of the 1990s, especially with games such as *Chrono Trigger* and *Star Ocean*, the path towards each of the hardcoded distinct endings was, for all intents and purposes, a process that was not overtly stated nor immediately obvious to most players from the start. Many of the paths towards these myriad endings were iteratively reverse-engineered by players, further evidencing the underlying

complexity of those game systems, and underscoring the emergent potential of the technology at the time. And despite the technological limitations, the design of the games themselves, coupled with the epic scope of the rendered game world, lent themselves to offering the illusion of emergence--that is, it offered the simulated (yet predetermined) surprise experience of a variable outcome, which for players of that era was quite the pleasant surprise.

As the medium of games continued to grow and evolve through the decades, computer graphics and photorealism became the industry benchmark of the AAA-level gaming studios, and therefore, the informal hallmarks of top-tier game production. This, too, reflected that game system complexity was reaching sufficiently high levels and potentially becoming capable of achieving true technological emergence in terms of procedurally-generated content. However, even at the time of this writing, this sort of true procedurally-generated emergence has not yet been actually achieved. At the annual Game Developers Conference, game industry veterans and experts Warren Spector and Tom Abernathy have contended that the industry is seeing a plateauing effect in terms of photorealistic CG technology, and that despite that, gameplay and narrative delivery in the video game medium remains unimaginative and inexplicably stagnant, leading them to conclude that the technological path to creating what would essentially be a tabletop RPG Dungeon Master in computer form may not yet be an entirely feasible way to achieve innovation in games [87] [88]. In response to the technological plateauing effect they observed, Spector in particular contends that it would be perhaps better to investigate what the industry can do instead in terms of the aesthetic and design factors of games in order to create innovative gameplay and narrative. Furthermore, at GDC 2015, Stephen Hood, founder of Storium, actually contended that the computer system, no matter how advanced at this point in history, actually inadvertently functions as a bottleneck for human expression, player input, and narrative choice [89]. Having noted as much, it can be considered more feasible to investigate ways to innovate on the design aspect of games as opposed to relying on the technology to remedy everything ineffective about games and narrative.

Coincidentally, it is also around this time in the early 2010s that the Indie

Game movement began to gather some significant steam. It was in this indie game movement--where veteran developers, now unfettered by the restrictions of publishers and free of the vetoes of the marketing departments of the much larger companies they hailed from--that there seemed to be many examples of experimental gameplay and narrative design. These indie developers, now further enabled by the relative ease of self-publication which the internet had ushered in, had the freedom to experiment with new and innovative ways of making games, to address topics of their choice, and to tell interactive stories in unique ways. In doing so, many of their efforts can be seen as examples in an indirect parallel response to Abernathy, Spector, and Hood's call to innovate not only on the technological front, but on that of the design front as well.

In particular, the recent much-lauded examples of Lucas Pope's *Papers, Please* [71] and The Fullbright Company's *Gone Home* [72] stand out as representative of this direction of innovation. These games are technologically inferior to other lofty titles of this era such as *Crysis 2* [90] or *The Elder Scrolls V: Skyrim* [91]. However, unlike these AAA-level games, *Papers, Please* (Figure 18) and *Gone Home* rely on a very different system framework (and the complexity inherent therein) in order to achieve its near-emergence--that of the human mind.

Figure 18: *Papers, Please* main gameplay screen. (© [2014], [Lucas Pope]. Used under Fair Use.)

At least in terms of emergent narrative, by placing a significant portion of the burden of narrative reconstruction with the player as opposed to relying solely on the technological systems inherent to the game software to direct such an experience, I observe that indie games like *Papers, Please* and *Gone Home* invoke and involve the complex system of the human mind, and in doing so, potentially achieve a form of emergence with their respective narratives. Albeit, this is not true, self-contained software-side technological emergence, in which the emergence results from the constituent parts of the game and their reactions with each other within the confines of the software system. Rather, the emergence of narrative which is observed in these two indie games is one of distributed system complexity, where the game system provides a system of narrative elements such as conventional plot points/events, and the human system (of the player) provides a space for those constituent parts to interact and therefore achieve a kind of user-side emergence of narrative. I contend that it is in this way that the concept of emergent narrative can be observed in modern video games--as a process of reaction between both the

software-side systems and the human player-side systems (Figure 19 below).

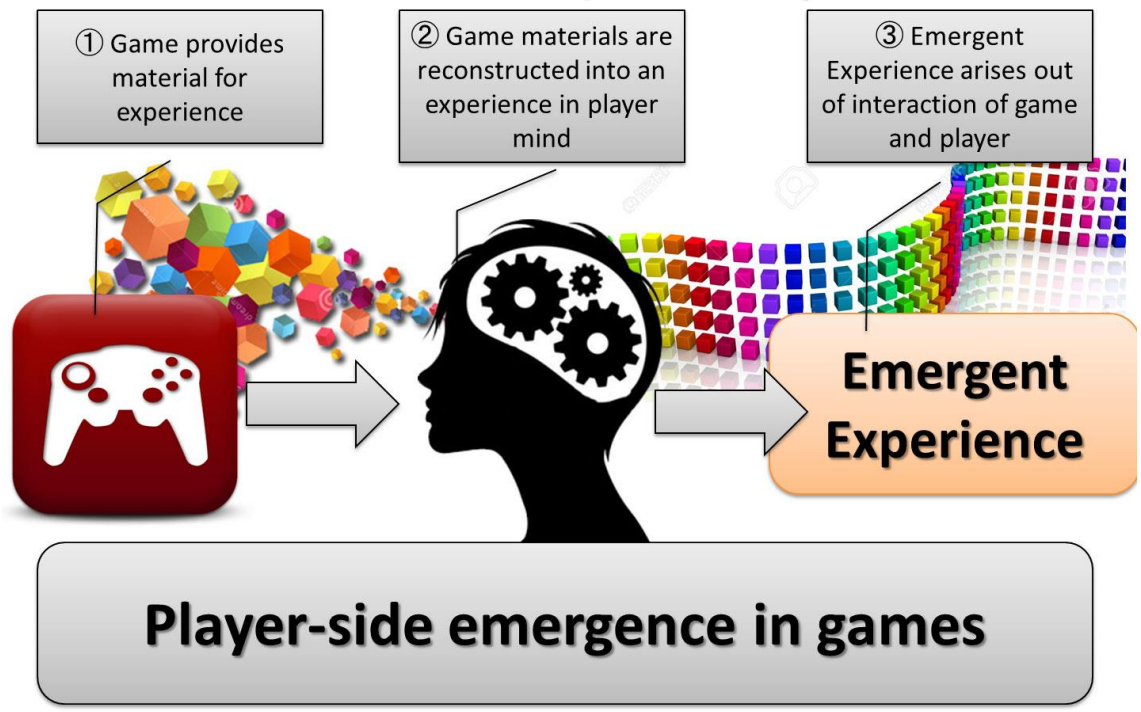

Figure 19: The concept of Player-side emergence in games. The material of the game is reordered/reconstructed in the mind of the player in an emergent fashion, thus rendering the resultant emergent experience from the game. In this conceptualization, intentionally-ambiguous game design can invoke the use of the human mind to be used in place of software-side procedurally-generated content.

In a time where the industry and academia at large are now just beginning to understand emergent gameplay and narrative in games and equally the appeal of these approaches for the games, the medium at large has also become acutely aware of the technological requirements necessary to achieve true procedural gameplay/narrative. As such, the technological limitations involved with achieving true emergence in that sense are both considerably daunting and currently unattainable. Considering this much, what can be done to further and encourage emergence in games? I contend that we can begin to answer that very question by considering how certain examples of the current time use clever game design

decisions to split the burden of a reconstructed emergent experience between the actual game software and the pattern-seeking tendencies of the human mind to good effect.

5.3. Player-side Emergent Design: Some Case Studies

For the purposes of illustrating how emergent properties are evident even in modern games which lack true technologically-based procedural emergence, we will apply a Close Critical Reading to a couple of recently significant game titles: *Papers, Please* and *Gone Home*. Both of these games are independently-published games which were thoroughly lauded in 2014 for their innovative game design and for their ability to render story experiences in unique ways [92] [93] [94] [95]. These games will be analyzed and discussed in the subsequent section in terms of how their hardcoded technological elements and intentionally ambiguous/subtle game design encourage the mind of the player to render an emergent experience.

5.3.1. *Papers, Please* - A Most Entertaining Paperwork Simulator

Lucas Pope, creator of *Papers, Please*, stated that he was looking for a way to turn the tension of a passport checkpoint into an enjoyable gaming experience [96]. Based on the accolades that the resulting game has received in 2014, one could claim that Pope has accomplished this mission. In terms of gameplay, *Papers, Please* is essentially a paperwork simulator. Players are invited to assume the role of a Cold War-era common citizen of the fictional Communist country called Arstotzka, who must labor away at a passport checkpoint, checking peoples' documents ad nauseam until a chime signals the end of the working day. The game itself uses these end-of-working day events to break the action of the game up into self-contained yet contiguous chapters. A brief textual summary shows how your hard work and ability (or inability) to accumulate money affects your family (Figure 20 below). In short, the game gives basic monetary rewards for properly adhering to passport-checking protocol, and conversely issues a monetary penalty for lapses in judgment, regardless of whether such lapses are simply monotony-induced mistakes, or the player willfully deciding to turn a blind eye.

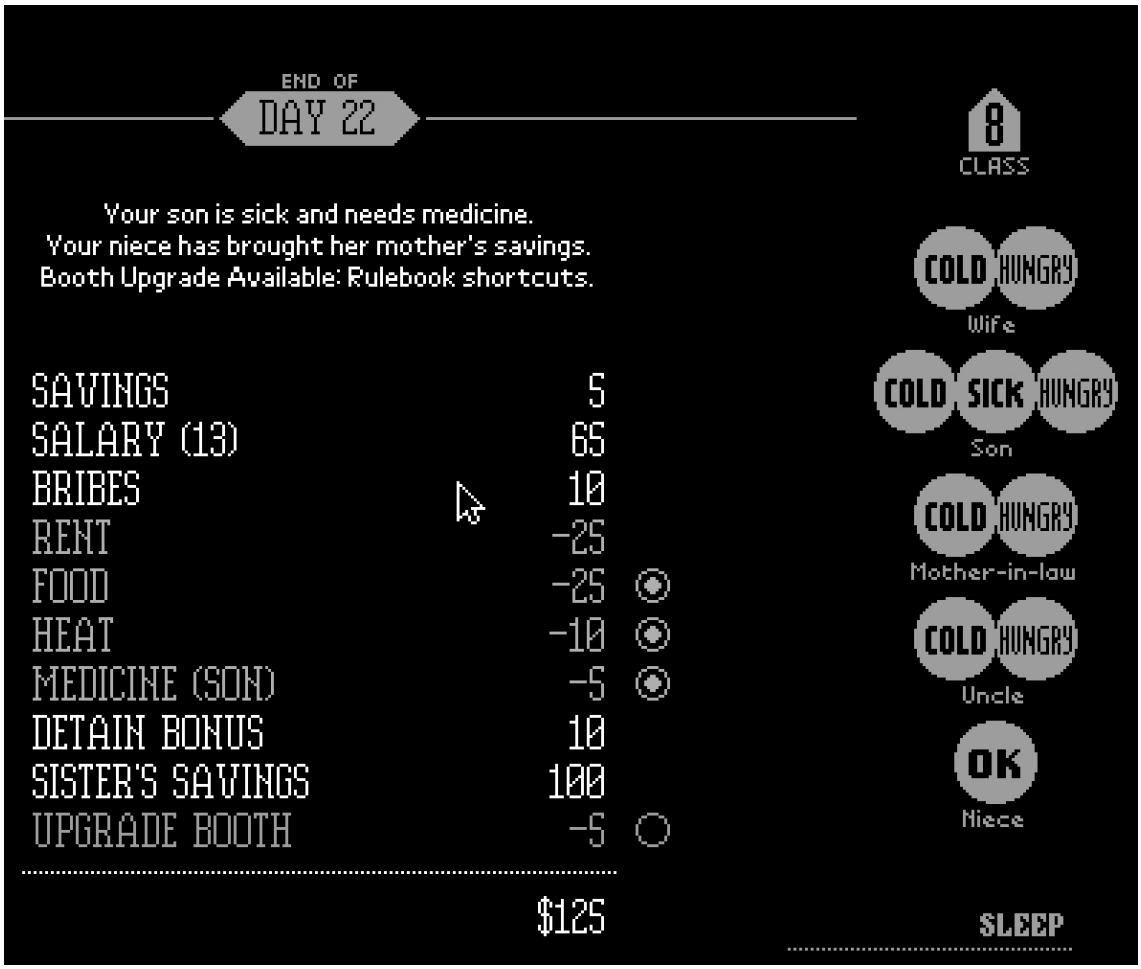

Figure 20: The "Daily Summary" screen which concludes daily levels of *Papers, Please*. This constitutes the only information you are given regarding your fictional family. As this information is textual-only, visual information (and the resultant potential for emotional response) must be manifested/constructed entirely only on player-side. (© [2014], [Lucas Pope]. Used under Fair Use.)

This simple freedom which the player possesses, to ultimately admit or reject entry into Arstotzka, is simultaneously the core game mechanic and the true storytelling power of the game. At a prima facie glance, there does not appear to be anything particularly innovative about the game play mechanic of *Papers, Please*, in that it is simply an accurate, boiled-down rendition of what it means to work in a

bureaucratic capacity. However, the human drama and the ramifications of your actions in *Papers, Please* are made aware to the player in both explicit and implicit ways.

Explicitly, *Papers, Please* informs the player of the consequences of their actions via in-game text. The aforementioned example of the family status report at the end of each game day (Figure 20 above) is one of the first examples of this explicit narrative that the player is privy to. Other examples of this explicit narrative action can be found littered throughout the actual gameplay, and they can be found in the form of pertinent newspaper headlines or official memoranda from the government.

An intriguing feature of *Papers, Please* is when it presents morally-implicit narrative cues. Through the course of the game day, a given player is presented with the occasional personal request from immigrant Non-Player Characters (NPCs), and this drives the moral tension of the game narrative. There are many examples of this in *Papers, Please*: a mother who has not seen her son in six months has erroneous paperwork; a husband and wife fleeing their country's dictatorship, but only the husband has valid credentials; a young woman who informs you that her pimp, a dangerous man whom she believes will kill her, is in line behind her. In such instances, it is up to the player to decide whether or not to admit the petitioner despite their faulty paperwork (fundamentally at potentially great personal expense to the player and their fictional family), or to simply do your job, take care of your own family and responsibilities, and follow the letter of the law.

It is in these morally-implicit situations where the narrative cues are particularly potent. The game itself makes no overt efforts to tell you to be good to your fellow man, or to be a model law-abiding citizen. It simply places you in a booth along the border with a set of reject/accept stamps and throws an unceasing line of humanity at you, replete with the full and realistic range of ugliness and beauty and all that comes with it. In a very actual sense, considering the limited scope of the subject material of this game, these fictional NPCs' lives and purpose culminate at your border-booth, when the player must navigate the straits of right and wrong. Hypothetically-speaking, as a player, what then do you do? Uncomfortable or not,

the game narrative is doled out in this fashion.

To its credit, *Papers, Please* does not pass judgment on you or your actions as the player, regardless of whatever occurs. It is important to note, however, that if played long enough (two game months, roughly 3~4 actual hours), the game will inevitably culminate in one of 20 different storyboard-type endings, each of which is an extrapolated outcome on a gradient that is bookended on one end by law-abiding oppression, and on the other end by revolutionary freedom [71]. As this brief ending functions as both denouement and epilogue, it is a vital piece of the narrative experience of *Papers, Please*.

Considering what we as players are given in terms of narrative from *Papers, Please*--a straight-forward explication in the beginning, a series of situationally-explicit and morally-implicit narrative pieces, and an ending which has been more or less shaped by our decisions in the passport booth--the narrative portrait still functions as a complete picture, despite there being no distinct thread between those morally-implicit points (save for the player's interactive contact with each instance). The responsibility of the reconstruction of the overall narrative portrait in this case is decidedly on the player-side of things, separate from the game software, which is simple and uncomplicated, relative to other games of this era. On the surface level, *Papers, Please* is a game that is not evidently attempting to offer a complete narrative experience, yet it succeeds in offering just that. It achieves certain expressions of emergent behavior by relying on the inherent aspect of human curiosity and a human need for logical context in order to make sense of the world around her. In nigh-existential terms, *Papers, Please* is a functional, but ultimately uncaring piece of software which merely presents players with a variety of information. In essence, that is all that this game is doing. However, the story experience and meaning can potentially come from how the player uses the narrative pieces or cues from the game and reconstructs those pieces to create an emergent narrative experience, unique to both that instance of gameplay and potentially also unique to the player and infused with narrative meaning that comes from the player herself.

5.3.2. *Gone Home*: A Story Exploration Video Game

If one were trying to liken the game play of *Gone Home* to any of its predecessors, from a genre-standpoint one could consider it a 1st-person 3D adventure game, perhaps akin to *Myst* [97]. *Gone Home* certainly functions in many conventional Adventure game ways, such as having the player navigate through an area rife with collectable items which have a variety of uses, many of which serve additional functions such as allowing player access to inaccessible sections of the map, other key items, or in some way providing more contextual information to the player regarding the narrative of the game itself.

However, unlike other Adventure games, *Gone Home* is considerably subtle in its approach to exploratory play, eschewing the more overt-direction-driven conventions of both the Adventure game genre and also those of the video game medium at large. For example, there are no true enemy characters or interact-able NPCs. In fact, save for the player character, the game is devoid of other physically-present characters (in relation to the game world). That is not to say, however, that *Gone Home* lacks other characters entirely, as the player character's younger sister Samantha is incrementally revealed through textual/audio artifacts as the primary character focus of the game's narrative. Though not physically-present within the game, the very context and story of Samantha, coupled with her ominous absence and oft-alluded-to meaningful sisterly-relationship that she shares with the player character are factors within the game which actually account for the majority of the narrative content, with your quest as the player to investigate, understand, and account for Samantha's absence.

In a medium which often relies on interaction with the visually-overt, *Gone Home* is an intriguing example of a game narrative which is ideally expressed in terms of absence. It is this absence in the game which serves as the central quandary and is presumably the main task of the game--to find out what has become of your younger sister Samantha. In order to address that absence in a way that leads to the resolution of said quandary, the player tromps through the empty house which supposedly belongs to your fictional family, happening upon scraps of paper, journal entries, post-it-note communiques between parents and kids, etc. All of this sort of

banal (yet accurately rendered) familial-detritus being collected/viewed, and summarily examined, can then potentially coalesce into a slowly-forming picture of the family who occupies this house. And so, the central game play aspect of *Gone Home* is exactly this: assuming the role of a kind of archaeologist and unearthing the evidence of the people who used to be here but for some reason are no longer present, in order to more meaningfully understand them, yourself, and why they are gone.

As story-centric games go, *Gone Home*'s method of conveying the narrative (by indirectly inviting the player to conduct self-investigation via collecting contextual bits and pieces) is most-decidedly indirect and subtle. Just as in *Papers, Please*, *Gone Home* seems to intentionally omit explicit context, instead relying upon a human's inherent curiosity, their need for logical context, and well-written contextual clues in order to motivate the player to continue "playing."[5]

There is actually no guarantee that players will find every single one of the contextual clues, nor find them in a set order. Neither is there a "correct" order in which to discover these clues, which can potentially lead to sequentially random contextual discovery. Similar to assembling a jigsaw puzzle, in order to achieve a true fulfillment of the game's tasks, the order of assembly is not necessarily as important as seeing how each piece of the puzzle fits in relation to the others. In this sense, the way in which *Gone Home* encourages the reassembly of its narrative experience (and consequently too, the way in which it reveals its full story to the player) is essentially one of whimsy, fundamentally without the promise of a fulfilling explication, which furthermore seems to put the onerous of meaningful contextual reassembly squarely in the hands of the player.

While this modus operandi is seemingly more work for the player, it is an interesting conceit in that it truly does rely on the player to use the material of the game world to re-create the game narrative, relative to that player. In that sense, the narrative of *Gone Home* is both intentionally-designed and a result of

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[5] There has been some industry-level talk about whether *Gone Home* is actually classifiable as a "game" or not [112]. This definitional nuance will likely also influence whether we can say that *Gone Home* can be "played," but for the purposes of this investigation, I are treating *Gone Home* as a modern video game.

emergence--the overall structure and narrative message of the game has been pre-planned by the game's designers (Determined Narrative), while all of the actual construction and interpretation of that narrative message and meaning--all of the actual (perhaps, virtual) experiencing--is up to the player (Personal and Collective Narrative).

It is important to note, however, that since *Gone Home* essentially culminates in one unified ending, the resultant narrative experience could potentially be considered non-emergent, as the overall experience has the same beginning and end. In this case, resultant playthrough experiences in *Gone Home* vary only in the order of their construction. This fact further distances *Gone Home* from an emergent classification. Conversely, this game also expresses Player-side Emergence in the form of the narrative clues and artifacts, which are presented plainly and devoid of directed contextual narrative. They are merely possibly happened upon by the player, who is free to inspect each item at their leisure and as intensely as they wish. The player may potentially opt to dismiss a potential clue altogether. Each inspected narrative clue in *Gone Home* is fashioned after a particular artifact from the 1990's--a TV listing, a period-appropriate textbook, (and in one eerily recursive example) a Super Nintendo video game cartridge. Fashioning these narrative clues after period-specific real world objects inherently carries with it the potential for a range of interpretation for the player. Certain players may place more or less meaning or emphasis on certain artifacts. Furthermore, there are other design considerations which are overtly ambiguous, such as the artifacts alluding to a possible extra-marital affair the mother may be having. These notes are left considerably vague, but with just enough connotation to imply an affair and potentially arouse suspicion in the player. It is in these ways that the game exhibits the potential for player-side emergence, but it is worth noting that as *Gone Home* seems to exhibit both emergent and non-emergent traits (variable narrative reconstruction and a unified, singular ending, respectively) the proposed concept of Player-side Emergence must be applied carefully in order to account for the variety of narrative design aspects present in both current and future games.

Based on these observations, how can we make sense of this proposed

player-side model of emergence in games, with respect to our observations of *Gone Home* and *Papers, Please*? How do these examples fit (or not fit) within the current literature on the subject? Do these games exist within the theoretical ecosphere of Game Studies or do they represent new and novel outliers? The next section of this chapter seeks to discuss just that.

5.4. Player-side Emergence and Ludonarrative Dissonance

As our investigation here deals with emergence in games, and particularly that of emergent narrative, it is helpful to see what Game Studies of narrative in games has to say about this. Unfortunately, narrative in modern video games at large has always been a rather contentious topic in Game Studies. On the one hand, some have argued that the narratives of games have sufficient depth to be explicated [19], or that games in and of themselves (and between their players) are a kind of meta-narrative [21]. Conversely, others have equally argued that narrative is incidental to the game medium, and/or that a game narrative cannot be meaningfully understood in terms of analytical tools which were designed to address static media [18]. The one thing that seems consistent in the wide spectrum of ideas is that narrative is essentially present in games and addressable to some considerable critical extent, and that the video game medium is presenting new and dynamic ways of human expression which are so rapidly and ubiquitously effective that academics are still trying to figure out exactly what is going on with this prickly business of narratives in games.

Equally, this wide variety of theories and posits on the nature and function of narrative in video games shows what other conventional precedent media have known all along: that the ways in which human creativity can be displayed are fundamentally inexhaustible. In that sense, studying narrative in games is akin to researching the cure for an infectious pathogen that both replicates and mutates into different functional versions of itself with both ease and haste. Having noted as much, it is certainly a relief that we are instead merely dealing with innocuous video games.

A significant problem inherent to the modern video game medium in terms

of both narrative and gameplay is that of Ludonarrative Dissonance (LND), which is sometimes also known as the Narrative Paradox [98]. In essence, as games are inherently interactive, they encourage player freedom and interactivity with and within their game worlds. This player freedom, however, comes into direct contention with any Determined Narratives which may be present within that game world--given a sufficiently constraint-free game world, players are free to potentially deviate entirely from any narrative which the game designers have placed within that game world. This can potentially result in instances where the player's actions are horrendously out of sync with the embedded, predetermined story elements of the game. An example of this dissonance can be seen in the *Elder Scrolls V: Skyrim*, where despite any moral stance you adopt as a result of your actions as the fabled Dragonborn player-character/protagonist, you will eventually be lauded as a hero who has saved the realm from destruction. In some cases, this can become a fitting tale, but in the case of more severe moral deviance, it makes little logical sense to praise a villainous player character, but that is what will eventually happen once the player has progressed successfully past the central storyline in *Skyrim*. As such, LND tends to appear in games with a high degree of player freedom and some type of embedded narrative.

Ludonarrative Dissonance in games is an inherent trade-off between player and designer authorship. That is not to say, however, that developers have not experimented with tune-able workarounds. Lessening the range of player actions and freedom can help game designers to tell the story they intend to tell, but can potentially lead to a gaming experience that seems limited or overly-linear. On the contrary, increasing player freedom equally increases interactivity with the game experience while lowering the chance that the core story can be successfully conveyed to the player at all. Game designers are currently tinkering with ideal ways to preserve both player freedom and authorial intent [22].

With the concept of Player-side emergence, there is a potential for any ludonarrative discrepancies which arise out of LND to be contextually accounted for by (and during) the reconstruction of the emergent narrative experience in the mind of the player. In short, in striving to craft a specific, detailed, and deeply-fleshed-out

gaming experience, some games (such as *Skyrim*) may be potentially allowing the circumstantial creation of instances of LND. By contrast, games which are designed to be loosely constructed via hints within the player mind and with a healthy degree of ambiguity (the sort that can encourage Player-side emergence), the player mind can potentially have adequate room to account for disjoints between narrative instances and rendered gameplay. This is akin to how in modern cartoon animation, the human mind subconsciously disregards the blank spaces between separate animation frames, and instead interprets the swift changes in animation frames as one contiguous moving image. The human mind has the potential to create a context in this fashion.

In many precedent works of fiction in more conventional media, there is no actual mandate for authors to explain every character and plot point to its fullest. With games, this freedom also exists, and this phenomenon is present in both *Papers, Please* and *Gone Home*. Particularly with *Gone Home*, the game progresses with an understood base level of ambiguity. That is to say, it is fairly evident when engaging in actual gameplay that the game is intentionally withholding contextual narrative information. This creates a base understanding in the player that explicit context will likely not be revealed, thereby lessening the expectation for comprehensive exposition of plot and encouraging open player interpretation. By creating this freedom of interpretation, *Gone Home* expresses a narrative space which is not limiting or (by form and function) prone to instances of LND, as the player mind can potentially account for any contextual blank spaces between narrative nodes. I contend that it is this sort of relaxed state space which can constitute a valid design consideration for game designers who wish to address the phenomenon of LND in their own games.

As it is the focus of this chapter, *Gone Home*, *Papers, Please*, and other games like it are an interesting example of a kind of game that exists feasibly in the middle of the LND spectrum. There are several aspects of these games which are classifiably embedded or hardcoded in nature--for *Gone Home*, it is the set environment of the house, the carefully-written journal entries, the high-quality voice-acted lines of dialog, and the attention to detail required to render an

authentically-1990s home--all of these things (particularly the diary entries and other textual/visual/audio "clues" the player finds in the house) were designed prior and crafted intentionally, and this much is evident. The fact that the player has the freedom to explore most of the house from the very start of the game, thereby potentially allowing the player to come across the narrative bits in any order, encourages emergent processes in that any experience which is reconstructed in the player mind cannot be completely predicted or intended by the game designers.

Papers, Please exhibits many of these same characteristics: it offers a series of standalone, seemingly-unrelated narrative instances, but frames several of these instances as moral conundrums, bereft of value guidance. They are neutral happenstance occurrences which the player happens to be in a position to "remedy" in one fashion or another. In the end, it is the way in which the player navigates these moral conundrums which completes each moral vignette and therefore contributes to an overall emergent reconstruction of the game experience which seems to collectively ask, "In what manner did you live your life?" Whether the answer to that question actually bothers you as the player or not is really up to each player, respectively, and it is this aspect of *Papers, Please* which is very highly emergent in nature.

In short, LND has a higher tendency to occur when the following two factors are present within a narrative game:

1) a very well-fleshed out story, explained out to the very last details and

2) a high degree of player freedom in terms of the game mechanics.

When both of these factors are present and significant within a narrative game, the instance for LND is very high because the narrative has been set up as a very strictly-defined condition, and the state space provided by the actual degree of interaction in the game (the gameplay mechanics) is very large. Hence, illogical deviation from the main embedded narrative is a very plausible outcome of any playthough.

Thusly, LND can logically be rectified by rebalancing those two factors. Specifically, the story parameters can be re-tuned in order to be less stringent with details, and in doing so, the need to rebalance the parameters of the gameplay and

degree of player freedom would be theoretically negligible. In this way, the proposed concept of Player-side Emergence contributes to a design-based approach toward the rebalancing of the narrative factor in a game--by planning for what Kristian Ahm of the University of Copenhagen calls "Strategic Ambiguity," the game designers of a particular game can in fact create a game with a low or minimal potential for LND by basically freeing up their story to be more intentionally ambiguous at certain key points within the narrative. Doing so will not only create a wider state space for the emergent interpretation to occur in, but it will also create opportunities for the player to guess at any multitude of meaningful interpretations of the story, in turn encouraging playful interpretation and increasing that game story's potential to create a subjectively meaningful experience for any given player.

5.5. The Future of Player-side Emergence

As emergence tends to express itself in complex systems, games like *Papers, Please* and *Gone Home* can potentially achieve their emergence by using the hardcoded software of the game in conjunction with an intentionally and sufficiently ambiguous design to encourage emergence not in the game itself, but within the complex system of the player mind. Players are given pieces of the game experience by the game and are then encouraged by the design of that game to reconstruct that game experience within their own mind. In doing so, each player can respectively draw on their own minds' capability to create context between those disparate and individual game experience pieces. This is where the emergence occurs in this proposed concept.

These examples show that in some meaningful and feasible way, the call to action elicited by Spector, Abernathy, and Hood to seek design-based approaches over technology-based approaches to innovate in games has been, and is continuing to be answered. This has thus far been expressed in two considerable ways. Our proposed concept of Player-side emergence in games can be applied meaningfully to games such as *Papers, Please* and *Gone Home*, and such applications do render some insights as to how, in the current absence of true technological procedurally-generated emergence, design-based approaches can inspire narrative emergence of a sort on the player-side of the screen. Based on the analyses of these

two games, I contend that theoretically, our proposed concept of player-side emergence in games can be used as a design consideration for game developers who are trying to avoid instances of Ludonarrative Dissonance.

As a healthy point of conjecture, there also remains the equally viable possibility that LND is perhaps an essential aspect of the narrative game medium that might not necessarily be "remedied" as it were, as much as it can be anticipated and accounted for. Still, the authors would like to contend that in an effort to both further understand and maximize the benefits of both embedded narrative and player agency, it is worthwhile to see how designing a game which allows the player's own mind to account for any narrative inconsistencies in relation to rendered game play can at least address LND in some meaningful and useful fashion.

Considering this, the future of our investigation is concerned with two main tasks. Firstly, it is necessary to experiment with different methods of sampling and observing player-side emergent reconstructions with the games cited in this paper and other subsequent games of similar design. To that end, our next step will also involve an investigation of the potential methods of such a sampling in order to determine which types of sampling are feasible. By trying out various sampling methods, this research can be further matured by then selecting and/or creating and proposing a new theoretical framework to apply to the observation of player-side emergence.

Secondly, in terms of furthering our proposed concept itself, there is a need to create experimental working prototype games which can be used by games researchers to test out varying and diverse methods of Player-side emergent game design. To that end, we can potentially use the CIMI Method [63] which was designed specifically to identify worthwhile narrative elements in games and study them via game prototyping in order to isolate the target narrative mechanic in terms of player testimonies.

On this note, it may also be useful for this investigation to also begin looking at Alternate Reality Games (ARGs), as they are predicated upon a collective of players who collaboratively construct a meaningful narrative out of the elements

presented across a range of transmedia sources (internet websites, games, commercials, etc.) [99]. However the current scope of our research deals primarily with single player, non-transmedia games, and is at present not yet ready to make the move to multiplayer environments. I have chosen this scope in order to deal with developing the concept of Player-Side Emergence in a gradual, careful fashion, which can begin with single-player games which are "isolated" from transmedia ecologies, then potentially ramp up to the collective, transmedia realm of ARGs. I anticipate that before this move can be made in a meaningful way, more work will be required regarding the first future work goal, which is to establish the methodology of observing (and perhaps even recording) player-side emergent experiences.

Although this chapter contains an analysis of two separate indie games as test cases for our concept of Player-Side Emergence, this constitutes a starting foundational basis of this research effort. In the future I intend to further delineate and develop this concept by observing other games in much more deeper ways, isolating single games for analysis as opposed to doing an initial comparison as I have done in this current effort. I believe that by undertaking such game-by-game analyses, the concept of Player-Side Emergence can be fleshed out in more rigorous ways.

5.6. Player-side Emergence and Game Narrative at Large

Admittedly, the concept of Player-side Emergence is significantly new and difficult to convert into a fully-codified methodology for the creation of games which can always successfully create an emergent narrative/gameplay environment for the player's own interpretive reconstruction. In fact, it is the authors believe, based on the body of knowledge which currently constitutes contemporary thought on narrative in games at large, that in principle, Player-side Emergence is not fundamentally achievable in 100% of all game design efforts. Player-side Emergence is not intended to be a kind of "Silver Bullet" solve-all solution for the problem of LND. Rather, Player-side Emergence is being proposed here as 1) a design consideration for game designers who would like to create a variable experience for players of narrative games and 2) a theoretical perspective which game narrative

researchers can employ in order to gain insights into narrative or persuasive games which are attempting to tell a story in a manner that does not make primary use of traditional narrative exposition (i.e. as in the overly-cinematic exposition of *MGS*, or the heavily-text/dialog-driven styles of the conventional Japanese Visual Novel). But how exactly is Player-side Emergence helpful in gaining more insights in game narrative, and what are its implications to the greater field of Game Studies as it pertains to narrative?

An aphorism from David Wheeler which is of particular note among the computer science community claims that "all problems in computer science can be solved by another level of indirection." Although game narrative is decidedly not true computer science, the proposed concept of Player-side Emergence contributes to our understanding of game narratives because it constitutes another level of indirection. It allows us as game narrative researchers to re-frame the model of what we consider narrative elements with a crucial consideration of the player and her input into that system of gameplay. Player-side Emergence still recognizes that all of the normal elements of narrative are present and in-play, but also recognizes that the player-side interpretations/reconstructions are of considerable importance, and that if we view the player mind as the actual rendering engine of the story of an ambiguous, non-traditional exposition game, then we can make more meaningful inferences about what other hidden symbols and meanings still exist, both on the software side of the game, and in the resultant interpretation on the player-side of the system. In that sense, Player-side Emergence is a new level of indirection, which allows us to reorient the perspective for a better, more meaningful view of the system as a whole.

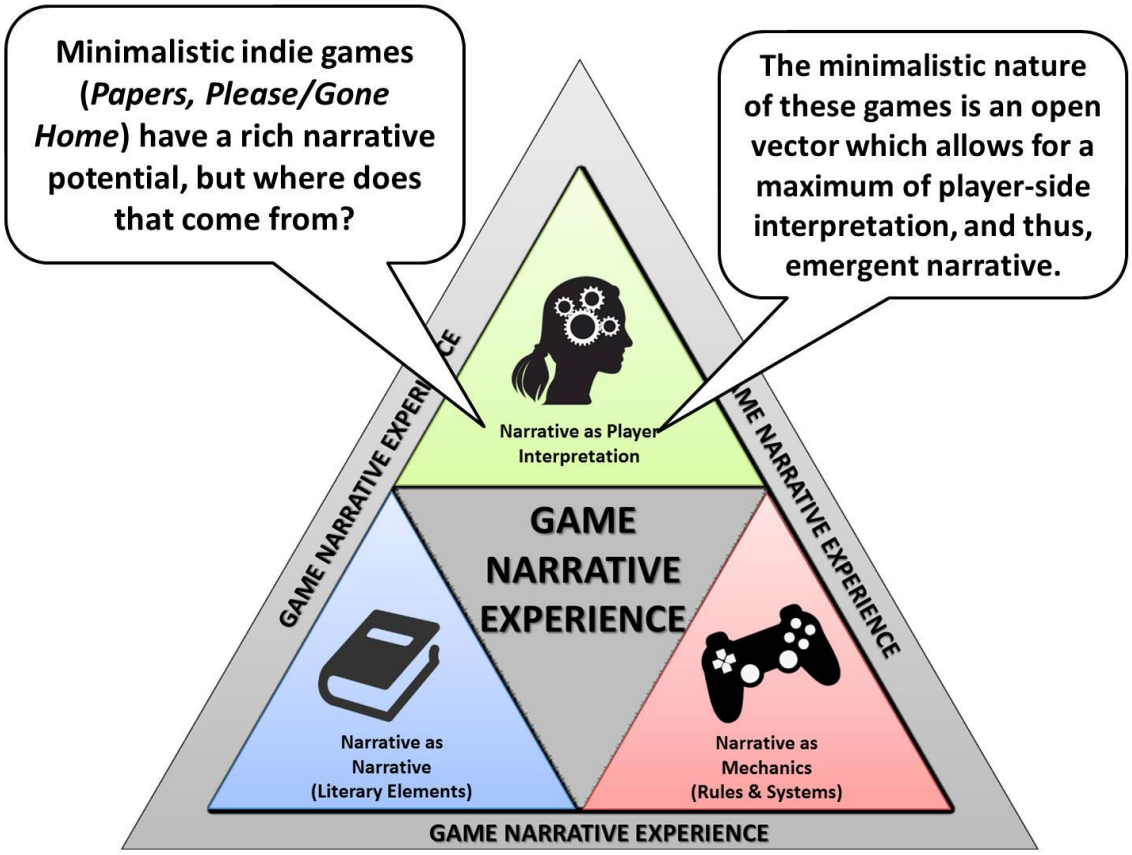


Figure 21: Understanding Player-side Emergence and Game Narrative Experience. Game narrative as an overall experience seems to stem from (and utilize) both embedded narrative elements which can be analyzed in a literary fashion, as well as systemic and rule-driven elements which can be studied ludologically. But what ties all these elements together in a way that makes cohesive narrative sense to the player is that player's own ability to rationalize their own narrative out of whatever the game provides (even minimalistically, as with the above game case studies), either as set elements or some function of their rules and mechanics. Thus, Player-side Emergence as a concept accounts for this synergy and effect, and stands as the third force of this Narrative Experience Trinity.

Chapter 6: Towards a Model for the Game Narrative Experience

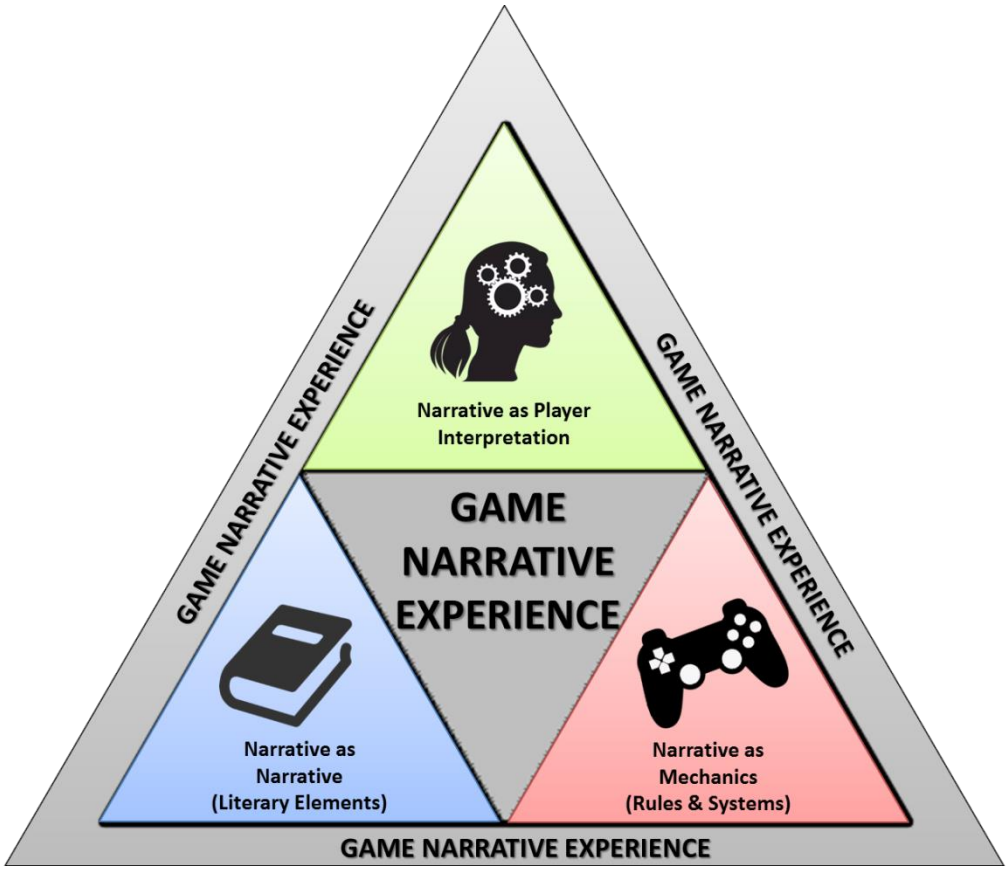
"Whatever you now find weird, ugly, uncomfortable and nasty about a new medium will surely become its signature. CD distortion, the jitteriness of digital video, the crap sound of 8-bit--all of these will be cherished and emulated as soon as they can be avoided. It's the sound of failure. So much modern art is the sound of things going out of control, of a medium pushing to its limits and breaking apart. The distorted guitar sound is the sound of something too loud for the medium supposed to carry it. The blues singer with the cracked voice is the sound of an emotional cry too powerful for the throat that releases it. The excitement of grainy film, of bleached-out back and white, is the excitement of witnessing events too momentous for the medium assigned to record them."

-Brian Eno

The above quote by acclaimed music producer Brian Eno is evidently regarding traditional media such as music and cinema, but I find that it applies just as accurately to the phenomenon of narrative, emotion, and meaning in video games. There were many times throughout these last few years of researching narrative in video games where I found myself questioning whether any of these queries had any real, definitive answers at all. However, in recognizing that a significant new medium actively and inherently evades definition is also an indication that its study, despite being radical and fringe, is also somewhat necessary. Simply put, to find that studying narrative in the interactive medium of games is difficult and that no one theory can as of yet "stick" to the medium means simply that perhaps we are actually on to something here.

In the above quote, Eno talks about how certain essential truths of emotion

and meaning often stretch the capacities of their intended medium to the limit, and even past their breaking point. In essence, on occasion, it can be problematic for meaning or emotion to properly come through to the audience due to the physical limitations of a given medium. Through this research, I have witnessed the same phenomenon with the study of narrative in games. In fact, if anything, it has become apparent (via all of the varying approaches undertaken in Chapters 3, 4 and 5) that what we call "narrative" in interactive video games may not actually exist or be properly conveyed in any one dimension of the medium itself. What this research seems to indicate is that narrative in interactive games is not a straightforward dissemination of information from system/product to constituent/consumer, but rather, it appears to be some kind of synergistic effect--an ecosystem of embedded meanings and symbols which find interactive, variable interpretation and reconstruction only upon actual player involvement as in Figure 9 of the Narrative Experience Trinity (duplicated below).



This is a somewhat broad claim, but one that I feel confident to make when considering the elusive nature of the understanding of interactive narrative in the modern video game as a whole. The following subsections of this chapter will serve to detail the reasoning behind this conclusion in addition to explaining why this model of the Narrative Experience Trinity is beneficial to both researchers and designers at large.

6.1. On the Presence or "Location" of Game Narrative in the Medium

The research efforts undertaken in this Ph.D. term were necessarily segmented. More specifically, each of the conference papers and journals which constituted this body of work focused specifically on only one aspect, dimension, or function of any discernable narrative to be found in significant examples in the medium. With the *MGS* study, I was primarily concerned with signs and symbols, and I applied a predominantly Literary approach to understanding the presence, function, and limitations of traditional symbolic narrative devices such as character foils and narrative themes. It became readily apparent through that study that while narrative does in fact exist and function in games, that narrative interpretation and its general effectiveness have the potential to be severely influenced by the fact that, at its heart, a game is an interactive experience which places the player squarely in the shoes of the main character/protagonist. This aspect of interactivity cannot be denied and must necessarily be accounted for in any analysis of narrative in games.

Having considered those findings, I then proceeded to look directly at the game system (its rules and structures), that which constitutes the system of interactivity in a game when I committed to my analysis of the *OoT*. Through the use of the CIMI Close Critical Reading with respect to the Model of Narrative Experience as a theoretical framework, I was able to understand that in terms of interactivity, the rules and game mechanics can also constitute a symbol and metaphor of their own (game mechanic *as* a symbol). This finding is a new insight because the Ocarina itself can be identified as an object which functions as both mechanic and narrative symbol. Furthermore, it is this Ocarina/Ocarina-Mechanic

which functions and exists on both the literal and figurative levels of narrative interpretation. As it achieved such a prominent role in the game lore, the Ocarina as a symbol has then transcended the bounds of the game software in order to become an internationally-recognized symbol which signifies the game franchise, the game itself, and the entire cumulative narrative experience of the *OoT* to fans all over the world.

In modern society, it has become easy and commonplace to dismiss fandom as a sort of malady of the obsessed--an unsightly affliction to be avoided. However, in our study of the *OoT*, I contend quite the opposite--that through the narrative creation of a truly Cross-Cultural Object such as the Ocarina from *OoT*, the game succeeds in exerting (though not by intentional design) a tremendous amount of observable recognition and fandom on a worldwide scale. That recognition is nothing to be ashamed of--rather, it stands as a testament to the cultural capital of that game. That is true cultural influence that Japan has created *by accident.* Modern television shows such as *Cool Japan* can only hope to deliberately attempt to create such a benignly positive stir overseas, but I contend that through the interactive medium of games, the creation of such Cross-Cultural Objects which carry the latent potential as a truly powerful cultural export is much more feasible and possible. It is my personal hope that the Japanese game (and pop/sub-culture) industry at large continues to nurture this sort of creativity as opposed to killing it with well-intentioned yet ill-executed marketing concerns.

And so, it can be seen at least from those two research efforts, that game narrative seems to exist and function sufficiently within the confines of the game itself (as both embedded narrative elements/literary devices, and as narrative game mechanics), so long as the experience is triggered by player input. In recognizing this fact, it is of the utmost importance to understand how narrative exists and functions as a function of interactivity. In order to understand that, it is then necessary to look at what it is that the players are experiencing/receiving/retaining when they play a narrative game. To that end, I pursued a study of various indie games (*Papers, Please* and *Gone Home*) in order to see what was happening with games that had little to no exposition yet were still being hailed in popular media as

"highly-narrative" experiences.

What I found with regards to *Papers, Please* and *Gone Home* was that even in the absence of traditional narrative exposition (cinematic cutscenes or dialog-heavy scenes), a kind of narrative reconstruction was occurring anyway. In a sense, one could say that narrative would begin to coalesce even with minimal inferences from the game itself. In trying to conceptualize this phenomenon, I proposed the concept of Player-side Emergence, which accounts for the presence and function of a narrative experience even in the absence of highly-detailed, overt Determined Narrative.

6.2. The Narrative Experience Trinity

In considering all of these findings, I conclude that narrative in (and from) an interactive game exists and functions therefore in *all* of these areas and dimensions. It exists as the predetermined, embedded parts of the game, in the game's very digital DNA, if you will. Though, like the concluding theme of *MGS*, a game's digital DNA can only dictate its narrative potential--the rest of the narrative experience then must necessarily be derived from the "Free Will" of the game, which is the player input. It is the player who willfully enters the fictional narrative world of the game via its interactive system, and in interacting with it, succeeds in creating the next part of the narrative experience--that of the action/reaction of the game's mechanics and rules. It is in this part of the creation of the narrative experience when any mechanics which are simultaneously functioning as interactive symbols reach their narrative potential. Lastly, the overall narrative experience to this point is then reinterpreted/reconstructed by the player within their own mind. When this occurs, the narrative experience can then potentially be colored by that given player's subjectivities, their own emotional inflections and experiences from the past.

This is the total composition of our proposed model, the Narrative Experience Trinity. Our model recognizes that it is in this way that the phenomenon of narrative experiences emerges out of both game and gameplay (which should be understood as two separate but highly-interrelated concepts). The game experience

is not possible without the software, or the game itself, and the game is considered inactive until it is interacted with by a player. While narrative may exist either in part or as a large body of exposition in a given game, it remains un-experienced until a player both plays and considers the content and rendered experience of the game. Finally, the narrative experience coalesces in the Collective Narrative level when a player considers the narrative play experience they had and tries to re-frame it in a way so as make sense (internalize) their own narrative experience or to tell their tale to another.

6.3. A Rhetorical Caveat

Although the above conclusion tentatively serves as the overall conclusion of this entire research effort, it is important to note (as Brian Eno had pointed out at the start of this chapter) that in as many ways as there are to experience emotion, there may be equally just as many ways of attempting to convey that emotion through a medium, and in many cases, the medium fails to do this properly. Considering this, I feel it is important to remember that human narrative experience cannot (and perhaps should not) always be conveyable via media. Simply because an interactive game can render a narrative experience such as the ones studied in this dissertation does not mean that it will be capable of doing this in every case, with every game title, with every person who plays it.

This caveat also functions as our "limitations of scope" for this research effort. With the sheer amount of game titles currently being released on the modern market [4], it is factually impossible for games researchers (the human ones) to be able to make surefire blanket statements about all games and be infallible on such statements [48]. By the very nature of the game, which attempts to subvert expectations and "play" with people's reactions in that regard, there surely can be no absolute when it comes to the subjective aspects of games, especially as they pertain to the realm of narrative. I am, however, confident that what I was able to find in this Ph.D. work is significant with regards to interactive narrative and helpful for understanding narrative experience as an overall phenomenon in and of games.

6.4. The Contribution of the Narrative Experience Trinity

The main problem which I sought to address in this research effort was that of LND (ludonarrative dissonance)--when the inherent interactivity of a game comes into direct contention with the narrative experience of the game in logically dysfunctional ways which break narrative immersion and create for a nonsensical game narrative experience. What the proposed model of the Narrative Experience Trinity does is that it gives game narrative researchers a theoretical framework to employ which considers the dimensions of game narrative which exist both within and without the game software. The Narrative Experience Trinity places equal significance in game narrative to the embedded narrative elements from the developers, the interactive game mechanisms and rules which also potentially function narratively, *and* the outer dimension of player interpretation. It is this third and equally important) element of the Narrative Experience Trinity which is most important towards understanding LND in narrative games, and subsequently how designers may theoretically address and/or negate instances or rates of LND in their own games.

The Narrative Experience Trinity is also potentially helpful for those game developers and designers in the game industry who wish to avoid creating instances of LND in their products. The model itself necessitates a comprehensive understanding of the game system in terms of narrative itself and the player interactions and interpretations. Designers who are trying to consider narrative within their games are fundamentally better off considering their game as a narrative system with the plastic potential for flux (in terms of player interpretation). The big machine of the AAA game development is necessarily a wide-scale effort distributed over a division of labor, and the narrative development of a game can vary in its involvement of those separate divisions of game development. In such cases, it would be harder to maintain a unified narrative design vision for a particular game project, but even in such large-scale productions, the Narrative Experience Trinity can serve as a mind map or general design principle which all game development departments can refer to in order to remain unified of purpose and therefore more resilient to creating instances of LND.

6.5. Utilizing the Narrative Experience Trinity

Although the Narrative Experience Trinity was created as a model for games researchers to understanding interactive narrative in digital games from the critical viewpoints of the game mechanics, the possible player interpretation, and the story itself, it can also be used to guide the development of narrative games as well. However, due to the highly-subjective and potentially limitless variety of subject material which narrative in games can deal with, I do not recommend the usage of the Trinity as any sort of "game development formula" which should stringently be adhered to in order to consistently produce better (perhaps, more entertaining) narrative games. Rather, the Narrative Experience Trinity should instead be considered by game developers as a game design principle which can be frequently referenced throughout the game development process, during any of its various phases, in order to keep the development team focused on balancing both narrative and gameplay elements of the project at hand. Of course, for games researchers, the Trinity can be used as a means of both situating a the theoretical focus of given research project, or to provide a guideline for researchers to critically analyze any narrative game. I will go into some detail about both of these usages in the subsequent sub-sections.

6.5.1. The Narrative Experience Trinity for Researchers

Since the Narrative Experience Trinity has its origins in games research, it is naturally well-suited to subsequent research efforts for narrative in games. As it has been discussed thoroughly in the earlier portions of this dissertation, the highly multivariate nature of both the game medium itself and the academic tools and theories used to study them can be inherently problematic for the games researchers. Furthermore, I also went into detailed discussions about how due to that very same multivariate nature, narrative in games cannot (and should not) be studied simply from one theoretical lens--a sole reliance on, for example, literature studies, cinematic studies, or ludology will inevitably lead to the inability of that research to properly consider the game as an interactive system, despite whatever insights are

reached regarding either just the story or the game mechanics, respectively. Noting this much, it then becomes evident that the Narrative Experience Trinity represents (to borrow a term endemic to video gaming, itself) a theoretical "world map" which future game researchers can use as a reference when considering all three of these delineated dimensions when addressing the narrative phenomenon of any given interactive game.

As a matter of due diligence, a games researcher will invariably be starting their research project from any of the particular corners of the trinity. As was the case in this dissertation, I began by looking at narrative in games simply as narrative, using the theoretical lens of narrative studies. Thus, my journey towards understanding game narrative began in the decidedly *Narrative* corner of the Trinity. As the research further matured, the observations and analyses I made indicated that the theoretical focus should necessarily transition to (and from) the other corners of the Trinity, namely those of the *Game Mechanics* and lastly, that of the *Player Interpretation*. And so, subsequent researchers may follow a similar shift between the different dimensions of the Narrative Experience Trinity.

The path through the model is not as important as the fact that each of these areas is considered in relation to the other parts in terms of the particular narrative study being conducted (as was demonstrated by our efforts in this dissertation). It is up to the researcher herself to decide which path is best, and what allocation of focus suits their particular research in a way that is ideal to their specific investigation. As an initial effort in coming to discover the shape and dimensions of this model, I have outlined in this document as a whole, our path towards that understanding and my reasons for proceeding thusly. Quite naturally, a different theoretical starting point on this narrative "world map" will necessitate a different journey with different reasons for transitioning to the various dimensions depicted on the Trinity model.

For example, a researcher who deals primarily with Quality Assurance as a base metric for the effectiveness of a given game's narrative may end up starting their study in the top-most part of the Trinity, where player experience is the primary focus of study. Through such an investigation, the various factors which

contribute to that player-side interpretation/experience can potentially be traced back to ludological mechanisms (the game rules) and the embedded narrative content (narrative dimension), and that researcher may then possibly draw a much more comprehensive (though tentative) conclusion about the nature of a game's narrative phenomenon with the basis of the Quality Assurance data as a grounds for their initial study, which can then be supplemented by observations and findings which stem from analyses of mechanics and actual embedded story. The Narrative Experience Trinity binds all of these factors together in a way that simultaneously considers the phenomenon as a contiguous whole while also not ignoring the plastic nature of the medium itself.

6.5.2. The Narrative Experience Trinity for Game Developers

As an overall, thematic reminder, the Narrative Experience Trinity can be especially helpful in top-tier game studios where teams of potentially hundreds of different kinds of game developers (graphical artists, sound engineers, producers, programmers, user interface designers, narrative directors, etc.) are working simultaneously on a single game product. In such cases, there is a high potential for entire teams and sections to easily lose touch with the core game mechanics and how they may potentially affect the story they are crafting. Alternately, for example, the game design team may also potentially lose touch with the central narrative themes of the game. Naturally, as is the current industry standard, the upper management tiers of these teams (directors, producers, team leads, etc.) will be the ones ultimately responsible for maintaining a unified vision of story and gameplay, but I contend that if the Narrative Experience Trinity is introduced in game studios as a design principle, then teams of developers can set the parameters of their narrative game in relation to the Trinity in terms of how much of a priority they would like to allocate to the various points of the Trinity (for example, a game may choose to focus more on linear storytelling at the expense of gameplay interactivity and vice-versa). In doing so, a game design team's members, no matter how large, can all maintain an awareness and proper consideration of the narrative and gameplay experience at all

times, therefore likely lessening instances of LND which stem from the design phase.

The Trinity can also serve as a design philosophy anchor which focuses design teams and helps the project not lose sight of the narrative/gameplay integrity over particularly long development periods. It is not uncommon for corporation-level design studios such as Blizzard Entertainment or Bethesda Studios to spend several years to produce a single game. As in the example above, top-level industry games have massive teams of game developers, and the size of the teams can invariably lead to significant difficulties in maintaining a unified creative vision for a game's narrative. As a parallel factor, the extended development time of such games can also equally contribute to the same sort of difficulties in maintaining that same creative vision for the narrative.

The Narrative Experience Trinity can aid game developers in charting how close their current progress is in relation to their original creative vision, though in this case the usage could be quite literal in terms of mapping. For example, the Trinity can be used as a kind of state space, upon which the current progress of a game's narrative can be plotted by considering each of the three corners of the Trinity as attributes. If, for example, a team considers their game narrative and sees that it is becoming particularly close to the Narrative corner of the Trinity, when according to the original vision, it should reside more closely between the game mechanic and narrative sides of the Trinity, then they have some feedback to utilize towards steering the development of the game narrative further towards the interactive. A game narrative which is highly narrative in nature is a likely indicator that the interaction level of the game is decreasing, and vice versa. If the plotted point of the game narrative development progress begins to skew upward to the Player Interpretation corner of the Trinity, this may mean that the narrative itself is beginning to take on the characteristics of ambiguity. This, in and of itself, is not necessarily a good or a bad thing for game development, as I have shown earlier that the right sort of ambiguity can be a healthy state space for Player-side Emergence to form, but as in the case of the Trinity with respect to games researchers, it will be up to each game development team themselves to determine

whether their current project, as potentially plotted by the Narrative Experience Trinity, is going according to plan. As a whole, however, it is in this way that the Trinity can be potentially utilized by game developers as a thematic anchor/reminder for understanding the current characteristics of their particular game narrative, and thusly use it to iterate on the current version to ideally suit their own needs.

Chapter 7: Future Work

"Video games are bad for you? That's what they said about rock-n-roll."

-Shigeru Miyamoto

Games, as a narrative medium, are historically, relatively new, but that does not mean that they are insignificant. And though the medium is young, games continue to mature. With the maturation of anything, be it ideology or person, the ability to function at higher levels increases, and so thusly too does that thing's social responsibility to use that new power wisely and benignly. Video games are no different in this regard.

Atari's *Missile Command* of the early 1980s was (perhaps inadvertently) a haphazard commentary and product of a time which was highly paranoid of any thermonuclear holocaust which could result immediately during the Cold War [100]. Could such a game make a deeply meaningful commentary on the tenuous nature of mutually-assured destruction under which the peoples of that time lived? Such a question is not only valid, but also the responsible inquiry of future game researchers. Having noted as much, can games of the modern era succeed in making a deeply meaningful social commentary on the pertinent issues of our time, or any time for that matter?

Based on what has already been presented, at least in this small dissertation as the distillation of what I could learn about narrative in games at large, I would have to say that games can in fact make that impact. Storytellers through the ages have always used media as a means of voicing opinions on the issues of the times, and in doing so have contributed to shaping the very Zeitgeist of their respective eras. Based on this research, in the medium of video games, I see a powerful potential to make commentaries that are not merely passive in transmission (where the message goes from medium to viewer), but rather, I sense the palpable stirrings of a potent, reactive system of ideas which by the very nature of games' interactivity, manifests as a discussion cycle between creator and

consumer. Through the players active involvement in the very stuff of the narrative of a given game, that game then has the potential to not simply become a lecture from game to player about the importance of X or the dangers of Y, but instead, a narrative game becomes a discussion, a forum that asks potentially more critical thinking of the player than other more traditional, precedent media. Interactivity--the opportunity to get your hands dirty with whatever theme is being dealt with in the game in question--that immersion and involvement that only games can provide (at times under the guise of entertainment) is the next phase of the evolution of narrative.

But where can games researchers take it from there? Below are detailed a few suggestions.

7.1. CIMI for Prototyping an Emergent Narrative Game

The CIMI Method which was outlined in Chapter 4 and used to analyze *OoT* is modular by design, and this modularity will be key in the designing of an experimental Emergent Game Prototype for further study. Typically, CIMI is designed to be applied to a game which already exists. The method is used to select a singular narrative gameplay mechanic for study, understand it through a Close Critical Reading, Isolate the Mechanic for study using a prototype of that mechanic, and the findings are supplemented by subjective Player Interviews for both the source game and the prototype feedback.

In attempting to design a prototype game which exhibits the traits which I designated as being particularly conducive to Player-Side Emergence, it will be critically important to select a game with a simple mechanic. By definition, Emergence itself is predicated on a kind of complexity which has the very quality of being irreducible (untraceable back to its constituent parts). In true, Strong Emergence (the sort that cannot even be simulated in a computational model), this is essentially impossible. But the researcher who studies Player-side Emergence must be more concerned instead with Weak Emergence, the sort of emergent behavior that can at least be observed to have been the result of something.

Still, that is far easier said than done. At the time of this writing, I do not as

of yet have any firm, specific ideas about how researchers in the future can attempt to design for experimental emergence in a game meant to test people's emergent interpretations (based on the above paragraph, that could be considered functionally paradoxical and somewhat self-negating), but for starters, based on our analyses of *Papers, Please* and *Gone Home*, the next step in CIMI for either of these games would likely be to take a single gameplay mechanic and at least replicate that in a way which utilizes slightly more distinct narrative elements.

For example, with *Papers, Please*, creating a simple gameplay prototype of the paperwork checking system would be the relatively easy part of the application of the Isolation step in CIMI. The difficult part then would be to determine what set of narrative elements or symbols could be used in that mechanic in order to observe a traceable emergent effect.

Though this is a difficult line of research, I sincerely hope that it can continue in the future, for research into furthering the idea of Player-side Emergence has the benefits of being able to create games which allow the player to contextualize discrepancies which result from occurrences of LND. The advantage of having less LND in a game can directly affect and help to maintain a player's Suspension of Disbelief, thus contributing to better immersion overall. However, it should be noted that true, total immersion is not necessarily a goal in and of itself for narrative game research (See 7.4. Technology, Immersion, and Narrative Experience for a detailed look at issues related to total immersion for players.).

7.2. Pervasive Games and ARGs

As it was referenced in the closing sections of Chapter 5, Pervasive game and Alternate Reality Games (ARGs) represent an interesting avenue of investigation for Player-side Emergence, specifically because they blend real-world elements and events in within a fictional context for their game setting. The difficulty in doing any such research with ARGs however, is in setting an appropriate scope of study. As it stands now, ARGs have the potential to utilize anything found on the world wide web, and that in and of itself constitutes a game with the potential size of the world. In a daunting real world example of this (on the geographic scope), the game mobile

ARG called Ingress is networked on a global scale and actually involves players traveling to real life locations in order to engage in the core gameplay of this game [101]. Considering the scope of this popular example of Ingress, it can easily be seen how intimidatingly broad the game itself is, and consequently, how broad and overwhelming the study of such a system could potentially turn out to be.

That said, the fact that such games have at their disposal the entire inventory of human goods, places, and knowledge basically makes for one of the most richly complex game systems to date. When we discuss Player-side Emergence, the state space being as wide as it is with a game like Ingress then contains a high potential for emergent narrative contextualization. In fact, Ingress already comes with a Determined Narrative written in by the developers of the game. Per the main documentation for Ingress, control of a fictional particulate energy source is being fought over by two multi-national factions, namely the "Enlightened" and the "Resistance," respectively. The fictional resource in question is said to spring from focal points located at major spots in the real world (i.e. The Cologne Cathedral, Figure 22 below), and the goal of the game is to obtain and maintain control over as many of these points as possible. Control of the points is determined by a given player's proximity to these real life geographic points. This gameplay mechanic has proven to be considerably successful, and players the world over have organized annual events to battle with each other over fictional energy which springs from real life landmarks.

The fact that this gameplay mechanic utilizes real world locations and recontextualizes the gameplay as a kind of battle of ideologies for the future of the human race lends the play activity itself a kind of epic overtone, and these elements all reside in the Determined Narrative side of the spectrum. Yet, Ingress still has a very wide potential for Player-side Emergence (obviously on the Personal and Collective Narrative end of the gradient) because the embedded narrative only describes the goals and the items. All other elements of the game (landmarks, personal affordances, vehicles, individual situations, etc.) all exist on the player side of the game, creating a highly-emergent situation for gameplay and Personal/Collective Narrative to flourish in emergent ways. Investigating these and

other subsequent aspects of Player-side Emergence in ARGs will prove to be a very intriguing line of research in the future.

Figure 22: Ingress Screenshot. Players vie for fictional control of a real world landmark using their smartphones and actual geographic proximity to the landmark. (© [2012], [Niantic Labs]. Used under Fair Use.)

7.3. Inadvertent Wordplay with Memes on the Internet

The game *MGS* deals with and references the idea of "Meme," as it was coined by scholar Richard Dawkins [102]. Since the inception of *MGS* in 1998, memes have indeed been flourishing in an observable way on the internet, and in ways which seem to coalesce into worldwide references used between internet denizens. At the time of this writing, there are currently thousands of internet memes which serve as the humorous (and potentially) clever shorthand of internet forum users. In short, an internet meme consists of an image with bold text over it (Figure 23). The overall effect of this construction is to serve as sort of encapsulated visual/textual vocabulary that can stand in for traditional text. As Dawkins' original meaning of the word "meme" also suggests, like their genetic counterparts (genes), this form of

information transference is also prone to active mutation (though with memes, this mutation seems to occur quite intentionally).

Figure 23: Four "mutations" of the "Meanwhile in Japan" meme. The main idea here is that (for those not of Japan), there always appears to be something strange and related to subculture occurring on an extreme scale in Japan. Although these images are generally understood to be untrue, a mythos begins to emerge out of this memetic lineage, and the game of further mutating that lineage is indirectly encouraged of other "players."

I contend that meme culture on the internet constitutes an emergent form of play, in an internet-enabled game where even the rules themselves seemed to have coalesced out of the mystery of the natural laws of internet virality. The difficulty in studying this sort of emergent play would be in documenting the actual, traceable changes in a particular meme's mutation, and in doing so, attempt to discern any logic or humor out of that memetic lineage. Though this may not seem on the surface

to be a particularly significant area of game narrative research, it is our contention that the explosion of the popularity of these memes is a sign that new technology enables new ways of communicating as well as new ways of play. The fact that play emerges in some form or another in any new technological medium is evidence enough that humans require play as some essential element that is an unavoidable part of living. Meme-play constitutes but one major example of how language, the transmission of meaning, and play connect over the ubiquity of the internet. This emergent play with memetic lineage could even be a new dimension of narrative with which to amend the Model of Narrative Experience with.

7.4. Technology, Immersion, and Narrative Experience

The contemporary game industry buzz in recent years has been centered around the new Virtual Reality (VR) headset technologies such as the Oculus Rift and the Morpheus. Such technologies indeed provide an entirely new dimension of immersion, which is a key factor for furthering the development of the narrative experience in games. It will also be equally important to understand several other resulting phenomena from the adoption of such new technology.

Immersion--the degree to which a person can be surrounded by a fictional experience--is an important factor for any kind of narrative experience. Many non-VR video games already go to great lengths to increase levels of immersion for players. One technical example of this is when games have support for stereo and surround sound for their audio. An example of how games attempt to maximize immersion from a design perspective can easily be seen in many of the First-person Shooter type games, in which the player character's vantage point is always in the first-person perspective, so that it contributes to the illusion of experiencing all of the narrative occurrences in the game first-hand.

An increase in the degree of immersion generally contributes to the game's ability to maintain a player's suspension of disbelief [103]. That is to say (generally), that the higher the degree of immersion, the higher the chance for the player to continue suspending their disbelief in the fiction being presented (or more simply, higher immersion contributes to players continuing to believe in the game fiction).

The suspension of disbelief can also be thought of as a general guideline for writers of any fiction in any medium. As a kind of threshold, it represents the point at which a player may decide to willingly enter and remain in a fictional world. Of course, a total 100% suspension of disbelief is theoretically insanity, as that would literally constitute a player no longer being able to differentiate the real world from the fictional one, but generally with games and other narrative media, there is a functional zone of the suspension of disbelief which lies somewhere between the insanity zone mentioned above, and the ability to partially believe in and enjoy the narrative world being provided [22].

In terms of the future work of this research into the phenomenon of game narrative experience, VR technology for games represents a variety of storytelling potentials, all of which are (at the time of this writing) still highly speculative. What sort of literary and cinematic devices actually still work well with VR-enabled narrative games? What new narrative game mechanics might arise out of a fully-sensory-immersed platform such as this? In what ways can VR technology contribute or be used towards creating Player-side emergent experiences? The answers to these questions have yet to be considered, but examples contemporary to this dissertation may hold some insights.

On one hand, VR technology can potentially serve as an entirely new dimension in the enjoyment of video games, and it is an exciting look at the future of the development of games technology. The potential of the technology to provide beneficial experiences for players is great. One game in particular entitled *Guided Meditation* [104] provides a very effective, full-sensory immersive experience to maximum relaxation effect.

On the other hand, VR technology presents a potential danger for too high a degree of immersion. The VR game entitled *Summer Lesson* [105] involves a narrative context wherein the player character is a private tutor for a high-school-aged girl, and the gameplay is simply that the player interacts with the minor (Figure 24). Literally, this in and of itself is an innocuous situation. However, due to the interactivity the game provides, unless there is some guarantee or set limitation on the Determined Narrative end of the software, the context of *Summer*

Lesson seems like a rather dangerous prospect for would-be perverts and introverts who are already on the edge of losing their purchase on reality. The basic premise of this game seems to give an encouraging comment on the predatory habits of men against women. Having noted as much, it is necessary in any research to always consider whatever moral implications are being arising.

Figure 24: *Summer Lesson* screenshot. The player wearing the VR headset is featured in the inset on the upper left. For all intents and purposes, this is a VR game where you spend time with and interact with a high school girl. (© [2015], [Bandai Namco Games]. Used under Fair Use.)

7.5. E-sports: The Legend of League of Legends

In recent years, E-sporting events which center around core games such as *Starcraft* [106], *Starcraft II* [107], and *League of Legends* [108] have gained a massive international following and constitute a tremendous subset of the behemoth that is the global game industry. E-sports have even recently been featured on international sports channels such as ESPN. This is about as official a recognition as

a video game can get to being classified (definitionally) as a sport in popular culture.

Having noted as much, one can begin to draw the comparisons between such large-scale sporting events and those of their more traditional counterparts in American Football or International Soccer. In such sports, fandom is often maintained at fanatical levels, and legends and myths begin to emerge regarding the players and teams involved in such sports.

E-sports teams, their players, and the matches and tournaments which constitute the sport at large represent a fertile ground for the creation of similar legends and mythologies, that which constitutes a rich layer of Collective Narrative among both the players of E-sports and the spectators. Gameplay rematches are re-narrativized by fans who are watching legendary, historical, ground-breaking matches, and this phenomenon is only continuing to grow. It will be important in the years to come in Game Studies in general and for narrative studies which focus on the Collective Narrative level of narrative in games to pay special close attention to the growth and development of E-Sports. Findings related to this field can potentially be cycled back into the design process as new ways to create more enduring characters for said games or to discern which sorts of gameplay mechanics work best to truly enthrall a spectator crowd, something that traditional video games has been lacking for many years prior to the success of things like YouTube, Twitch, NicoNicoDouga, and E-sports at large.

Figure 25: A new champion is crowned at an E-sports event held and sponsored by Red Bull.

7.6. On Mod Culture

For as long as there have been games available on the personal computer, so too have there been entire communities of players (online and otherwise) who partake in modifying the source code and/or the asset management systems of games in order to create either more improved or parody-versions of those games. This phenomenon has been contemporarily referred to as "Mod Culture" and the act of modifying a game also referred to as "mods."

Although the reasons for modding a game can range from the non-sequitur bizarre to that of concerted attempts at humor, the potential of moddability for games in general is an interesting one that opens up a new level of interaction between game and player that other precedent media have not been privy to. The ability to alter any part of a given game is essentially the power to alter the narrative experience which is both contained within the Determined Narrative Layer and any resultant Personal/Collective Narrative as well. This power also

demonstrates a now-permeable border between the software which was originally created by official developers and the players who wish to change the guts of the game itself.

Figure 26: The ride-able chicken of *The Elder Scrolls V: Skyrim*. This humorous user-shared mod (among others) was very popular in this game. Mods for Skyrim are all free and available via various websites. This degree of player authorial power exceeds the agency granted by the game rules which have been determined by the game developer. (© [2011], [Bethesda Softworks]. Used under Fair Use.)

Game developer Bethesda (makers of the popular *Elder Scrolls* series of open-world sandbox games) has actually recognized the popularity and appeal of mod culture and is known for designing their games from the ground-up to be freely mod-compatible. This design philosophy invites players to be creative and to actually play with the assets and rules of the games themselves. Not only can players who mod games like *The Elder Scrolls V: Skyrim* and *Fallout 3* [109] by adding new, uniquely user-made content, but they can also tailor the rules of the game to a particular end, or even toy with the parameters of the game in order to re-balance the game difficulty. The cumulative effect of this level of player-side authorship is to basically allow the player to make the game their own, and in doing so, this allows

any player of such a game the potential to create a game that is completely emergent and separate from the original game.

The implications that this has for narrative in games is tremendous, and already somewhat evident in the mods which are currently available today for such popular mod-able games. As in Figure 27 below, some modders have already succeeded in creating and importing their favorite characters from other fictional franchises into the fantasy game world/engine that is Skyrim. This is but one example of how the ability to mod games directly influences the narrative which arises out of games. It constitutes a potential for user-made remixes and rearrangements of fiction, which is actually taking the idea of player agency and authorship to an extreme.

Figure 27: Luffy in *Skyrim*. The character Luffy from the famous manga *One Piece* is not canonically a part of the separate, equally-fictional world of Skyrim, but modders have now made it possible for players to potentially remix and rearrange their favorite fictional settings and characters at will. (© [2011], [Bethesda Softworks]. Used under Fair Use.)

While the ability to mod a game represents a high potential for humorous remixes of game fiction and narrative, it also constitutes a powerful platform for

social discourse and protest. In the Fall of 2015, Konami released *Metal Gear Solid V: The Phantom Pain* (*MGSV*) to mostly positive acclaim [110]. The game was not without controversy, however, as one of the main NPCs was depicted in the game as being nearly naked for the duration of the game itself. This portrayal of a nearly-nude female sniper drew several criticisms from academics and the media for over-sexualizing a female character for weak contextual reasons. At around the same time, some players had dug into the assets and resource folders of the PC port of *MGSV* and began to freely and liberally swap CG model references so that many characters in the game began to show up on screen as the wrong characters [111].

By swapping out the characters of *MGSV* in a free-form non-sequitur fashion, the mod community ended up inadvertently making a social commentary on the sexist portrayal of Quiet. In a famous example, modders exchanged the model of Quiet with a model of Ocelot, an important, fully-clothed, and ruggedly male NPC in the same game. The result was that the pivotal romantic cinematic cutscene between the main character and Quiet, where they embrace lovingly in the rain, had now been transformed into a scene where Ocelot inexplicably slathers rainwater all over himself then runs into the main characters arms. They embrace like that, face-to-face in the rain as a flock of birds disperses in the distance. The overall effect of changing out a scantily-clad woman with a rugged, mustached old man is striking. Modders had basically changed the meaning of this narrative scene into one of homosexual romance (see Figure 28 below). Konami officially responded to the phenomenon of players modding *MGSV* by issuing a formal public warning which admonished anyone who altered the game contents. This response represents the other side of the argument which prioritizes the original authors over the will of the player.

Figure 28: The infamous "Ocelot in the rain Mod-Swap" in *MGSV*. Modders replaced the scantily-clad CG character model of Quiet with that of a prominent male NPC named Ocelot. The implication is that now the pivotal romantic scene in the game has adopted homo-erotic inferences. (© [2015], [Konami]. Used under Fair Use.)

It is unknown whether this mod-swap was done intentionally to comment on and subvert the ridiculous romance that is in the game by default. Regardless of whether the commentary was intentional or not, the fact remains that such an interpretation and reading can be performed, and that the power to change the narrative context through game mods is great and can be used to socio-political effect. As a rhetorical example, I could invoke the example of *Summer Lesson* once again. If, for example, a heterosexual female player wanted to play the game *Summer Lesson*, but were dismayed that the action centered around interacting with a female high school student, she could potentially mod the game so that the character model was instead replaced with a handsome young man (or perhaps even a fictional character of her choice, as was the case with Luffy in *Skyrim*), and in doings so, she is essentially optimizing the game *Summer Lesson* to her own preferences and play style in order to get the narrative experience that would make

her happiest.

7.7. On the Creation of Historical Narratives

For the field of History, the recording and preservation of first-hand accounts from the people who actually lived through certain events and time periods is a critical concern. As historical testimonies constitute a type of historical narrative, games can definitely aid in the process of both obtaining and contextualizing these historical narratives. One such effort has been conducted by Ritsumeikan University in Kyoto, Japan, wherein elderly people (assisted by research assistants) play through a research game entitled *Showa no Ie* ("Showa House") [112].

In *Showa no Ie,* the player may move about freely in a 3D, faithfully-rendered Showa-era household (which was common to Japan of the 1960s and 1970s). Through the course of wandering around the house, the elderly player (who actually lived through the time period) will tell the research assistant to stop and look at/interact with an item in the virtual space, at which point the elderly player will often recount a tale from their childhood, giving a narrative retelling of their own memories and experiences which have been triggered by a symbol in the virtual game space [112].

In considering such a study and its importance for the field of History, it can be seen how considerations for game narrative, the Collective Narrative dimension of games (from the Model of Narrative Expression), and the Player-side Emergent factor of the Narrative Experience Trinity can be applied in order to iterate and perhaps improve on the design of the original *Showa no Ie* research game. By using the Narrative Experience Trinity to maintain a design consideration, researchers and designers for this game can enhance the embedded narrative symbols in the game composition as well as any ways in which those embedded symbols can be utilized via game narrative mechanics to evoke a memory narrative from the player.

7.8. Iterating on the Research Process

As it was initially formally mentioned in Aarseth's [48], an actual, formal, established methodology for the study of narrative in games is fundamentally

elusive due to the multiplicity of approaches used to study game narrative, and the equally wide variety of sources of those approaches (Psychology, Literature, Cinema Studies, Engineering, Artificial Intelligence, Software Engineering and Design, etc.). As this research effort demonstrates, the actual shape of Game Studies will necessarily have to be multivariate in nature in order to reflect and accurately understand the equally multivariate nature of the medium of games, which are essentially synergistic amalgams of art and technology.

The Narrative Experience Trinity is an attempt to recognize that multivariate approach/problem, at least from the fundamentally humanities side of the spectrum. There are definite limits to the ways that, for example, the hard sciences can understand human subjectivity, emotion, and philosophy (and dare I mention, narrative as well). Conversely, the humanities has very little potential purchase on the concepts of efficient graphics rendering techniques, game AI, or procedurally-generated content. However, that is to say that the two will never meet in terms of researching game narrative. As the Narrative Experience Trinity demonstrates, narrative and interactive systems are inseparable from each other--they are in fact two facets of the same narrative jewel. Adding the third facet of Player-side Emergence in this model simply means that we have a much more comprehensive model of the system of game narrative which now includes a critical consideration of the player's role in generating, interacting with, and interpreting the narrative in and of games. Further efforts from this point for future game narrative researchers should subsequently recognize that multivariate nature of game narrative and strive towards theories, models, and methodologies which are also multivariate in nature.

References

[1] Christopher Dring. (2015, June) MCV - The Market for Computer & Video Games. [Online]. http://www.mcvuk.com/news/read/more-money-is-spent-on-games-than-movies-and-music-combined-says-ihs/0151059

[2] Christopher Correa. (2013, April) Why Video Games Are More Addictive and Bigger. [Online]. http://www.forbes.com/sites/christophercorrea/2013/04/11/why-video-games-are-addictive-and-bigger-than-movies-will-ever-be/

[3] Tom Chatfield. (2009, September) Videogames now outperform Hollywood movies. [Online]. http://www.theguardian.com/technology/gamesblog/2009/sep/27/videogames-hollywood

[4] Mark Cerny, GDC Flash Forward, 2013.

[5] Jenova Chen. (2013) GDC Vault. [Online]. http://www.gdcvault.com/play/1017700/Designing

[6] J. Huizinga, *Homo ludens-a study of the play element in culture*.: Beacon Press, 1950.

[7] "spacewar!" - pdp-1 restoration project. [Online].

http://pdp-1.computerhistory.org/pdp-1/?f=theme&s=4&ss=3

[8] Stewart Brand, ""Spacewar: Fantastic Life and Symbolic Death Among the Computer Bums"," *Rolling Stone (Straight Arrow Publishers, Inc.)*, pp. (123): 50–58, December 1972.

[9] Jesper Juul, "Games Telling Stories? A brief note on games and narratives," *gamestudies.org*, vol. 1, no. 1, 2001.

[10] Chris Kohler, *Power-Up: How Japanese Video Games Gave The World An Extra Life.*: Brady GAMES/Pearson Education, 2005.

[11] Square, Final Fantasy, 1987.

[12] Enix, Dragon Warrior, 1986.

[13] Sega, Sega CD, 1991.

[14] Sony Entertainment, Sony Playstation, 1994.

[15] Sony; SingleTrac, Warhawk, 1995.

[16] Naughty Dog, The Last of Us, 2013.

[17] Quantic Dream, Heavy Rain, 2010.

[18] Espen J. Aarseth, *Cybertext: perspectives on ergodic literature*. Baltimore, Maryland: John Hopkins University Press, 1997.

[19] J. H. Murray, Hamlet on the holodeck: The future of narrative in cyberspace, 1997.

[20] Jesper Juul, *Half-Real : Video Games between Real Rules and Fictional Worlds.*: The MIT Press, 2005.

[21] Henry Jenkins, "Transmedia storytelling and entertainment: An annotated syllabus," vol. 24, no. 6, 2010.

[22] Grant Tavinor, *The art of videogames.*: John Wiley & Sons, 2009.

[23] Roberta Williams, King's Quest, 1984.

[24] Éric Chahi, Another World, 1991.

[25] Analyzing a story's plot: Freytag's Pyramid. [Online].

http://www.ohio.edu/people/hartleyg/ref/fiction/freytag.html

[26] David Trottier, *The Screenwriter's Bible*.: Silman James, 1998.

[27] Markus Persson, Minecraft, 2011.

[28] DMA Design, Grand Theft Auto, 1997.

[29] Rockstar North, Grand Theft Auto: San Andreas, 2004.

[30] Christian Bautista. (2014, September) Microsoft buys 'Minecraft' for $2.5 billion. Has 'Notch' Persson done the right thing? [Online]. http://www.techtimes.com/articles/15797/20140920/microsoft-buys-minecraft-for-2-5-billion-has-markus-notch-persson-done-the-right-thing.htm

[31] Clint Hocking. (2007, October) Ludonarrative Dissonance in Bioshock. [Online]. http://clicknothing.typepad.com/click_nothing/2007/10/ludonarrative-d.html

[32] S. Brislin. (2013, May) Balancing Narrative and Gameplay. [Online]. http://gamasutra.com/blogs/SimonBrislin/20130529/193201/Balancing_Narrative_And_Gameplay.php

[33] Squaresoft. (1997) Final Fantasy VII.

[34] Espen Aarseth, "Computer Game Studies, Year One," *Gamestudies.org: the international journal of computer game research*, vol. 1, no. 1, 2001.

[35] B. Perron and M. J. P. Wolf, *The Video Game Theory Reader.*: Routledge, 2003.

[36] Espen Aarseth, "A Narrative Theory of Games," in *In Proceedings of the International Conference on the Foundations of Digital Games, FDG '12*, New York.

[37] J. Quijano-Cruz, "Using Literary Theory to Read Games: Power, Ideology and Repression in Atlus' Growlanser: Heritage of War," vol. 2, no. 2, 2008.

[38] Frank Lantz. GDC Vault. [Online]. http://www.gdcvault.com/play/1020788/Hearts-and

[39] Richard Lemarchand. (2015) GDC Vault. [Online]. http://www.gdcvault.com/play/1022083/Infinite.

[40] Double Fine. (2013, November) Double Fine Action Forums. [Online]. http://www.doublefine.com/forums/viewthread/11091/

[41] Christopher Michael Yap, Youki Kadobayashi, Shigeru Kashihara, and Suguru Yamaguchi, "Genetic Predestiny vs. Digital Free Will: A Critical

Analysis of Character Foils in Metal Gear Solid," in *In the proceedings of the Replaying Japan 2014 2nd International Conference on Japan Game Studies*, Edmonton, Alberta, 2014.

[42] Christopher Michael Yap, Cody Mejeur, Youki Kadobayashi, and Suguru Yamaguchi, "Playing the Ocarina Across Cultures: Explicating Ludo-Narrative Experience in The Legend of Zelda: Ocarina of Time," in *In the proceedings of the Replaying Japan 2015 Conference 3rd International Conference on Japan Game Studies*, Kyoto, 2015.

[43] Christopher Michael Yap, Youki Kadobayashi, and Suguru Yamaguchi, "Conceptualizing Player-side Emergence in Interactive Games: Between Hardcoded Software and the Human Mind in Papers, Please and Gone Home," *International Journal of Gaming and Computer-Mediated Simulations (IJGCMS)*, vol. 7, no. 3, 2015.

[44] Gonsalo Frasca. (2001) What is ludology? a provisory definition. [Online]. http://www.ludology.org/2001/07/what-is-ludolog.html

[45] Julian Kucklich, "Literary Theory and Computer Games," in *Proceedings of the First Conference on Computational Semiotics for Games and New Media (COSIGN)*, 2001.

[46] Janet H. Murray, "The Last Word on Ludology vs Narratology in Game Studies," in *DiGRA 2005*, 2005.

[47] Julian Kucklich, "The Road Less Traveled - The Case for Computer Game Philology," in *The Challenge of Computer Games Conference*, University of Lodz, 2002.

[48] Espen Aarseth, "Playing Research: Methodological approaches to game analysis," in *In Proceedings of Digital Arts and Culture*, 2003.

[49] George P. Landow. The Literary Canon. [Online]. http://www.victorianweb.org/gender/canon/litcan.html

[50] (1998) Metal Gear Solid. Playstation 2 Game.

[51] (1987) Metal Gear. MSX Game.

[52] (2002) Splinter Cell. Playstation 2 Game.

[53] (2014) Metal Gear Solid V: Ground Zeroes. Playstation 3 Game.

[54] R. Nelson. (1998, October) IGN. [Online]. http://psx.ign.com/articles/150/150569p1.html

[55] J. Gerstmann. Gamespot. [Online]. http://www.gamespot.com/news/metal-gear-solid-casts-its-spell-2467579

[56] J. L. Wilson. (2010, June) PCMag.com. [Online]. http://www.pcmag.com/article2/0,2817,2364895,00.asp

[57] Encyclopaedia Britannica Online. Foil [Def. 1]. (n.d.). [Online]. http://global.britannica.com/EBchecked/topic/211951/foil.

[58] I. A. Richards, *Principles of Literary Criticism*, 2004th ed. London: Routledge Classics, 1926.

[59] IGN. (1998, April) IGN. [Online]. http://psx.ign.com/articles/064/064632p1.html

[60] Mary Shelley, *Frankenstein*.: Broadview, 1999.

[61] Jordan Jackson, On perspectives and ergodics: video games as literature, 2009.

[62] Nintendo. (1998) The Legend of Zelda: Ocarina of Time. Nintendo 64 Game.

[63] Cody Mejeur, Interactive Stories in Virtual Worlds: Theorizing Narrative Expression in Guild Wars 2, 2013.

[64] Christopher Michael Yap, Using the Proposed CIMI Method to Understand

Interactive Narrative in Digital Games, 2014.

[65] (2008, April) Guinness World Records.

[66] P. Schneider. (1998, November) IGN. [Online]. http://www.ign.com/articles/1998/11/26/the-legend-of-zelda-ocarina-of-time-review

[67] T. Thabet, *Video Game Narrative and Criticism: Playing the Story*.: Palgrave Macmillan, 2015.

[68] H. Koenitz, G. Ferri, M. Haahr, D. Sezen, and T. I. (Eds.) Sezen, *Interactive Digital Narrative: History, Theory, and Practice*.: Routledge, 2015.

[69] Richard Walsh, "Emergent Narrative in Interactive Media," *Narrative*, vol. 19, no. 1, pp. 72-85, 2011.

[70] Stefano Ferretti, Marco Roccetti, and Stefano Cacciaguerra, "On Distributing Interactive Storytelling: Issues of Event Synchronization and a Solution," in *Technologies for Interactive Digital Storytelling and Entertainment 2004*, Ulrike Spierling, Anja Hoffman, Ido Iurgel, and Oliver Schneider Stefan Göbel, Ed. Berlin: Springer, 2004, p. 219~231.

[71] thatgamecompany, Journey, 2012.

[72] Gary Gygax and Dave Arneson, Dungeons & Dragons, 1974.

[73] Jeremy Parish. (2012, October) What's the Deal with Square Enix's Akitoshi Kawazu? [Online]. http://www.1up.com/features/deal-square-enix-akitoshi-kawazu

[74] Lucas Pope. (2014) Papers, Please. Computer Game.

[75] The Fullbright Company. (2014) Gone Home. Computer Game.

[76] P. A. Corning, "The Re-Emergence of "Emergence": A Venerable Concept in Search of a Theory," vol. 7, no. 6, 2002.

[77] G. H. Lewes, *Problems of Life and Mind (First Series) 2*. London: Trübner.

[78] W. Wheeler, *The whole creature: Complexity, biosemiotics and the evolution of culture*. London: Lawrence & Wishart, 2006.

[79] Stanford. Stanford Encyclopedia of Philosophy. [Online]. http://plato.stanford.edu/entries/properties-emergent/

[80] M. A. Bedau, "Weak Emergence," vol. 31, no. s11, 375-399.

[81] A. I. Oparin, *The origin of life.*: Courier Dover Publications, 2003.

[82] S. Forrest, "Emergent computation: self-organizing, collective, and cooperative phenomena in natural and artificial computing networks: introduction to the proceedings of the ninth annual CNLS conference," vol. 42, no. 1, 1990.

[83] (1972) Pong. Computer Game.

[84] Taito. (1978) Space Invaders. Computer Game.

[85] Nintendo. (1981) Donkey Kong. Computer Game.

[86] Jenova Chen, "Flow in games (and everything else)," *Communications of the ACM*, vol. 50, no. 4, 31-34, 2007.

[87] Ed Logg and Dona Bailey, Centipede, 1981.

[88] Square. (1995) Chrono Trigger. Super Nintendo Game.

[89] Enix. (1999) Star Ocean: The Second Story. Playstation 1 Game.

[90] Tom Abernathy. (2014) GDC Vault. [Online].
http://www.gdcvault.com/play/1020050/Death-to-the-Three-Act

[91] Warren Spector. (2013) GDC Vault. [Online].
http://www.gdcvault.com/play/1018122/Narrative-in-Games-Role-Forms

[92] Stephen Hood. (2015) GDC Vault. [Online].
http://gdcvault.com/play/1021872/Computers-Are-Terrible-Storytellers-Let

[93] Electronic Arts. (2011) Crysis 2. Computer Game.

[94] Bethesda. (2011) The Elder Scrolls V: Skyrim. Computer Game.

[95] BAFTA. (2014, February) BAFTA. [Online].
http://static.bafta.org/files/games-nominations-2014-2166.pdf

[96] Gamasutra. (2014, March) Gamasutra. [Online].
http://gamasutra.com/view/news/213548/Papers_Please_takes_the_grand_prize_at_16th_annual_IGF_Awards.php.

[97] C. Grant. Polygon. [Online].
http://www.polygon.com/2014/1/15/5311568/game-of-the-year-2013-gone-home

[98] D. Lee. Bafta games: The Last of Us clears up at awards. [Online]. http://www.bbc.com/news/technology-26549269

[99] C Costantini. (2013) YourMira.org. [Online]. http://www.yourmira.org/2013/08/15/new-papers-please-video-game-may-sur-prise-you/?lang=en

[100] Brøderbund. (1993) Myst. Computer Game.

[101] S. Louchart, Emergent Narrative: Towards a Narrative Theory of Virtual Reality, 2007.

[102] Unfiction. Unfiction. [Online]. http://www.unfiction.com/glossary/

[103] Atari, Missile Command, 1980.

[104] Niantic Labs, Ingress, 2014.

[105] Richard Dawkins, *The Selfish Gene*.: Oxford University Press, 1976.

[106] S. T. Coleridge, J. Engell, and Bate. W. J., *Biographia Literaria, Or, Biographical Sketches of My Literary Life and Opinions*.: Princeton University Press, 1984.

[107] Josh Farkas, Guided Meditation, 2014.

[108] Allegra Frank. (2015, September) PlayStation VR title Summer Lesson asks to call you 'sensei' in new trailer. [Online]. http://www.polygon.com/2015/9/15/9332023/playstation-vr-title-summer-lesson-asks-to-call-you-sensei-in-new

[109] Blizzard Entertainment, Starcraft, 1998.

[110] Blizzard Entertainment. (2010) Starcraft II: Wings of Liberty.

[111] Riot Games, League of Legends, 2009.

[112] Bethesda Game Studios, Fallout 3, 2008.

[113] Konami, Metal Gear Solid V: The Phantom Pain, 2015.

[114] Paul Tassi. (2015, September) Quiet's Sexiest 'Metal Gear Solid 5' Scenes Are Much Better With Revolver Ocelot Instead. [Online]. http://www.forbes.com/sites/insertcoin/2015/09/11/quiets-sexiest-metal-gear-solid-5-scenes-are-much-better-with-revolver-ocelot-instead/

[115] Akinori Nakamura, Seiki Okuda, and Junya Igaki, "Qualitative Analysis on the elderly players of interactive contents, Showa era at the Elderly Home,

using narrative approach," in *In proceedings of the Replaying Japan 2015, 3rd Annual Conference on Japan Game Studies*, Kyoto, 2015.

[116] S. Gaynor. GDC Vault. [Online]. http://www.gdcvault.com/play/1020376/Why-Is-Gone-Home-a

[117] Alexey Pajitnov, Tetris, 1984.

Appendix

A.1. List of Publications

A.1.1. Journals

1. Yap, C. M., Kadobayashi, Y., & Yamaguchi, S. Conceptualizing Player-side Emergence in Interactive Games: Between Hardcoded Software and the Human Mind in *Papers, Please* and *Gone Home*. The International Journal of Gaming and Computer-Mediated Simulations (IJGCMS), Vol. 7, Issue 3, (2015). Also featured in the proceedings of the International Academic Conference on Meaningful Play 2014 (recipient of a Top Paper Award).

A.1.2. International Conferences

1. Yap, C. M., Kadobayashi, Y., Kashihara, S., & Yamaguchi, S. Genetic Predestiny vs. Digital Free Will: A Critical Analysis of Character Foils in Metal Gear Solid. In the proceedings of the Replaying Japan 2014 Conference 2nd International Conference on Japan Game Studies.
2. Yap, C. M., Kadobayashi, Y., & Yamaguchi, S. Conceptualizing Player-side Emergence in Interactive Games: Between Hardcoded Software and the Human Mind in *Papers, Please* and *Gone Home*. In the proceedings of the International Academic Conference on Meaningful Play 2014.
3. Yap, C. M., Mejeur, C., Kadobayashi, Y., & Yamaguchi, S. Playing the Ocarina Across Cultures: Explicating Ludo-Narrative Experience in The Legend of Zelda: Ocarina of Time. In the proceedings of the Replaying Japan 2015 Conference 3rd International Conference on Japan Game Studies.

A.1.3. Oral Presentations, Panels, etc.

1. Yap, C. M., Padua, J., & May III, T. The Mythology in and of Games: Why the Legend of Zelda is just as important as the legend of Beowulf. PAX East 2014, Boston. Video publically viewable in its entirety at https://youtu.be/WtjAzMj-bIg?t=33m48s

2. Yap, C. M. Nintendo and the New Digital Mythology. In the proceedings of the Replaying Japan 2015 International Conference on Japan Game Studies, as a portion of the Panel entitled, "How The World Met Nintendo/How Nintendo Met the World". http://www.slideshare.net/christophermyap/nintendo-and-the-new-digital-mythology-48590562.
3. Yap, C. M. Tale of the Snake: The Meta-narrative of Hideo Kojima and the "Metal Gear" Franchise. In the proceedings of the Society for Cinema & Media Studies 2016 Conference, as a portion of the panel entitled, "Playful Thinking: Explorative Perspectives on Textuality in Japanese Videogames" (to appear).

A.2. Extracurricular Research Efforts

"We have a dream where the games of the future allow the flexible telling of an infinite number of mythologies--that which reflects the infinite, cumulative experiences of life--told in such an engaging, interactive way that the tale of all humanity can not only be learned, but enjoyed as well."

-from The Mythology in and of Games panel, PAX East 2014

In a new field, especially one like Game Studies which has not yet reached a point where its journals have a classically index-able "impact factor," it is necessary for the individual researchers to become impact factors themselves. This is especially true for those Game Studies researchers who wish to continue leading in the long-term development of the field in the future.

To that end, I have compiled a list of activities which constitute such efforts of academic outreach, as well as those efforts intended to spread literacy of the field to the true stakeholders of the Game Studies field--the everyday gamers. These efforts, while not in the traditional vein of academic work, have still contributed

significantly to the research presented in this dissertation, and I sincerely hope that they contributed to growing the field as well. The efforts are categorized and outlined below.

A.2.1. In the Media

Throughout the course of my Ph.D. candidacy period I was fortunate to have the opportunity to be interviewed by various media outlets on the internet. Each of these interviews on my research on games and beyond can still be viewed in their entirety at the links below.

1. Evans. T. " How *Papers, Please* and *Gone Home* Are Like LEGO Bricks and IKEA Furniture: A Conversation with Christopher Yap". GeekParty.com. January 25, 2015. Retrieved from http://geekparty.com/how-papers-please-and-gone-home-are-like-lego-bricks-and-ikea-furniture-a-conversation-with-christopher-yap/
2. Evans, T. " Mass Effect 3 and The Problem of Interactive Storytelling". GeekParty.com. December 29, 2014. Retrieved from http://geekparty.com/mass-effect-3-and-the-problem-of-interactive-storytelling/
3. Kroll, J. "Zelda is as important as beowulf: an interview with Christopher Yap". PopMythology.com. December 28, 2014. Retrieved from http://www.popmythology.com/zelda-as-important-as-beowulf-christopher-yap-interview/
4. Torres, L. " Games, Seriously Joins the Web as a Meaningful Games Podcast". Games & Meaningful Play @ Michigan State University. December 11, 2014. Retrieved from http://seriousgames.msu.edu/games-seriously-joins-the-web-as-a-meaningful-games-podcast/
5. Arena-DeRosa, A. "THE FRONTIER OF VIDEO GAME RESEARCH: AN INTERVIEW WITH CHRISTOPHER YAP". The Rule of the Games. October 30, 2014. Retrieved from

http://theruleofthegames.tumblr.com/post/101312310722/the-frontier-of-video-game-research-an-interview

6. Whitney, M. " Indiegogo Campaign Hopes to Help Make Study of Narrative in Video Games a Possibility". GeekPr0n.com. September 26, 2014. Retrieved from http://www.geekpr0n.com/indiegogo-campaign-hopes-help-make-study-narrative-video-games-possibility/

A.2.2. The "Games, Seriously" Podcast

In December of 2014, at the conclusion of my first year in the Ph.D. candidacy, I co-founded and co-hosted a serialized internet podcast show on Game Studies which was entitled the "Games, Seriously Podcast." (http://gamesseriously.com). This podcast was predicated on the idea that games can be a positive and meaningful medium and force in society today. Towards that understanding, each 60~90 minute episode focused on one main pertinent Game-Studies-related topic. Each of the co-hosts would discuss the main topic in terms of their own fields of expertise in both the games industry, academia, and the creative arts industries, respectively.

Figure 29: The Games, Seriously Podcast homepage.

A.2.2.1. Games, Seriously Hosts

- **Christopher Michael Yap:** Narrative Games Studies researcher from NAIST Japan.
- **Rachél Bazelais:** Indie Game Developer from New York
- **Jonathan Padua:** Fiction writer/Novelist from Hawaii
- **Thomas May III:** Games Researcher from Michigan State University

A.2.2.2. Episode List

At current, there are five public episodes of the Games, Seriously podcast as well as 2 episodes currently in post-production with release dates in the 1st Quarter of 2016. All the currently available episodes and their topic questions are detailed below.

- **Episode1: Why are Games Important?:** Despite the global popularity which the game industry and medium enjoy in the world today, why do you believe are games important? What potentials do games as an industry or medium of expression constitute to you? (https://soundcloud.com/gamesseriously/games-seriously-se01-ep01b-actual-01)

- **Episode 2: What Makes Games more than just Entertainment?:** What makes a game more than a game? What are those factors that make a game more than just a piece of entertainment? (https://soundcloud.com/gamesseriously/games-seriously-podcast-se01-ep02-what-makes-a-game-more-than-a-game)
- **Episode 3: Game Deep Dive: "Game Dev Story" from Kairosoft:** We are doing a deep dive into Kairosoft's most excellent and addictive mobile game Game Dev Story in order to explore why this game works so well, and why we can't put it down. (https://soundcloud.com/gamesseriously/se01-ep03-game-deep-dive-game-dev-story-from-kairosoft)
- **Episode 4: The Hero's Journey in Games:** In this month's episode we examine Joseph Campbell's theory of the Monomyth, also commonly known as The Hero's Journey. While the Hero's Journey has been an interesting analytical lens to use when looking at static media such as Literature and Cinema, how does the Hero's Journey function in the interactive medium of the video game? (https://soundcloud.com/gamesseriously/se01-ep04-the-heros-journey-in-games)
- **Episode 5: This War of Mine:** Today we are having a look at 11 bit Studio's critically-acclaimed game entitled, "This War of Mine." Based loosely on the Bosnian conflict in 1992, "This War of Mine" allows players to experience the war not as a soldier, but rather as a civilian who is caught in the crossfire and must survive until a ceasefire is declared. How does this game create empathy, and how effective is it in this endeavor? (https://soundcloud.com/gamesseriously/se01-ep05-deep-dive-this-war-of-mine)

A.2.3. The Game Studies Open Forum

I founded the Game Studies Open Forum (GSOF) on Facebook in April of 2012, right at the start of my graduate studies in Game Narrative. It had become apparent early

on that in order to get any meaningful work done in Game Studies, I would need to be actively seeking out my own network of professionals from this field, as there were very few in relatively close geographical proximity. Furthermore, the more I dug into the research itself, the more it became apparent that in this new field, certain camps and tribes were forming overseas, and all of them had interesting, unique ideas about Game Studies.

And so, I founded this research group on Facebook primarily because I was 1) lonely in this new and spectacular field, and 2) because I wanted an easy, convenient, and casual repository for interesting developments I found around the web pertaining to the field of Game Studies. Since that time, I am beyond happy to see that the GSOF has grown into a robust, moderately-sized community of games researchers, game developers, and enthusiasts. More than that, seeing how the people of this group contribute meaningfully to it via shared links for Calls for Papers, Conference announcements, Game Studies events, respectful and intelligent discussion, and collaboration has been a boon to both my own research and motivation (which as many of you know can be difficult to maintain in grad school).

The GSOF is at https://www.facebook.com/groups/524960114191159/ and while the group is searchable and public, membership is limited to invitation from existing members, or via simple membership request. I must reiterate that the GSOF has been invaluable to my own research in this new field of Game Studies, and I am happy to report that other researchers also feel the same (Figure 30 below).

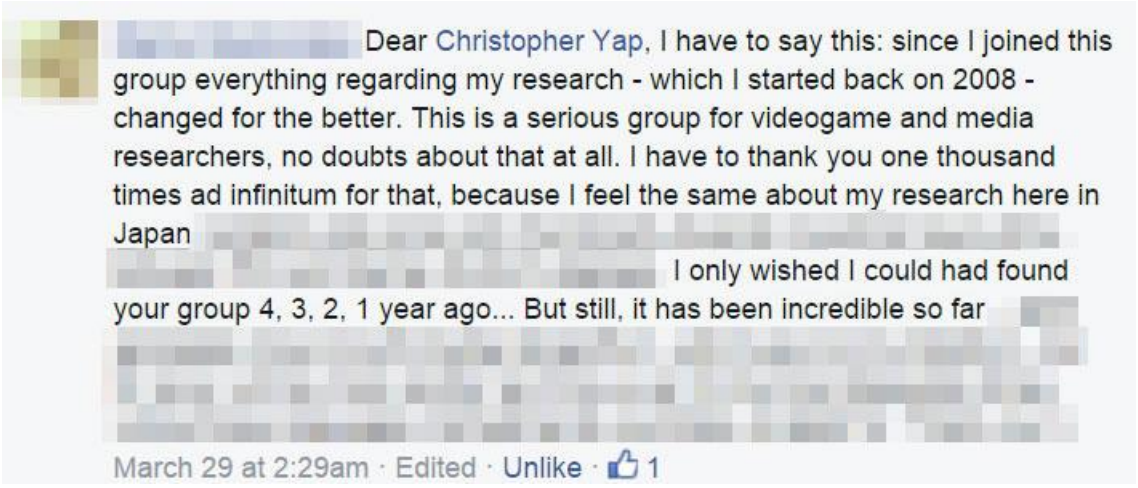


Figure 30: A Game Studies researcher comments positively on the Game Studies Open Forum.

A.2.4. Crowdfunding Game Studies Research

As a new field of study, the question of how to fund Game Studies is a very pertinent one. The costs involved in undertaking research and participating in an academically-forward manner are daunting, regardless of the field. Game Studies is no different in this regard. For example, for one to be able to simply attend the annual Game Developers Conference in San Francisco (from Japan), one would need about $5500 USD at the time of this writing. This is derived from:

- the conference all-access pass ($2000 USD)
- the roundtrip flight ticket ($2500 USD)
- the cost of accommodations in downtown San Francisco for the duration of the conference ($1000 USD)

Surely, there must be some way to fund these trips which have the potential to contribute meaningfully to this research.

I had initially been inclined to approach established video game companies for funding as that is a kind of funding activity which occurs in other industries, but after floating the idea among some colleagues, the general consensus that came back was not promising. So, as a kind of experiment in alternative funding methods, I set

up a crowdfunding campaign on crowdfunding site Indiegogo.com which lasted for one month from August to September of 2014, with an initial monetary goal of $2000 USD (the original campaign page can be viewed at https://www.indiegogo.com/projects/video-game-studies#/). This financial target was derived from the costs needed to simply attend the International Conference on Meaningful Play 2014 at Michigan State University in October of 2014. Per Figure 31 below, with the help of the internet, I was able to exceed the original target by over $500 USD.

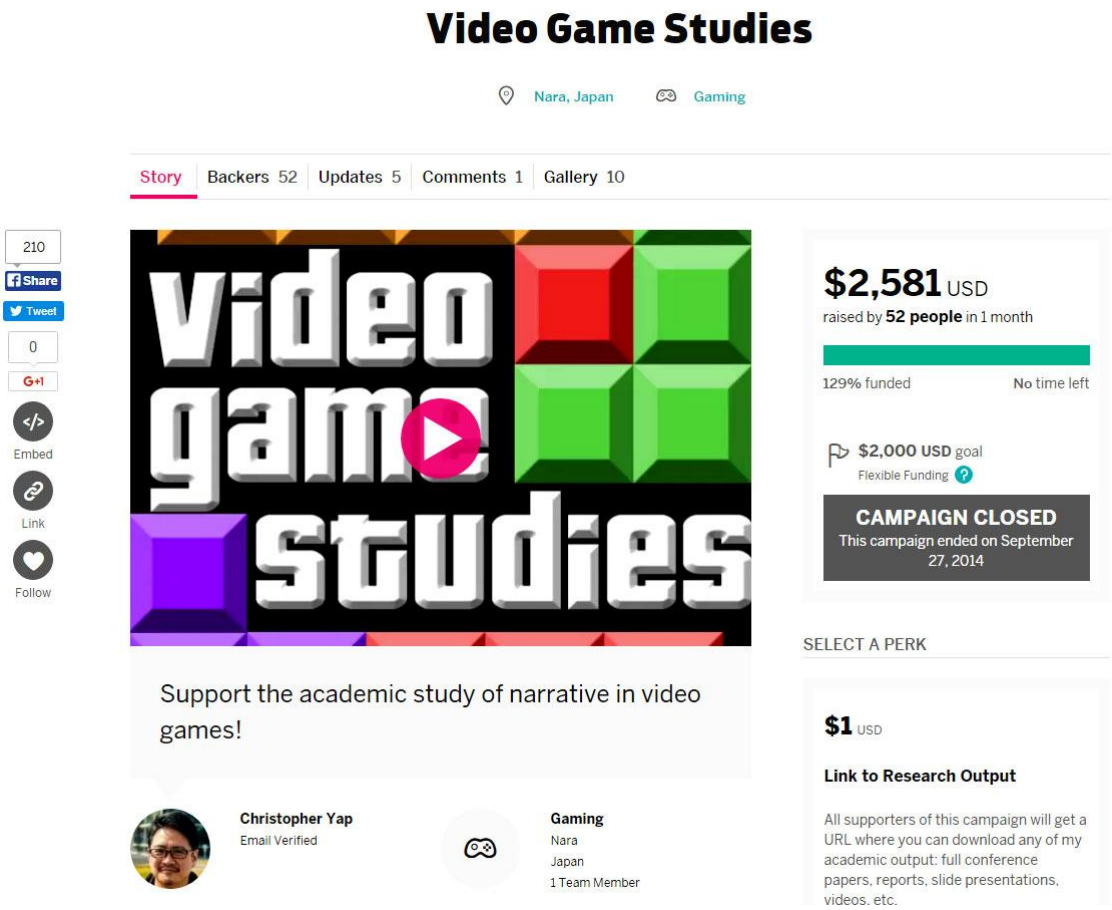


Figure 31: The successful "Video Game Studies" crowdfunding campaign on Indiegogo.

An interesting question that came up regarding how to crowdfund your research over popular internet media such as Indiegogo and Kickstarter was about rewards for the contributors--what sort of "rewards" can a starving researcher actually promise to others, especially considering that in purely academic research, the actual creation of any product is not any sort of inherent guarantee?

For starters, the first thing that one can promise is total transparency with the research being conducted. To that end, the base reward for all contributors is access to the research blog, which is essentially a front-row seat to all the Game Studies action that I can handle at any given point in time. Said research blog is located at http://chris-yap.com. It is in this way that contributors can actually observe the impact of their financial contribution and in turn feel that they have aided in the progress of the research itself, which is the very principle of crowdfunding. In other words, if you too seek to crowdfund your own Game Studies research, you simply owe it to your contributors to be open and honest about what is happening, even with the setbacks.

Secondly, higher-tier contributors (in this case, those above $25 USD) were given the opportunity to be listed in the Acknowledgements section of this very dissertation. A $50 USD contribution granted contributors the right to be listed and formally mentioned during the actual conference presentation on a supplementary slide (and in recognition during said presentation). A contribution of $100 USD or higher could secure one of five "Fully-guided Tours of Osaka" packages, all of which sold out in the early days of the month-long campaign.

In truth, a one-time crowdfunding campaign is indeed beneficial for researchers in a pinch from time to time, but in the long term it is not feasibly sustainable. In this experience, I learned that for the future, crowdfunding is indeed workable, but it is not something that should be the primary means of funding long-term research. If one chooses to crowdfund for research, I recommend trying out a site like Patreon.com, where contributors can sign up to contribute small monthly amounts on a much more consistent basis. If one goes the route of one-time crowdfunding, Indiegogo is a much more safer bet than Kickstarter (for example) because Kickstarter is an all-or-nothing system--with Kickstarter, if you fail to

reach your monetary goal by the end date, you will obtain nothing. Indiegogo on the other hand will let you keep any funds obtained up to the end date, regardless of meeting the goal or not.

Furthermore, it is of the utmost importance to time one's own crowdfunding campaign with speaking engagements or other similar networking events. If, for example, I had a crowdfunding campaign ready to launch the same day as my hugely successful PAX East 2014 talk, then the potential for large and frequent contributions increases exponentially. On that note, I will actually be further experimenting with crowdfunded Games Studies research in this fashion in the future as an independent researcher.

A.2.5. The *Metal Gear Solid* Academic Anthology

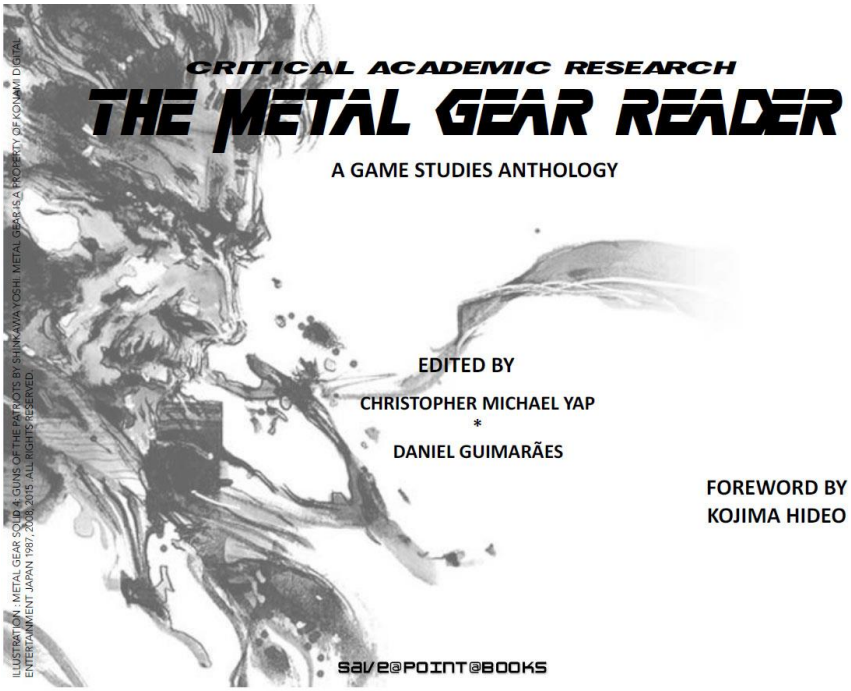


Figure 32: Proposed tentative cover art for the *Metal Gear Solid Academic Anthology*

At the time of this writing, I am currently working with Daniel Guimarães (Ph.D.

Candidate in Game Studies at Meiji University) as editors for an academic anthology on the Metal Gear Solid franchise of games. The Metal Gear Solid series of video games is considered one of the most popular and thought-provoking game franchises of all time. It is a fixture of the modern landscape of the video game medium. Record sales, avid fandom, and a near-cult-like worship of the series creator Hideo Kojima are are testimonies to the efficacy of the Metal Gear Solid series in modern popular culture at large. And yet, despite this widespread approval, the academic critical study of the series has yet to become a part of the common discussion surrounding Metal Gear amongst gamers. Why are the games of the Metal Gear Solid series discussed this often, this deeply, and for this long after the initial release of the series? This proposed book, which is currently being written and edited for a tentative release in the first quarter of 2017 will be the first official Metal Gear Solid Academic Anthology, and an initial primary effort to address these critical questions in a way that seeks to distinguish the series as a true classic of the game medium.

In this proposed book, researchers from all around the globe offer their academic contribution to the ever-evolving interdisciplinary field of Game Studies in an original Metal Gear Solid academic anthology. Each chapter, written by a different researcher in the field of Game Studies or a game industry insider, will provide a critical discourse on a particular aspect of the series. The enduring qualities of the Metal Gear Solid series (such as character relationships, plot symbolism, apocalyptic allusions, issues of actual and digital identity, and the use of cinematic devices in interactive games) will be addressed by each author in terms of their respective field of expertise. The end result will be a formidably robust academic text which can serve as a step towards qualifying the Metal Gear Solid series as one of the seminal works of the game medium. As Citizen Kane and the works of Shakespeare are to Film and Literature studies, respectively, so too is the Metal Gear Solid series to games. This book is an overt testament to that very fact, lending academic credence to this notion which gamers worldwide have known all along.

Furthermore, what truly distinguishes this book from any other similar efforts is that many of the authors of the book offer their cultural perspectives as

Japanese Game Studies researchers/industry insiders. The current literature on the field of Game Studies is fairly well-represented by voices from the Western world, but strikingly lacking in terms of opinions from the very country which spawned Metal Gear in the first place. This book will feature Japanese authors alongside foreign authors, offering their insights and opinions on the Metal Gear Solid series, in a first for Game Studies.

To the best of our knowledge, there is currently no other book like this on the popular market at large which deals specifically with the franchise of Metal Gear Solid from a comprehensive academic perspective. Currently, there are some papers from proceedings from conferences, but to date no formal anthology has been produced. As such, this book effort represents a unique chance for a new first in Game Studies. This book covers the currently relevant topics associated with academic discussion and output on the Metal Gear Solid franchise. Every effort has been taken to ensure that the authors who have been selected to compose the chapters of this anthology are all Game Studies scholars and industry professionals who have both a sufficiently-high level of critical acumen and a passion for the series at large. Although the authorship of the book will be primarily composed of academics, the editors will work towards crafting an edition which is also written in a way that is easier to understand than most rigorous academic journal articles or conference papers.

Methods of game design and discussions of how to get into the game industry are not covered in the book. This book is also not an extended, speculative thought piece inspired purely by subjective fandom. Instead, the goal with the Metal Gear Solid Academic Anthology is to make the reader literate and conversant with different critical perspectives which are often employed by Game Studies academics when discussing games which are potentially rich with meaning and significance. In this way, the Metal Gear Solid Academic Anthology is one step on a multi-path road towards critically understanding a video game series which has transcended being thought of simply as entertainment software and how that might have come to pass. The book is intended to bridge the gap between current Game Studies activities revolving around the Metal Gear Solid series and other more common, public,

colloquial gamer-level discussions which infer the substance of the series at large. It also constitutes a fresh and new effort to bring the voices of Japanese Game Studies and the Japanese Game Industry, which have been lacking in recent game scholarship, to a Western audience which is ever-hungry for such perspectives.