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# Narrative Structures in Computer and Video Games: Part 2: Emotions, Structures, and Archetypes

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## Abstract

This second of two articles concludes the examination of narrative in computer and video games. Where appropriate, results are schematically and chronologically presented to illustrate the unique nature of interactive narrative. Despite modern advances in games technology and design, the findings reveal notable gaps in areas such as the use of back stories, cut scenes, narrative structure and content, emotions, and archetypes, all of which may be expanded to offer richer and potentially more believable narratives. The findings from both essays draw attention to three salient aspects warranting greater efforts during the future development of interactive narrative: temporal, depth, and depiction.

## Keywords

narrative, storytelling, plot, computer games, video games

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## Introduction to the Concluding Analysis

Following from the previous article, this article concludes the analysis of narrative in a selection of old and modern computer and video games. In the first essay, context and definitions of interactive narrative were examined, along with a discussion of the initial set of findings relating to the proportion of time allocated to game narrative, the role and use of back stories, cut scenes, on-screen text, game prompts, and game structures. This remaining article resumes the examination by exploring components relating to the portrayal of emotions, established narrative structures, and archetypes.

As described in the initial article, this study captures data from a sample of 10 games shown in Table 1. The used methods are fully consistent to those specified in the previous essay. In summary of the extended discussion provided in the initial article, this article explores the following aspects of narrative.

- Human emotions with respect to the categorization of basic and mixed emotions as well as primary, secondary, and tertiary dyads, prescribed by Plutchik (1980, pp. 91, 157-172). The elements pity and fear and a character's change of fortune (Heath, 1996, pp. 20, 21) will also be considered.
- Narrative structures in accordance with the 12 chapters of *The Hero's Journey*, the three-act structure (including the reversal of fortune mentioned above, recognition, and suffering) and the distinctions of story types (including simple and complex plots as well as archplot, miniplot, and antiplot). Where appropriate, further schematic and chronological representations of these data according to kernel and satellite events will be provided to exemplify the composition of narrative structures.
- Closely linked to the use of formal narrative structures is the presence or otherwise of established character archetypes as documented by, among others, Jung (1983, 1991), Campbell (1988), and Vogler (2007). The depiction of archetypes and their relationships with the other examined aspects of narrative will be considered in the final section of the analysis.

### *Portrayal of Emotions*

Table 2 shows a basic summary of game characters' emotions, feelings, and/or behaviors observed in the chosen titles before a formal classification of data using Plutchik's (1980, pp. 157-172) model, as described in the previous article. To enhance the accuracy of the assignment of emotions to game characters, a minimum of three observations of the relevant cut scenes and modes of narrative delivery were taken (noting aspects such as characters' speech, body language, actions, feelings, and behaviors) from where allocations of emotions were made. Although it has been acknowledged that all measurement techniques for emotion contain some degree of bias or subjectivity—even an individual's interpretation of their own emotions can

**Table 1.** Games Analyzed in This Study in Order of Release Date

Game	Principal Genres	Platform	Developer	Publisher	U.K. Age Rating	Year of original release (United Kingdom)
The Legend of Zelda	Action adventure; RPG	Nintendo Famicom (NES); Gameboy Advance	Nintendo	Nintendo	E (Everyone) <sup>a</sup>	1986
The Secret of Monkey Island	Adventure; puzzle	Amiga, Atari ST, Apple Mac, PC	Lucasfilm Games	Lucasfilm Games	No rating	1990
Flashback	Platform; action adventure; 2D shooting	Amiga; Super Famicom; Megadrive	Delphine Software	U.S. Gold	11 + <sup>a</sup>	1992
Shenmue 2	Action adventure; RPG; beat-em-up	Dreamcast; Xbox	Sega, AM2 division	Sega	11 + <sup>a</sup>	2001
Resident Evil	Action adventure; third-person shooter	PlayStation 2	Capcom	Capcom	15 <sup>b</sup>	2001
Code Veronica X	third-person shooter					
Final Fantasy X	RPG; adventure; strategy	PlayStation 2	SquareSoft	Sony Computer Entertainment	11 + <sup>a</sup>	2002
Half-Life 2	First-person shooter; action adventure	PC; Xbox	Valve	Valve	15 <sup>b</sup>	2004
Fable	Action adventure; RPG	Xbox	Lionhead Studios; Microsoft Game Studios	Microsoft Game Studios	16 + <sup>a</sup>	2004
The Godfather	Action adventure; RPG	Xbox 360; PlayStation 2; Nintendo Wii	EA	EA	18 <sup>b</sup>	2006
Halo 3	First-person shooter; action adventure	Xbox 360	Bungie; Microsoft Game Studios	Microsoft Game Studios	15 <sup>b</sup>	2007

Notes: RPG = role-playing game.

<sup>a</sup> PEGI or recommended age ratings.

<sup>b</sup> BBFC rating (typically for games containing adult and/or violent themes).

**Table 2.** Basic Summary Data of Emotions, Feelings, and/or Behavior

Game	Number of Unique Characters Showing Emotions, Feelings, and/or Behaviors	Total Number of Emotions, Feelings, and/or Behaviors Observed	Number of Unique Emotions, Feelings, and/or Behaviors Observed	Average Number of Emotions, Feelings, and/or Behaviors Shown Per Scene	Mean Distance Between Each Set of Emotions, Feelings, and/or Behaviors
The Legend of Zelda	1	10	1	1	39 min
The Secret of Monkey Island	19	85	48	2	8 min
Flashback	1	4	4	1.3	2 hr 13 min
Shenmue 2	20	76	21	1.5	23 min
Resident Evil	8	75	32	2.1	16 min
Code Veronica X					
Final Fantasy X	21	151	61	1.8	28 min
Half-Life 2	11	57	26	2.1	29 min
Fable	12	57	43	2.3	21 min
The Godfather	33	115	36	1.7	7 min
Halo 3	9	62	41	4.1	42 min

**Table 3.** Basic and Combined Emotions, Feelings, and/or Behavior Using Plutchik's Model

Game	Basic Emotions	Primary Dyads	Secondary Dyads	Tertiary Dyads	Opposites
The Legend of Zelda	1	0	0	0	0
The Secret of Monkey Island	36, plus one undefined	11	6	4	6
Flashback	1	0	0	2	0
Shenmue 2	13, plus one undefined	39	1	5	12
Resident Evil Code Veronica X	15, plus one undefined	22	3	7	21
Final Fantasy X	31, plus one undefined	39	9	19	20
Half-Life 2	15, plus one undefined	16	6	7	1
Fable	5, plus one undefined	19	7	6	7
The Godfather	38	43	6	7	27
Halo 3	10, plus three undefined	19	7	9	5

be inaccurate (see Plutchik, 1980, pp. 199-218, 1994, pp. 130, 131; Russell, 1980, p. 1176)—the approach taken here represents a relatively simple but feasible subjective interpretation of various emotions depicted in each game. Although this approach can, to some extent, be verified by more advanced psychological and physiological approaches (of which would, in turn, necessitate a far more extensive study beyond the confines of this investigation), the subjective measures here, as described by Plutchik (1980, pp. 91, 139), can be considered to contain a certain level of validity for the measurement or recording of emotions because it takes into account feelings and behaviors to inform the specification of emotions.

Following the above, the data show the rising investment made by game developers to portray a range of emotions in modern games. Apart from the two older action-adventure titles (Zelda and Flashback), a wide range of emotions are exhibited by numerous unique characters in each game. Even when only unique emotions are taken into account—that is, after the removal of repeated emotions in scenes—a healthy quantity can still be observed among modern titles. In general, modern games generally contain a wider range of unique emotions as compared to older titles with, perhaps, the exception of Shenmue 2 and Half-Life 2. The explanation for this may be due to the result that both games (particularly Half-Life 2) deliver a sizable proportion of their narrative via gameplay (see analysis Section on Cut-scenes, Text, and Prompts in the previous article) as opposed to the emphasis on the use of cut scenes, thus altering the context and/or appropriateness for direct emotions to be depicted. In such instances, narrative largely serves as a means of prompting

the player on directions or gameplay, and hence the emphasis on emotion is typically reduced or unnecessary.

The other general observation concerns the more efficient or concentrated use of narrative scenes for portraying emotion, where it can be seen that most modern titles average around two emotions per scene, with the exception of Halo 3 that averages just over four (explained by the fact it uses fewer scenes and compensates with each one containing more emotions). In terms of the average distance between scenes, notable similarities are observed where the portrayal of each set of emotions (whether delivered via cut scene, text, or gameplay, etc.) is commonly presented every 20–40 min. Notable exceptions in this case are *The Secret of Monkey Island*, due to the high frequency of on-screen text; *Flashback*, where there are only three cut scenes in the entire game; and *The Godfather*, where there is a high quantity of cut scenes as a proportion of the total game time (see Table A1 in Appendix).

To provide a further examination of the depth and complexity of emotions, Table 3 shows the quantities of the various types of basic and mixed emotional states according to the formal classifications outlined by Plutchik (1980, pp. 157-172, 161-165), as discussed in Section 3 of the first article. It should be noted here that the lower frequencies observed here as compared to those given in Table 2 is explained by the sole classification of emotions, whereas the data in Table 2 may contain elements of feelings, behaviors, and/or character actions, which have not been scientifically defined in Plutchik's model. As would be expected, the general frequency of basic emotions and primary dyads far exceeds the prevalence of secondary and tertiary dyads—that is, more complex and contrasting emotions are portrayed less frequently than simple and similar ones. However, the most interesting findings reside in an inspection of the number of unique occurrences of basic and mixed emotions, as well as opposing emotions (i.e., opposites), shown in Table 4. On face value, it can be observed that in many of the chosen games, with the exception of *Monkey Island*, *Resident Evil*, and *Final Fantasy*, that the prevalence of basic emotions is relatively poorly represented, ranging from just one to four emotions being portrayed in total. However, this finding is explained by the fact that basic emotions are also contained in each of the three dyads, thus even if a particular basic emotion is not present purely on its own, it may be represented as a component of a mixed dyad. In this respect, 7 of the 10 chosen games portray all 8 basic emotions defined in Plutchik's model either as pure individual emotions or as part of a dyad. *The Legend of Zelda* and *Flashback* are the only titles that portray very few emotions due to the lack of time dedicated to narrative, while the sadness emotion was not found in *Half-Life 2*. In addition, numerous games portrayed a further range of emotions, feelings, or behaviors (including those of mysteriousness, decisiveness, sinisterness, and moralness), which were extensions beyond those defined in Plutchik's model and therefore offer themes beyond those of a necessarily conventional nature.

However, perhaps, the most telling finding in this section relates to the use and prevalence of opposing emotions as well as primary, secondary, and tertiary dyads. Table 5 shows the summary of the occurrences in each category of mixed emotions

**Table 4.** Unique Basic and Combined Emotions, Feelings, and/or Behaviors Using Plutchik's Model

Game	Unique Basic Emotions	Unique Primary Dyads	Unique Secondary Dyads	Unique Tertiary Dyads	Unique Opposites
The Legend of Zelda	1	0	0	0	0
The Secret of Monkey Island Flashback	7, plus one undefined	5	4	3	2
Shenmue 2	1	0	0	2	0
Resident Evil Code Veronica X	3, plus one undefined	6	1	5	1
Final Fantasy X	5, plus one undefined	6	2	4	1
Half-Life 2	7, plus one undefined	5	6	7	4
Fable	1, plus one undefined	4	5	4	1
The Godfather	2, plus one undefined	5	5	6	4
Halo 3	4	6	3	4	3
	4, plus three undefined	6	5	5	1

according to Plutchik's classifications (Plutchik, 1980, pp. 161-165) across the 10 chosen games—thus, for example, the data show that of the 10 games, 8 depict the primary dyad “aggression,” 6 depict the secondary dyad “betrayal,” and so on. The data indicate that the emotions of aggression, contempt, love, optimism, anxiety, dominance, outrage, and delight are all well represented, while emotional conflict (direct opposites) is most frequently portrayed as the combination of fear and anger. In contrast, relatively few games expose emotions of alarm, cynicism, morbidity, remorse, guilt, pessimism, envy, and shame (no games showed disappointment), while the least frequent opposite is that of joy and sadness. These findings signify that the majority of emotions relating to extrapersonal conflict (i.e., antagonism caused by and toward external forces) are more prevalent than those concerning inner conflicts or self (i.e., self-awareness, beliefs, self-doubts, etc.; see Glassner, 2004, pp. 41-43; McKee, 1999, pp. 145-147, 213-216). This particular finding is also supported by the observation of unique opposites where, for the majority of games, fear and anger (again, typically that relating to extrapersonal conflict) is the most prevalent, whereas joy and sadness (usually relating to inner conflict) is the least frequent. Indeed, from all of the chosen games, only *Fable* and *Final Fantasy X* portray all four forms of emotional conflict proposed in Plutchik's model.

The above observations, therefore, draw attention to implications relating to character development. It is well recognized that a major component in the creation of interesting or compelling stories is the presence of characters, which possess a

**Table 5.** Occurrences of Combined Emotions, Feelings, and/or Behaviors Using Plutchik's Model

Primary Dyads	Secondary Dyads	Tertiary Dyads	Opposites
Aggression = 8	Betrayal = 6	Anxiety = 8	Fear + anger = 9
Contempt = 8	Curiosity = 5	Dominance = 7	
Love = 8	Despair = 4	Outrage = 7	Surprise + anticipation = 5
Optimism = 8	Fatalism = 4	Delight = 6	
Submission = 5	Pride = 4	Sentimentality = 5	Acceptance + disgust = 4
Alarm = 4	Cynicism = 3	Morbidness = 2	
Remorse = 2	Guilt = 3	Pessimism = 2	Joy + sadness = 3
Disappointment = 0	Envy = 1	Shame = 2	

degree of conflict between the inner and outer selves, which intensifies as the story develops (Glassner, 2004, pp. 42, 43; McKee, 1999, pp. 213-216). Even so, it can be seen that such a contrast is generally lacking in the characters presented in the chosen games (with, perhaps, the exception of *Fable* and *Final Fantasy X*, from the data in Table 4), and hence despite the seemingly involving and complex themes presented in their respective back stories, game characters are generally only depicted with extrapersonal conflict (such as feelings or emotions of aggression, contempt, and outrage toward others) and rarely extend beyond such contexts. These shortfalls lead to the potential explanation where there may be a compensation of underrepresented emotions via gameplay. Taking, for instance, the primary dyads of alarm, remorse, and disappointment, where even though such emotions are clearly underrepresented in terms of explicit portrayals via prescribed narrative (as depicted in cut scenes, text, and so on), they may be alternatively triggered through various aspects of gameplay. Common examples include the harm or death of the game character as a consequence of difficult or complex levels, the accidental killing of allies, or the need for mastery of a certain skill before progression is granted, all of which may incorporate elements of surprise, tension, difficulty, and failure. In these cases, a player may become more directly attached or aware of the protagonist's struggle through repeated attempts at different sections of gameplay, even though explicit emotions may not be broadcast via conventional narrative means.

The final component of this part of the analysis concerns that of evoking pity and fear which, as discussed in the section on Narrative Techniques in Computer and Video Games of the first article, are central to arousing empathy toward a protagonist. In this respect, all of the chosen games evidence sufficient components (as shown in Table 6), which adhere to Aristotle's suggestions for complex narratives (i.e., those containing a reversal of fortune and, critically, that which is from good to bad—see Heath, 1996, pp. 20, 21). In addition, these evoke pity and fear among the audience or player, namely, a change in the actions performed by the protagonist and/or the change from ignorance to knowledge (Heath, 1996, pp. 18, 19). The only caveat in these cases being, of course, that the player physically completes



**Table 6.** The Presence of Pity and Fear According to the Presence of Complex Narratives and Tragedies

Game	Reversal of Fortune	Tragedy of Suffering	Tragedy of Character	Spectacle
The Legend of Zelda	From good to bad to good: peaceful world is threatened by antagonist, princess is kidnapped, protagonist defeats antagonist, and rescues the princess; from ignorance to knowledge	Physical suffering	Insignificant/weak presence	Unique environments, costumes, character designs, and so on
The Secret of Monkey Island	From good to bad to good: protagonist achieves aim of being a pirate, gains trust and friendship with allies, defeats antagonists, and finds love; from ignorance to knowledge	Physical suffering	Prevalence of numerous character and personality traits throughout	
Flashback	From good to bad to good: protagonist manages to escape but is stopped by aliens, awakes with amnesia, gains trust and friendship with allies, finds and defeats aliens; from ignorance to knowledge	Physical and mental suffering	Insignificant/weak presence	
Shenmue 2	From good to bad to good: protagonist's father is murdered, gains trust and friendship, finds further clues about where to locate antagonist and reasons for father's murder; from ignorance to greater knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout	
Resident Evil Code Veronica X	From bad to good: protagonist is captured by antagonists, manages to escape, gains trust and friendship, defeats antagonists; from ignorance to greater knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout	
Final Fantasy X	From good to bad to good: protagonist's home is destroyed, banished from homeland, gains trust and friendship, finds love, defeats main antagonists, finds peace; from ignorance to knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout	

(continued)

Table 6. (continued)

Game	Reversal of Fortune	Tragedy of Suffering	Tragedy of Character	Spectacle
Half-Life 2	From good to bad to good: protagonist is plunged in a world of terrorism and threat, gains trust and friendship, defeats main antagonist, finds peace; from ignorance to greater knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout	
Fable	From good to bad to good: protagonist's family is murdered and home is destroyed, gains trust and friendship, finds long lost sister and mother, defeats main antagonist, becomes hero or villain; from ignorance to knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout, with emphasis on morality	
The Godfather	From good to bad to good: protagonist's father is murdered, gains trust and friendship, finds love, obtains respect and revenge; from ignorance to knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout	
Halo 3	From bad to good: protagonist is plunged into a world of war, gains trust and friendship, defeats antagonists and saves the world; gains further knowledge	Physical and mental suffering	Prevalence of numerous character and personality traits throughout	

**Table 7.** The Presence and Layout of The Hero's Journey

Game	Stages Present and Order in Game	Stages Omitted
The Legend of Zelda	1, 2, 4, 5, 6, 7, 7, 7, 7, 7, 7, 8, 9, 10, 11, 12	3
The Secret of Monkey Island	1, 5, 6, 2, 3, 2, 4, 7, 8, 9, 2, 7, 7, 5, 7, 7, 8, 9, 11	10, 12
Flashback	1, 2, 4, 5, 6, 5, 7, 6, 7, 5, 5, 7, 8, 9, 11	3, 10, 12
Shenmue 2	1, 2, 5, 6, 7, 7, 2, 5, 8, 7, 4, 2, 5, 4, 7, 2, 9, 11	3, 10, 12
Resident Evil Code Veronica X	1, 2, 4, 5, 6, 7, 5, 6, 7, 2, 5, 6, 7, 7, 8, 8, 9, 11	3, 10, 12
Final Fantasy X	1, 2, 4, 5, 6, 5, 5, 8, 5, 3, 4, 7, 7, 7, 7, 7, 7, 7, 7, 8, 8, 8, / 8, 8, 8, 8, 8, 9, 10, 11, 12	
Half-Life 2	1, 2, 5, 6, 4, 7, 8, 9, 10, 11, 12.	3
Fable	1, 2, 4, 3, 7, 5, 6, 7, 7, 7, 7, 7, 8, 9, 11, 10, 12	/
The Godfather	1, 2, 2, 4, 4, 5, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 8, 9, 10, 3 11, 12, 10, 12	
Halo 3	2, 5, 6, 7, 7, 7, 7, 7, 8, 9, 10, 11	1, 3, 4, 12

the various stages of the game to initialize and fulfill changes of fortune. Interestingly, this degree of complexity is further reinforced by the presence of other forms of tragedies, which also promote pity and fear: those emphasizing physical and mental suffering and character traits. Out of the chosen titles, *Fable* possesses the strongest depiction of these by allowing the player to focus on issues of morality. Furthermore, the spectacle element of drama is also well represented due to the visual nature of the medium, especially in modern titles where aesthetic realism and visual effects play prominent roles.

The significance and broader context of this analysis will be returned to later on in this article. The following penultimate section of this analysis explores the structures that help to provide a cohesive bond between methods of narrative delivery, game structure, and the portrayal of emotions.

### *Narrative Structures*

Extending on the above examination of Aristotle's suggestions for story types, this part of the analysis focuses on the prevalence or otherwise of formal narrative structures described in the section on Narrative Techniques in Computer and Video Games of the first article. Table 7 shows the results from the observation of the various stages outlined in *The Hero's Journey* where, for each title, irregular changes in the ordering of stages are highlighted (underlined in Table 7), along with any stages that are omitted from the narrative. It can be seen that the chosen games generally adhere to the established structure with good consistency. Although only two games, *The Legend of Zelda* and *Halo 3*, mirror the proposed sequence without any significant reordering of stages, other titles (especially *Flashback*, *Resident Evil*,

Final Fantasy X, Half-Life 2, Fable, and The Godfather) also demonstrate remarkable uniformity in terms of the ordering of stages, evidencing only slight diversions from the standard structure—typically a reordering of stages toward the beginning and middle of the game. The only two exceptions are *The Secret of Monkey Island* and *Shenmue 2*, which evidence significant departures from the conventional sequence that occur at the beginning of the game—a further assessment of the placement and duration of stages is given below. With regard to omissions, the most frequently excluded are Stage 3 (Refusal of the Call, absent in seven titles), Stage 10 (The Road Back, absent in four), and Stage 12 (The Return with the Reward, absent in five). Interestingly, although this finding is not beyond expectation in interactive games where the Refusal of the Call cannot, in practice, be maintained for there to be game progression, the lack of its presence is surprising, especially because it can add greater depth and complexity to games that place a heavy emphasis on narrative (Rollings & Adams, 2003, p. 102). The omission of Stages 10 and 12 is justified by the explanation that it is often desirable to maintain suspense or uncertainty in the conclusion of a story to raise the audience's anticipation for further game sequels (Rollings & Adams, 2003, p. 109). This point is further underlined by the fact that all of the chosen titles have either sequels already produced or sequels reported to be in stages of production.

In terms of frequency, Stage 7 (representing tests faced by the protagonist) is, by some margin, the most regularly occurring. Typically, these include conflict with threshold guardians in the form of level bosses or guardians (an analysis of archetypes is given below), obstacles such as puzzles or barriers in a level, and other similar events that help prepare the hero for the final battle (Stage 8). The frequent occurrence of Stage 7 can be explained by the conventional structure of interactive games, which is that of individual levels or sections, each containing key guardians or obstacles that must be overcome before progression is granted. In games where such a structure is less prominent (such as *Flashback*, *Shenmue 2*, *Resident Evil*, and *Half-Life 2*), the presence of Stage 7 is less frequent because progression may be granted on arrival at specific checkpoints or areas in the game environment rather than necessarily that of defeating guardian opponents or overcoming explicit obstacles.

A more in-depth insight into these data can be gleaned from examining the proportion of time allocated to the various stages relative to the total duration of each game. Using the divisions proposed by Vogler (2007, pp. 8, 9), the 12 stages can be divided into three main acts, which also coincides with the three-act plot outlined by Aristotle (Heath, 1996, pp. 13, 29; Tierno, 2002, pp. 8, 9). According to Vogler's (2007, p. 8) division (of which closely matches the proportions specified by McKee [1999, pp. 218, 219]), Act 1 consists of Stages 1–5, typically representing 25% of the story; Act 2 consists of Stages 6–9, representing 50%; and Act 3 consists of Stages 10–12, accounting for the remaining 25%. Table 8 shows the respective proportions for the chosen games. Here, allocations were made into the appropriate acts on the first occurrence of key stages: 1, 6, and 10, each of which signify the beginning of

**Table 8.** Proportional Representation of The Hero's Journey Relative to Total Game Duration

Game	Act 1	Act 2	Act 3
The Legend of Zelda	0.5%	97%	2.5%
The Secret of Monkey Island	1%	97%	2%
Flashback	0.5%	99%	0.5%
Shenmue 2	1%	99%	<0.5%
Resident Evil Code Veronica X	2%	97%	1%
Final Fantasy X	1%	98%	1%
Half-Life 2	1%	98%	1%
Fable	4%	96%	<0.5%
The Godfather	2%	97%	1%
Halo 3	1%	98%	1%
Average	1.4%	98%	1.1%

each act. Thus, for example, in Shenmue 2 (using the data from Table 11), Stages 1, 2, and 5 are placed in Act 1, Stages 6, 7, 7, 2, 5, 8, 7, 4, and 2 in Act 2, and finally Stages 10, 5, 4, 7, 2, 9, and 11 in Act 3.

Manifestly, these results show that the traditional structure of The Hero's Journey, while adhered to by the chosen games, is massively skewed in terms of the proportion of time allocated to the three principal acts. Without exception, Acts 1 and 3 are exceedingly underrepresented in all games, demonstrated by averages of just 1.4% and 1.1% of game time, respectively. In contrast, Act 2 is allocated practically complete attention by game developers, with an average of 98%. Such a sizable bias in favor of Act 2 draws attention to not only the obvious imbalance it poses to the stories presented in the chosen titles but highlights the clear gaps on which future games may invest greater efforts to enhance the quantity and range of content. Quite staggering also is that despite advances in technology, aesthetics, and the reported developments in interactive narrative over a period of around 20 years as reflected in the age of the chosen titles, the imbalance between the various acts has remained all but constant, thus pointing toward the relative predictability, and obscure representation of game narrative.

In terms of content, an overview of story classes (as proposed by McKee, 1999, pp. 44-57) evidenced in the chosen games is shown in Table 9. Concomitant with the above results, it can be seen that all indicate the presence of the archplot, which reaffirms Sheldon's (2004, p. 183) view that despite the potentially diverse and fantastical themes present in interactive games, the content of their stories is largely congruent with the long-established conventions of cinema as well as the classical design structure of storytelling (McKee, 1999, pp. 44-47). In addition, the majority of games focus on external conflict and a single protagonist (these being some of the key characteristics of the archplot), hence underlining the emphasis on extrapersonal conflict as discussed in the section on Portrayal of Emotions. However, of the five

**Table 9.** Story Classes

Game	Story Class
The Legend of Zelda	Archplot: emphasizes causality, closed ending, linear time, single and active protagonist, and consistent reality
The Secret of Monkey Island	Mixture of archplot and antiplot: Archplot: emphasizes causality, closed ending, linear time, single and active protagonist, and a consistent reality Antiplot: presence of coincidence and inconsistent realities
Flashback	Archplot: emphasizes causality, closed ending, linear time, single and active protagonist, and consistent reality
Shenmue 2	Archplot: emphasizes causality, linear time, closed ending, external conflict, consistent reality, and active protagonist
Resident Evil Code Veronica X	Mixture of archplot and miniplot: Archplot: emphasizes external conflict and linear time. Miniplot: presence of open-ending and multiple protagonists
Final Fantasy X	Mixture of archplot, miniplot, and antiplot: Archplot: emphasizes causality, external conflict, and active protagonist Miniplot: presence of open-ending and internal conflict Antiplot: presence of nonlinear time and inconsistent reality
Half-Life 2	Mixture of archplot, miniplot, and antiplot: Archplot: emphasizes external conflict, active protagonist Miniplot: presence of open ending Antiplot: emphasizes coincidence, nonlinear time, and inconsistent reality
Fable	Archplot: emphasizes causality, linear time, closed ending, external conflict, consistent reality, and active protagonist
The Godfather	Archplot: emphasizes causality, linear time, closed ending, external conflict, consistent reality, and active protagonist
Halo 3	Mixture of archplot and miniplot: Archplot: emphasizes causality, linear time, external conflict, consistent reality, and active protagonist Miniplot: presence of an open ending

titles that travel beyond this, extensions can be observed, which offer a greater degree of variety, particularly in the case of Final Fantasy X and Half-Life 2 where each game offers a combination of all three structures (archplot, miniplot, and antiplot). Interestingly, despite the relative uniformity of the two titles when observing the above results (such as their game structure, use of emotions, and patterns in The Hero's Journey), it may be argued that they offer a more intriguing contribution to content via efforts to combine different story classes, especially that of the antiplot, which focuses on nonlinear time and inconsistent realities, which are effected most notably through the use of character flashbacks, time travel, and time distortion.

The final part of the analysis of narrative structures examines the patterns of micro and macro structures proposed by Cohan and Shires (1988). A basic summary

**Table 10.** Summary of Kernels and Satellites

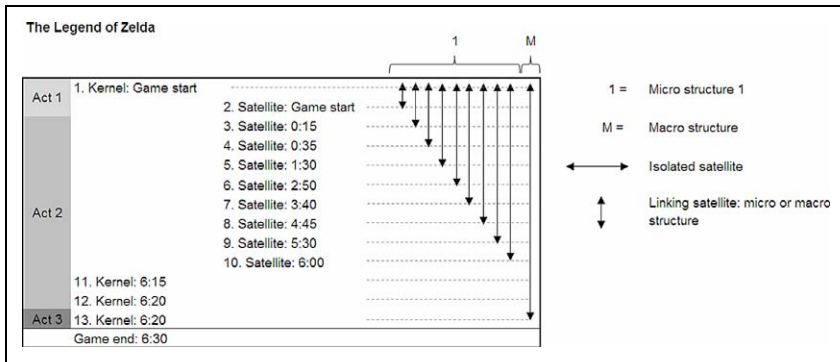
Game	Instances When Both Kernel and Satellite are Presented			Ratio of Kernels to Satellites	Percentage of Game Narrative Portrayed as Kernels	Percentage of Game Narrative Portrayed as Satellites
	Kernels	Satellites	Simultaneously			
The Legend of Zelda	4	9	0	1:2.2	31	69
The Secret of Monkey Island	56	37	28	1:0.7	63	42
Flashback	13	4	4	1:0.3	46	14
Shenmue 2	62	42	21	1:0.7	36	24
Resident Evil Code Veronica X	36	36	21	1:1	40	40
Final Fantasy X	97	95	34	1:1	39	38
Half-Life 2	23	18	12	1:0.8	66	51
Fable	45	17	15	1:0.4	49	19
The Godfather	79	57	32	1:0.7	71	51
Halo 3	17	14	11	1:0.8	71	58
Average	43	33	18	1:0.8	51	41

of the quantity of kernels and satellites is given in Table 10—here, each component of the games' narratives (cut scenes, text, visual cues, etc.) are assessed in terms of their classification as either kernel or satellite events as well as any instances when both are presented simultaneously in the narrative. One prominent finding from these data is the relatively low ratio of kernels to satellites which is, on average, 1:0.8. This observation contrasts markedly with traditional narratives, where kernel events are typically heavily supported by satellites to give added emphasis to kernels (Cohan & Shires, 1988, p. 56). One exception to this can be seen in *The Legend of Zelda*, with a ratio of 1:2.2, which can be explained by the relative simplicity of its story (its premise and objective being presented in the opening cut scene), exemplified by the presence of only four kernels from where virtually all subsequent events serve merely as signals of progression in the game. In comparison, relatively more recent and complex titles with low ratios such as *Fable* and *Halo 3* compensate through a greater use of kernels, as demonstrated by the percentage of narrative sequences (such as cut scenes, on-screen text, prompts, etc., as summarized in the section on Cutscenes, Text, and Prompts of the first article) presented as kernel events, shown in Table 10. In this context, 49% and 71% of all narrative sequences in *Fable* and *Halo 3* respectively contain kernels, thus representing significant events in the story, while the figure stands at just 31% for *The Legend of Zelda*, indicating that most of its narrative does not significantly contribute to the development of its story.

The other important reflection based on these data is that the stories presented in the chosen titles appear to lack depth. This is illustrated in the above analysis, as well as the relatively low percentage of satellites as a proportion of total narratives shown in Table 10, which suggests that kernel events may not be sufficiently amplified via supporting scenes of story development. However, using diagrammatic representations of these data with respect to micro and macro structures, further insights may be gathered on the overall delivery of narrative. Figures A1–A10 show these structures in terms of the links between kernel and satellite events as well as the time at which they are presented during the game (i.e., 0:15 indicates 15 min into the game). For completeness, temporal links to the three-act structure described above are also provided—again, these illustrate the imbalance of emphasis placed on each act mentioned earlier. A macro structure is established when links exist between kernel and/or satellite events that reinforce or encapsulate the entire spectrum of events in the main story. Micro structures are defined when links exist between preceding or succeeding kernel and/or satellite events but only those which establish or amplify events running in parallel to the main storyline. Also, displayed are isolated satellites—that is, those which do not emphasize preceding or succeeding events but serve to amplify only one specific section of the storyline. All micro and macro structures are grouped by numbers in Figures A1 and A10 to aid ease of reference.

Using these observations, it can be seen that four titles (*The Legend of Zelda*, *Flashback*, *Half-Life 2*, and *Fable*) portray the most simplistic narrative structures, with each containing only a single micro and/or macro structure throughout the

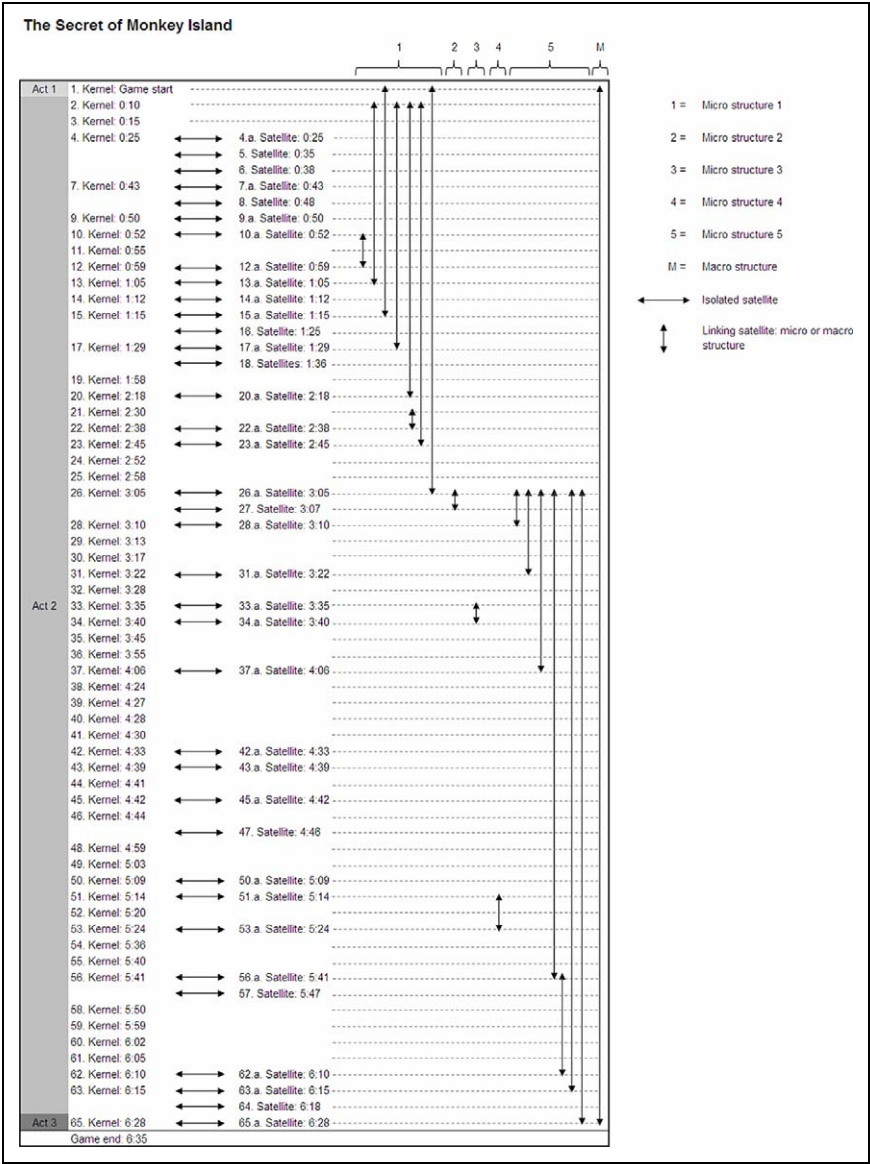




**Figure A1.** Macro and micro structures for The Legend of Zelda.

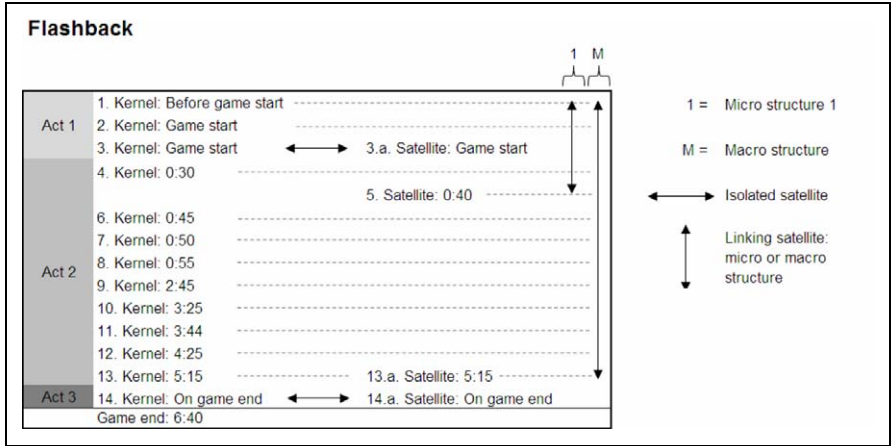
entire narrative. In contrast, *The Secret of Monkey Island*, *Shenmue 2*, *Resident Evil*, *Final Fantasy X*, *The Godfather*, and *Halo 3* demonstrate greater degrees of complexity, as epitomized by the presence of numerous micro structures throughout the narrative, which facilitate the development of the main story. These points are most patently illustrated in *The Secret of Monkey Island*, *Shenmue 2*, *Resident Evil*, *Final Fantasy X*, and *The Godfather*—see Figures A3, A4, A5, A6a and A6b, and A9a and A9b. Of these games, three distinct techniques were found for adding extra depth to narrative structures. The first relates to the quantity of micro structures, where in *Shenmue 2*, *Final Fantasy X* and *The Godfather*, each uses upward of nine micro structures as extensions to the main storyline. Thus, depth is achieved through a more frequent use of micro structures. The second is that of a horizontal division of the narrative, demonstrated in *Resident Evil*, where extra depth is provided through separating the interaction between three main protagonists and then using micro and macro structures to provide cohesion between the numerous subplots and the central story. The third is that of vertical division, exemplified in *The Secret of Monkey Island* and *Final Fantasy X*, where a key kernel event (Events 26 and 49, respectively, in Figures A2, A6a, and A6b) provides a major partition and reference point to the principal storyline.

It should also be noted that, in addition to these techniques, kernel events are necessarily accompanied by gameplay to provide emphasis to main story events. Even in games with relatively simple structures or a distinct lack of satellite events, the gameplay (i.e., interactivity) serves to cement kernels and, arguably, represents the most powerful entity for reinforcing the narrative. In effect, gameplay interventions derived from either the player and/or the game can be used to effect subtle alterations to the prominence of story events. Two prime examples of how this may be achieved are through the game's difficulty setting and how a player chooses to play the game. Taking *Half-Life 2* as an example, the player is aware that the main protagonist, Gordon Freeman, is being hunted by his adversary, and the emphasis



**Figure A2.** Macro and micro structures for The Secret of Monkey Island.

placed on survival is invigorated through the challenge presented during the game-play. In essence, should the player choose to play at a higher difficulty setting, he or she is likely to feel a greater sense of desperation for the character and desire to



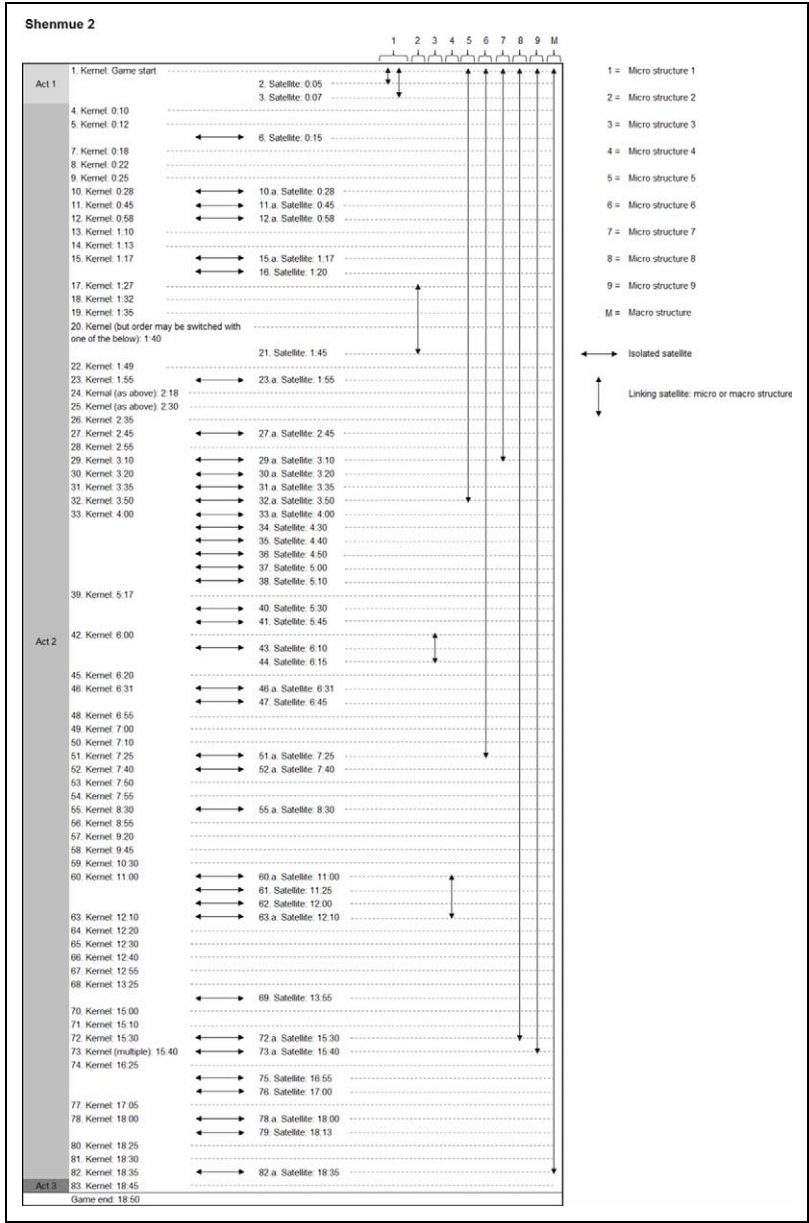
**Figure A3.** Macro and micro structures for Flashback.

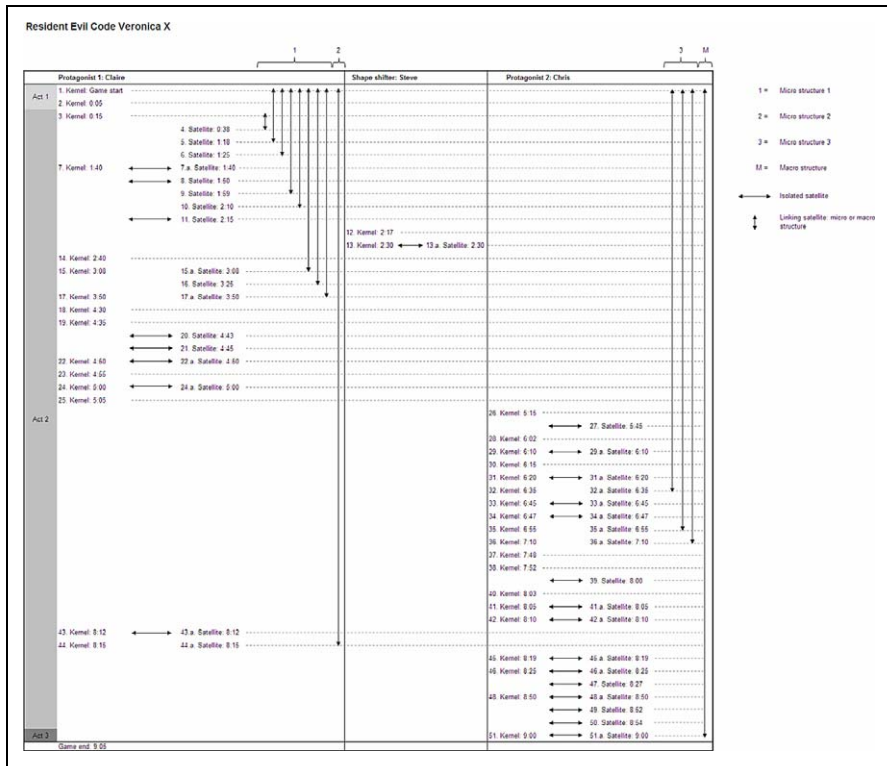
discover his identity and reasons for his wanted capture (as sparked by Kernel Event 1 presented at the game start, in Figure A7). In contrast, the player may also choose to play at a more leisurely pace or at a lower difficulty level, in which case the gravity of the kernel event can be diluted. Such examples may be seen across all of the chosen games in the numerous kernel events residing in them. These issues will be returned to later on in the conclusions.

**Archetypes**

This concluding section of the article explores the prevalence of archetypes as mentioned in the section on Narrative Techniques in Computer and Video Games of the initial article, which closely links with the above analysis on The Hero’s Journey. As with the assignment of emotions (see the section on Portrayal of Emotions), archetypes were allocated to game characters after repeated observations of their behavior and roles across the various modes of narrative delivery, and cross-checking this information with the archetype characteristics outlined by Vogler (2007, pp. 23-80). The assignments here were much less subjective than those for emotions, because the nature of each character can be allocated to an established archetype with comparative ease due to the general prominence of characters’ roles, particularly with respect to heroes, shadows, allies, and mentors. The only archetype that required greater attention was the shapeshifter, which may evidence numerous changes throughout the narrative and are hence reflected in the results below.

Using the archetypal characters outlined by Vogler (2007, pp. 23-80), Table 11 provides a basic summary of the occurrence of archetypes in each of the titles. As can be seen, by far the most frequently portrayed archetypes are the threshold guardian and ally, averaging 11.5 and 9.3 appearances across the 10 games. Consistent

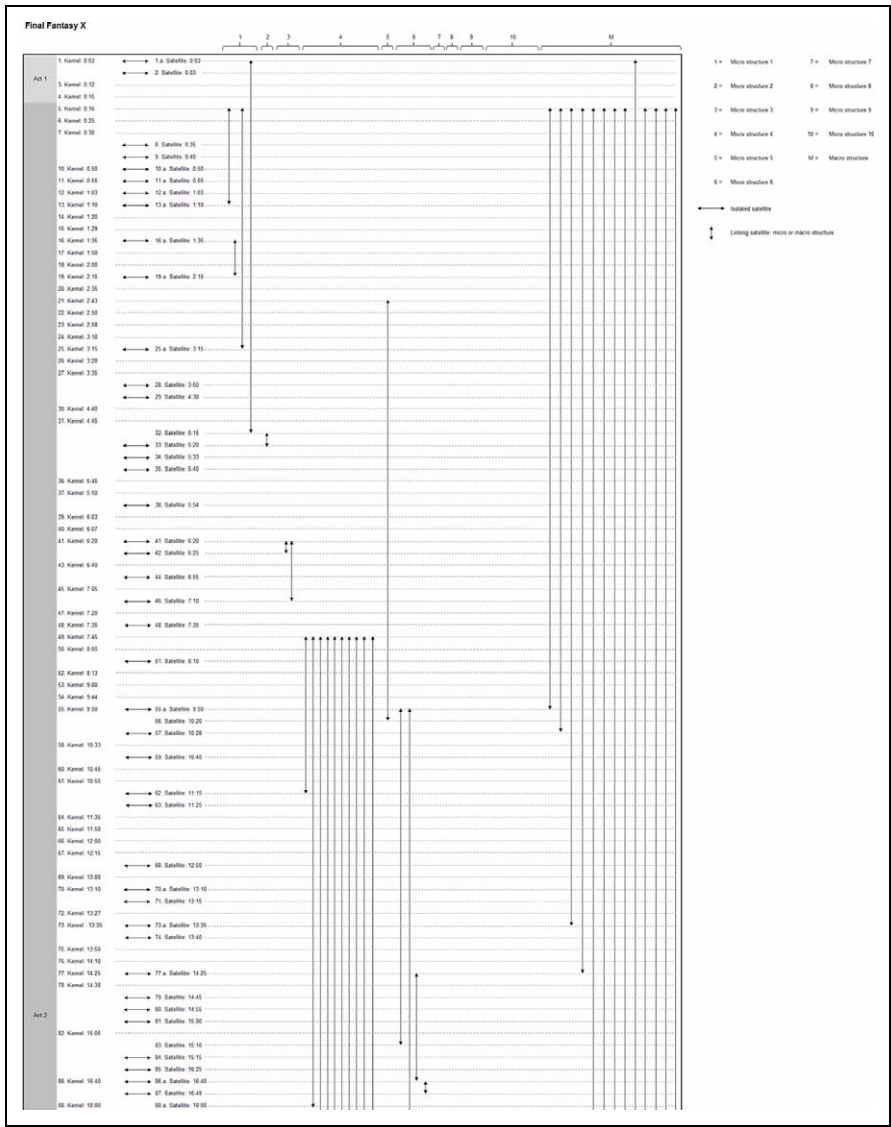




**Figure A5.** Macro and micro structures for Resident Evil Code Veronica X.

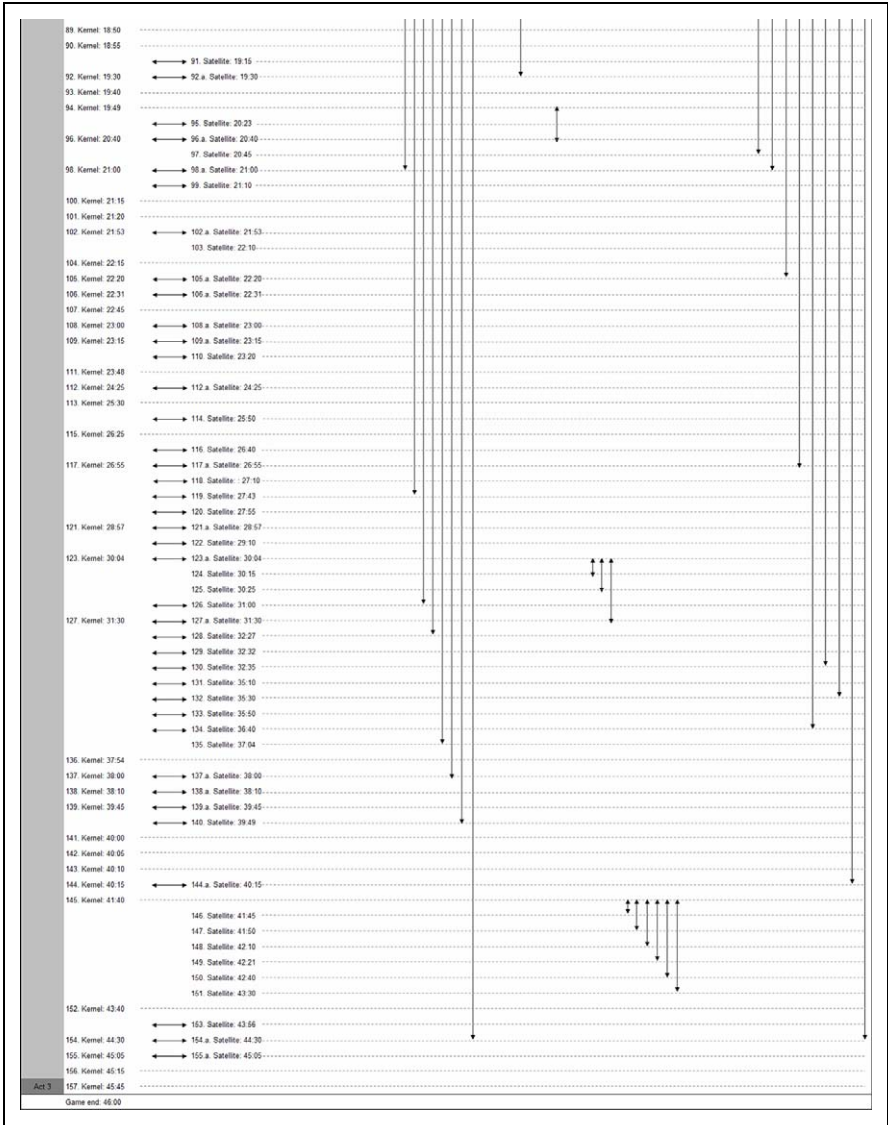
with expectations, these archetypes are repeatedly used to test the hero before the final battle, typically toward the end of each game level (in the case of threshold guardians, and which, of no coincidence, verifies the frequent occurrence of Stage 7 of The Hero's Journey), as well as assist the hero in his or her journey (in the case of allies). A broad use of the other main archetypes can also be observed, with the only slight exception being the trickster, which appears to be comparatively sparsely represented. As may also be expected, most games depict a single hero that is balanced with anything between one to six shadow characters. Characteristically, the hero and shadow archetypes are portrayed as humans or personified characters almost without exception, with the only deviation arising in Fable, where the final significant act in the game is for the hero (or player) to confront his or her morality. The other major point of note is that all but one of the protagonists in the chosen titles (Claire Redfield in Resident Evil) are male, but this aspect would require a more in-depth study into gender balance in games.

The most intriguing archetypes in this analysis, however, relates to the mentor, herald, and shapeshifter. The placement of these character archetypes as well as



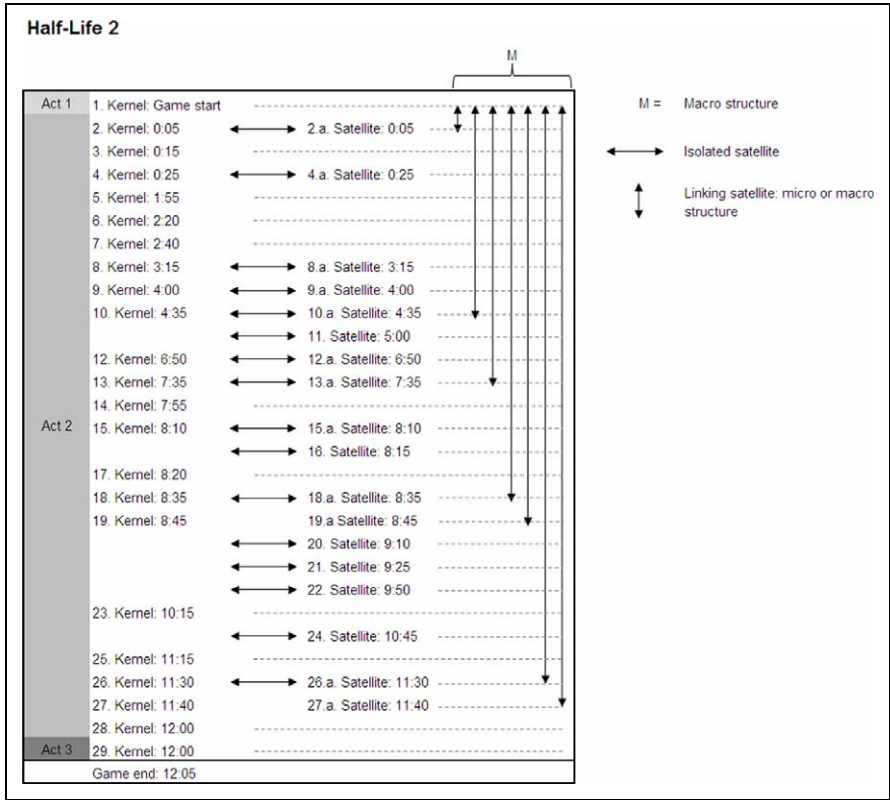
other notable variations identified in the chosen games are presented in Table 12. Due to the sheer quantity of data, the percentage figures only indicate the point at which the characters are first introduced in the game, that is, 50% indicates the mid-point of total game time and do not specify points at which the character may reappear in the narrative.





**Figure A6.** A. Macro and micro structures for Final Fantasy X (Part I). B Macro and micro structures for Final Fantasy X (Part 2)

In terms of the mentor archetype, the data indicate that although there is some variety in terms of the quantity of characters, the placement of mentors is comparatively predictable: the explanation being that it coincides with Stage 4 of The Hero's Journey (Meeting the Mentor), which is situated toward the beginning—typically

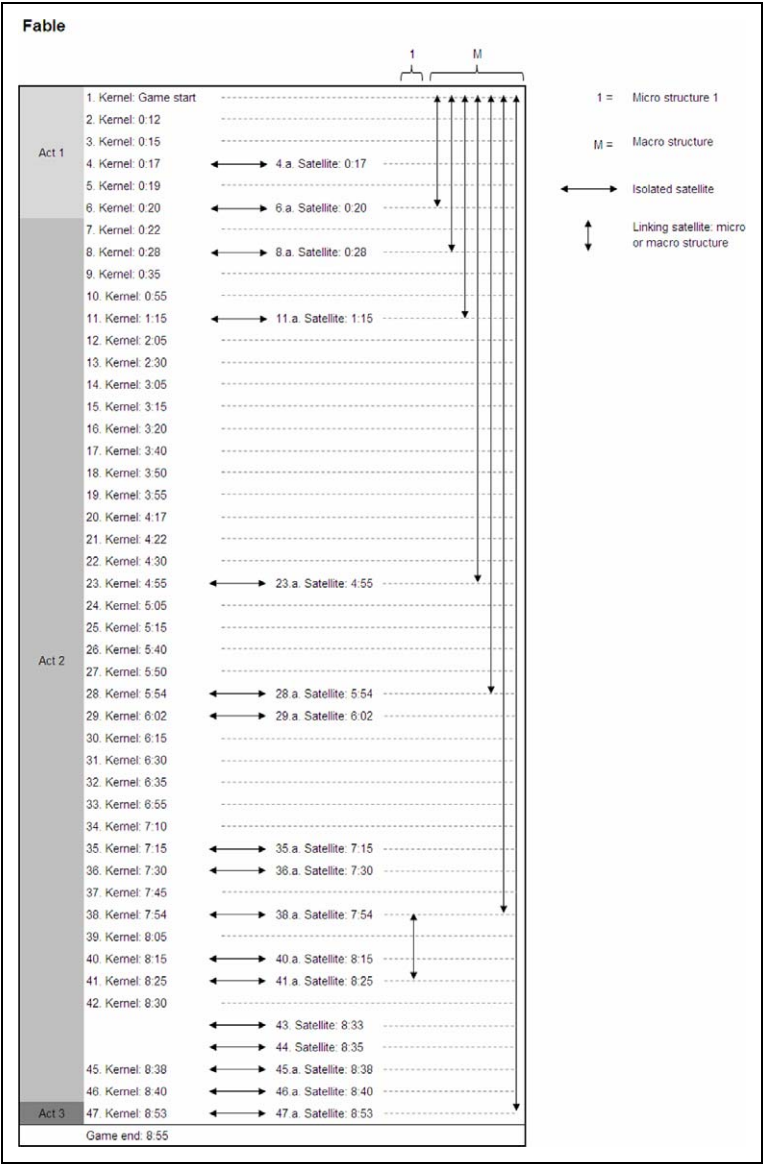


**Figure A7.** Macro and micro structures for Fable.

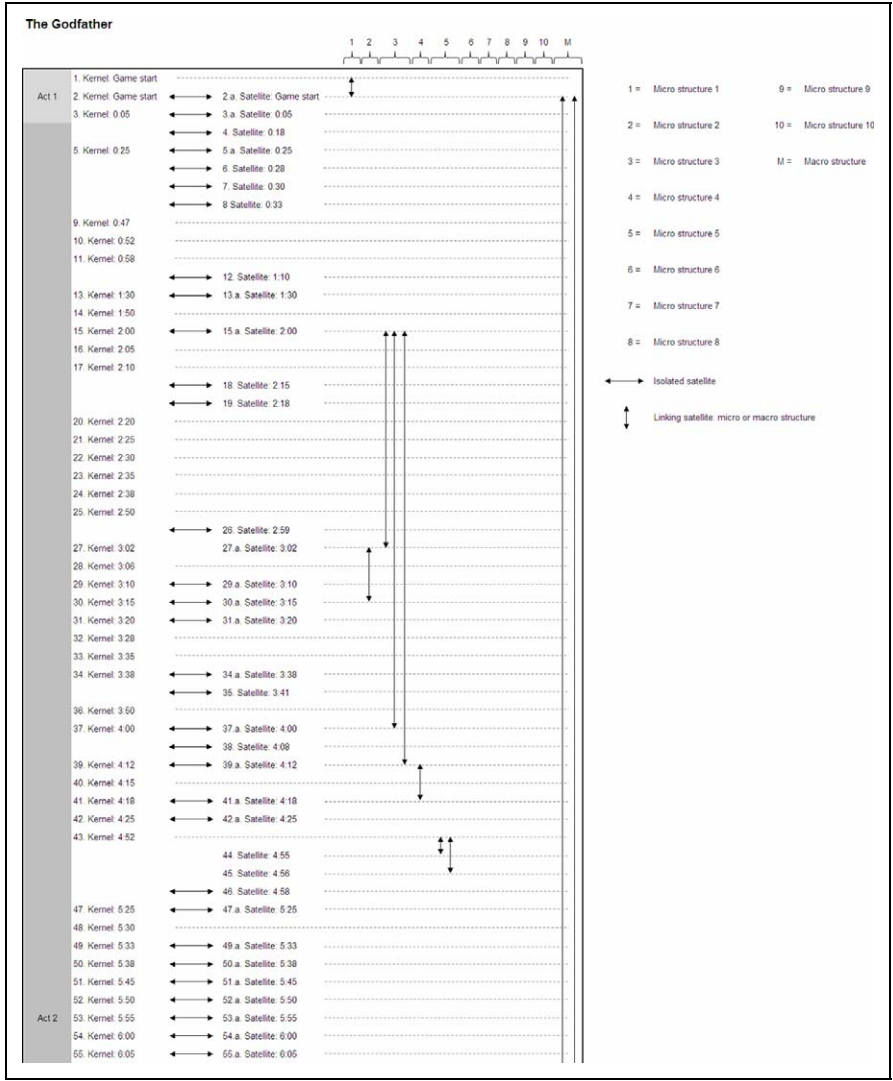
Act 1—of the narrative (Vogler, 2007, p. 47). However, although most mentors appear toward the initial sections of the games, slight extensions are provided in *The Secret of Monkey Island*, *Shenmue 2*, *The Godfather*, and *Halo 3*, where mentors appear during later sections, while in *Resident Evil* and *Shenmue 2*, an inanimate mentor is provided in the form of text-based journals or diaries that the player may access at any point for further instructions about game objectives and interactions. One notable extension to the mentor is its characterization of the higher-self, which depicts wisdom, nobility, and/or godliness (Vogler 2007, p. 40), and while it only appears in two titles (*Final Fantasy X* and *Fable*) with a degree significance, it does offer added depth to the development of the respective central characters.

With respect to heralds, all games use this archetype to good effect, both in terms of quantity of characters and their placement. Most titles evidence the use of at least two heralds, of which their placement varies between being toward the beginning, middle, and/or end of the narrative. Virtually, all of the observed heralds supply

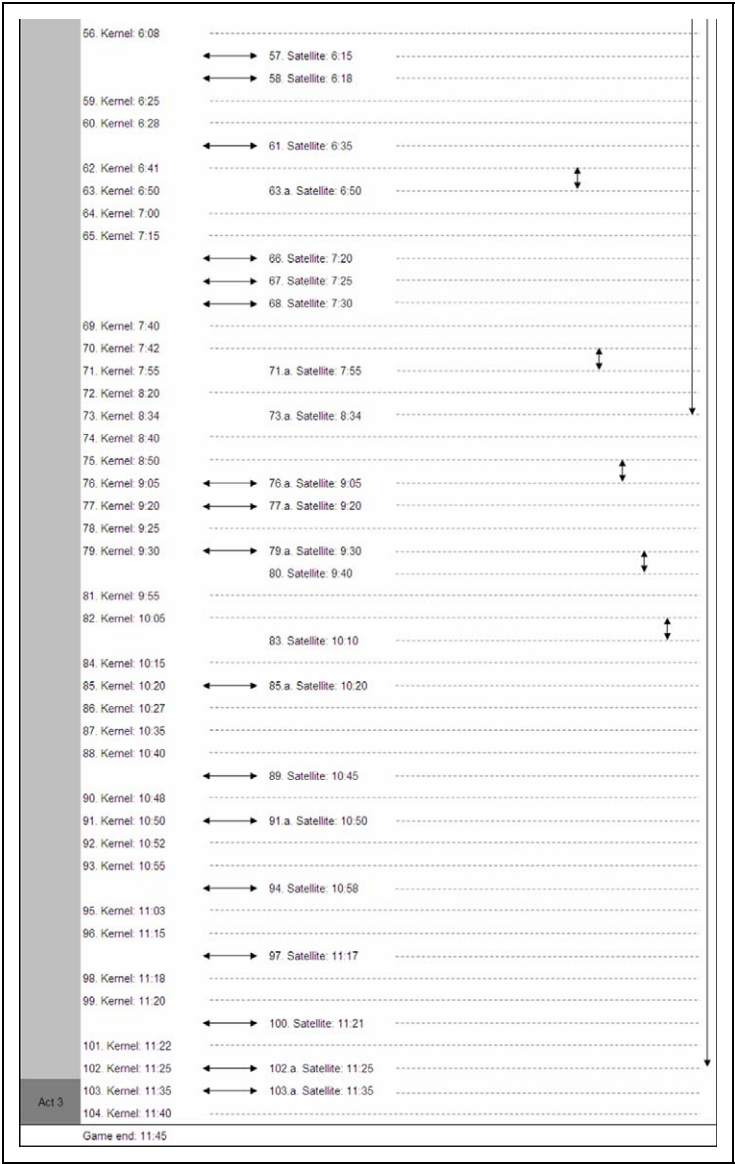




**Figure A8.** Macro and micro structures for Fable. Macro and micro structures for Fable.

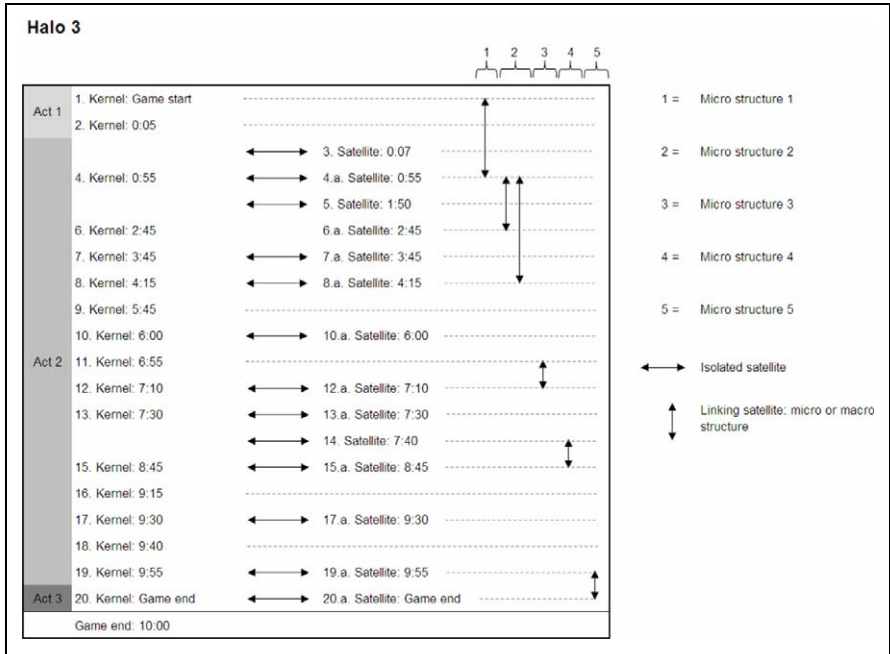


motivation to the protagonist in his or her journey, a point best represented particularly by characters in *The Secret of Monkey Island* and *Final Fantasy X*, who provide distinct impetus to the player during various stages. In *Monkey Island*, the female character Elaine Marley serves as an explicit love interest for the main character, Guybrush, thus empowering him to pursue the three trails toward becoming a qualified pirate and subsequently to rescue her from the antagonist. In *Final Fantasy*,



**Figure A9.** A. Macro and micro structures for The Godfather (Part 1). B. Macro and micro structures for The Godfather (Part 2).

Yuna (again female) provides regular motivation and encouragement to the main character, Tidus, in his struggle to find his home and quest to overcome the shadow. These two heralds serve as prime examples especially in view of the length and



**Figure A10.** Macro and micro structures for Halo 3.

monotonous nature of gameplay in these two games—Monkey Island being close to a 7-hour “point-and-click” adventure, while Final Fantasy revolves around traversing terrain and building characters’ strength attributes for more than 40 hours of gameplay. Hence, the heralds in these games act not only as key archetypes in story development but also as chief stimulants of player motivation during prolonged periods of repetitive play.

As can also be seen in the data, the shapeshifter archetype is also generally well represented, serving to provide extra emphasis to the narrative. Two of the titles which effectively depict this archetype are Resident Evil and Final Fantasy X through their respective characters Steve Burnside and Jecht. In the case of Steve, the significance of the change is delivered by his reappearance and graphic change from an ally into a threshold guardian at the 90% point of the game. Hence, following a relatively sizable investment of time (of approximately 8 hours) having been allocated to creating an emotional bond (largely of trust and friendship) between Claire (the protagonist) and Steve, the sudden change of archetype helps to stimulate a notable element of fear and surprise in the player. Alternatively, Final Fantasy X offers a dramatic change through the use of the protagonist’s father, Jecht, who is eventually personified as the shadow. Here, the shapeshifter is used throughout the game to create and emphasize the emotional conflict residing in Tidus, the protagonist.

**Table 11.** Summary of the Occurrence of Archetypes

Game	Hero	Mentor	Threshold		Shapeshifter	Shadow	Ally	Trickster
			Guardian	Herald				
The Legend of Zelda	1	1	8	1	0	1	1	0
The Secret of Monkey Island	1	1	8	3	4	1	16	1
Flashback	1	0	2	2	1	2	2	0
Shenmue 2	1	7 <sup>a</sup>	11	3	1	1	14	1
Resident Evil Code Veronica X	2	0 <sup>a</sup>	14	1	5	2	1	1
Final Fantasy X	1	1	24	2	13	4	21	0
Half-Life 2	1	2	5	1	1	1	17	1
Fable	1	2	11	2	4	2	5	0
The Godfather	1	3	26	2	5	6	10	1
Halo 3	1	1	6	2	2	3	6	1
Average	1.1	1.8	11.5	1.9	3.6	2.3	9.3	0.6

<sup>a</sup> Resident Evil and Shenmue 2 also provide text-based journals available throughout the game as mentor. These are not included in their respective counts.

In addition to the representation of the shapeshifter as a character who changes from one archetype to another (Rollings & Adams, 2003, pp. 141, 142), Vogler (2007, pp. 59-63) and Jung (1991, pp. 54-74) underline the other major facet of its depiction in the form of the animus or anima, which are commonly portrayed as the principal male or female character or temptress to the hero. In the case of the anima, this refers to the female element in the male unconscious and vice versa for the animus. Of the 10 games, those which most strongly evidence the animus or anima are The Secret of Monkey Island, Final Fantasy X, Fable, and The Godfather. All four titles portray the anima as the female romantic interest for the hero, thus helping to provide balance to the male-dominated nature of the chosen games, but only one, Fable, broadens this provision by characterizing the anima as a temptress and potential destroyer (see Vogler, 2007, pp. 61, 62) in the form of Lady Grey. Here, Grey provides an additional layer of complexity as it tempts the player to pursue courtship in a variety of means, including that of killing other game characters: an act which may conflict with how the player wishes to embark on the main narrative. Even so, this portion of the game is offered as a side quest, serving to boost player achievement and status, rather than as an integrated part of the core narrative, and hence its depth and emotional impact can easily be called into question. Overall, the anima element is weakly presented in the chosen games, where anything other than superficial depth is offered only in Monkey Island and Final Fantasy X, where the characters of Marley and Yuna are firmly integrated in the progression of their respective narratives.

**Table 12.** Placement of Archetypes: Points of Initial Introduction

Game	Mentor	Herald	Shapeshifter	Other Significant Characters
The Legend of Zelda	On game start	Before game start.	/	/
The Secret of Monkey Island	23%	1: On game start; 2: 16%; 3: 95%	1: 14%; 2: 30%; 3: 49%; 4: 71%	<b>Animal/temptress:</b> In back story, but formally at 16%
Flashback	/	1: 9%; 2: 83%	1: 9%	/
Shenmue 2	1: 6%; 2: 9%; 3: 12%; 4: 13%; 5: 15%; 6: 16%; 7: 19%	1: 6%; 2: 19%; 3: 87%	1: 1%	<b>Secret/mystery character 1:</b> 23%; <b>Secret/mystery character 2:</b> 96%
Resident Evil Code Veronica X	/ (See above)	1: 3%	1: Game start; 2: 7%; 3: 25%; 4: 30%; 5: 51%	/
Final Fantasy X	1: 1%	1: 6%; 2: 31%	1: 1%; 2: 2%; 3: 7%; 4: 12%; 5: 13%; 6: 13%; 7: 26%; 8: 28%; 9: 31%; 10: 53%; 11: 55%; 12: 65%; 13: 66%	<b>Father:</b> 7%; <b>Higher self:</b> 7%; <b>Animal/temptress:</b> In back-story, but formally at 6%
Half-Life 2	1: 1%; 2: 3%	1: 1%	1: 27%	<b>Secret/mystery character:</b> On game start.
Fable	1: 3%; 2: 3%	1: 55%; 2: 89%	1: On game start; 2: 2%; 3: 3%; 4: 3%	<b>Mother:</b> 2%; <b>Higher self:</b> 4%; <b>Animal/temptress:</b> 5%
The Godfather Halo 3	1: 1%; 2: 2%; 3: 20%; 4: 43%	1: 35%; 2: 74%; 3: 21%; 4: 25%; 5: 28%; 6: 43%	1: 7%; 2: 8%; 3: 21%; 4: 25%; 5: 28%; 6: 43%; 7: 43%	<b>Father and mother:</b> On game start; <b>Animal/temptress:</b> 17%

## Summary and Conclusions

This two-part essay has presented an initial step into how formal examinations may be carried out on salient components of interactive narrative for commercially successful computer and video games. The data obtained from the 10 chosen titles throughout the two articles contribute toward a more informed and detailed insight into the subtleties of the design, development, and implementation of game-based narrative. Analyzed in accordance with established storytelling and narrative techniques, these observations are further contextualized to elicit patterns and potential gaps from where future game projects may be based such that richer and more expansive narratives may be constructed. The following summary gives a brief outline of the most prominent findings from both essays.

Proportion of time allocated to prescribed narrative and the use of back stories (from first article):

- The chosen titles generally dedicate a significant amount of time to prescribed narrative with respect to recognized means of delivery such as the use of back stories, cut scenes, and prompts, where in some modern titles amount to in excess of 9 hours of total game time. However, in terms of the proportion of this narrative to total game time, this does not exceed around a quarter of the total gaming experience. Thus, in spite of recent advances in game technology—especially in the area of visual aesthetics—and the need for more complex narratives, the broad finding is that there is notable uniformity in terms of the proportion of time that is being dedicated to game narrative.
- Back stories were presented using conventional means (on game packaging, instruction manual, opening cut scene, etc.), but the most intriguing finding resides in their content. In the majority of back stories, there is the clear presence of Chapter 2 of *The Hero's Journey* (*The Call to Adventure*) and the creation of drama via the use strong themes (such as rescue, murder, revenge, escape, survival, mystery, and heroism) and introduction of key archetypes (typically, the hero and shadow).

Cut scenes (from first article):

- As highlighted in existing literature and the data gathered in this study, the use of cut scenes continues to dominate as the most popular method of narrative delivery. In some cases, the use of cut scenes amounted to over 70% of the total prescribed narrative. Self-evidently, this again draws attention to the problems posed by the use of cut scenes, which are exacerbated by the heavy reliance on its use as a form of narrative delivery.
- Despite the emphasis on cut scenes, variety was observed in other methods of narrative delivery where a total of 12 techniques were found, including on-screen text, audio cues, and the combination of gameplay, cut scene, and on-

screen text. In addition, it was discovered that the total time of actual narrative (devoted to aspects such as character development and story progression) was further eroded by the use of simple game prompts used to help guide the player through specific parts of gameplay. In some instances, this amounted to between 19% and 29% of total narrative: percentages largely attributable to the rising complexity of modern games, which necessitate the use of prompts to clarify gaming objectives and/or instructions for play.

#### Game structure (from first article):

- Although the literature reports for the need for more advanced game structures, the observations in this study point toward the sustained prevalence of the linear game structure. The use of the branching structure was observed but only as an adjunct to provide a greater sense of freedom in confined sections.
- A complementary technique that enhances the illusion of branching and player choice is the use of subquests, where the player may decide to deviate from the central narrative. Side quests contribute to the delivery of a more organic story but, as yet, serve only to provide minor additions to the main story.

#### Emotions:

- In general, a wide range of emotions are depicted in the chosen games, particularly among modern titles. Emotions are delivered with some degree of regularity, typically in 20–40 min intervals as the time between scenes.
- The frequency and prevalence of emotions are consistent with Plutchik's model, where basic emotions occur more frequently than primary, secondary, and tertiary dyads. Of this analysis, the most notable finding is the portrayal of emotions relating to extrapersonal conflict, which relate to external forces and antagonism to the hero. In contrast, emotions relating to inner conflict or self are much less frequently depicted, which point toward sizable gaps in terms of character development and narrative depth.
- Aristotle's suggestion for the presence of a complex narrative is generally well represented, which includes the representation of pity and fear, reversal of fortune, physical and mental suffering, and the spectacle element of drama.

#### Narrative structures:

- A good level of uniformity could be seen in terms of the ordering of the chapters in *The Hero's Journey*, with only minor deviations from the standard structure being observed.
- The most frequently omitted stages are Stages 3 (Refusal of the Call), 10 (The Road Back), and 12 (The Return with the Reward). In contrast, Stage 7



(Approach to the Innermost Cave) occurs with greatest regularity, as explained by the conventional level structure of games, which typically requires the presence of a threshold guardian to prepare the hero for the final battle.

- Analyzing the 12 chapters in the context of the three-act structure reveals a substantial skew in the proportional representation of each act as compared to other conventional narrative forms. On average, Acts 1 and 3 are afforded less than 1.5% of total game time each, whereas Act 2 dominates by commanding 98% of total time.
- In terms of content, the chosen titles demonstrate strong adherence to the established archplot model, which emphasizes external conflict (further affirming the above results) and a single protagonist. Some games further extend on this by incorporating elements of the antiplot, and offer more divergent themes such as nonlinear time and inconsistent realities.
- Further structural examinations reveal a relatively low ratio of kernel to satellite events, suggesting that key story events may not be sufficiently amplified by supporting scenes. However, when analyzed in the context of micro and macro structures, extra depth to the narrative may be achieved via three main techniques: (a) a greater quantity of micro structures, (b) horizontal division of micro structures, and (c) vertical division of micro structures. In addition, the integral element of gameplay further helps to amplify narrative structures.

#### Archetypes:

- Of the established archetypes, threshold guardian and allies are the most frequently occurring characters. This corroborates with the regular presence of Stage 7 in The Hero's Journey, where the hero is regularly challenged by threshold guardians and assisted by allies in preparation for the final battle.
- The appearance of the hero and shadow archetypes closely follows established conventions: characters that are typically personified, appearing on an average ratio of 1:2. The dominance of male characters for these archetypes is evident throughout the chosen titles.
- Some degree of variety could be observed in the mentor archetype, which may appear in a range of forms and at numerous junctures throughout the games.
- The importance of heralds are manifest in this analysis, of which are well depicted in terms of their supporting role of providing motivation to the player, particularly in lengthy games where gameplay may be comparatively monotonous.
- The use of the shapeshifter archetype is intriguing and potentially offers the greatest avenue for further development. Although well represented in the form of characters changing from one archetype to another, the representation of the anima or animus is relatively underused, especially in the form of a more striking personification in the form of a temptress or potential destroyer to the hero.

These findings draw attention to numerous aspects worthy of consideration by those concerned with the study, design, and production of interactive narrative. In virtually all of the components evaluated, clear weaknesses can be observed from where appropriate adjustments or a reallocation of effort may be directed toward the construction of richer, more effective, and/or previously unexplored avenues of gaming narrative. In addition to highlighting current gaps, the results draw attention to general facets of narrative design, which are likely to bear significance in the near future. Among these, three prevailing areas should take precedence: the temporal nature of narrative, the depth of narrative, and how narrative is depicted to the audience.

In terms of the first element, temporality, telling patterns of data can be observed with respect to order, duration, and frequency of events. On these fronts, it may be justifiably argued that despite rapidly developing and improving technology, interactive games are only developing at modest and predictable rates. Although the findings indicate a greater investment in the development of prescribed narrative sequences (such as cut scenes, on screen text, and audio and visual cues), all three components of temporality demonstrate uniformity across titles spanning over two decades of development, especially when considered in the context of the proportion of total game time that is actually dedicated to such narrative. Thus, although greater efforts are being allocated to producing narrative, these are merely rising in line with the proportional increase in the length required to complete each game.

Narrative depth entails a range of techniques that could be used to enhance the complexity and resonance of game narrative. Of these, a more varied application of established narrative structures, emotions, and archetypes would stimulate greater levels of depth and complexity. As shown throughout the results, the wealth of existing material in these and related fields provide highly suitable frameworks for inclusion in game narrative, via which game designers may deploy to break away from conformist methods of representation. Furthermore, greater advances may also be made to depict recognized aspects of story development with greater balance, particularly in view of the conspicuously skewed nature of structure in current forms of narrative delivery. With respect to emotions, in addition to the inclusion of a broader range of dyads as highlighted in the analyses, efforts may be directed toward more dynamic systems of integrating a player's emotions into a game. Of the games studied, only *Fable* offers the ability of expressing certain fixed emotions during simple interactions. Although limited, this provides an indication of how future titles may facilitate players' display of emotions to influence gameplay and could conceivably provide limitless expression as opposed to those solely prescribed by the game.

The final component, the depiction of narrative, is one which perhaps offers the widest scope for manipulation by content developers. Here, depiction is discussed in the context of focalization, as examined by Abbott (2002, pp. 66, 67, 115-118), Atkins (2003, pp. 78-84), Jahn (2007, pp. 94-107), and Ryan (2006, pp. 108-122) exploring the filtering of narrative information and asks the question of "who sees?"

or “who perceives?” during the narrative. The issue of focalization bears distinct significance due to the interactive nature of game narrative, which necessitates a constant balance between prescribed narrative (in the form of cut scenes, structure, explicit emotions, and other aspects examined above) and interaction or player intervention. In interactive games, narrative is depicted through a mixture of zero and internal focalization. In the case of zero focalization, a panoramic view of information is presented such as details about the game world, the nature of a hero’s quest, and other prescriptive elements that cannot otherwise be known, of which are commonly given by a grand narrator or an opening scene. In this instance, the player merely absorbs the information given by the game. However, internal focalization restricts information solely to the point of view of specific game characters. In most cases, narrative is told through the eyes of the protagonist in terms of the forces acting on him or her, but it is also “performed” by a human player, who determines how specific challenges in the form of levels, guardians, puzzles, and so on, are overcome during play, thus drawing attention to the role of the player as narrator. As discussed in the section on Narrative Structures, gameplay often represents the direct substitute or amplifier to the prescribed narrative. In this instance, focalization transforms from being internal to external—that is, the delivery of narrative moves from being a purely prescriptive experience to one which requires player interaction and intervention. In traditional narratives such as texts, films, and plays, the mixture of focalization is also referred to as chaining and embedding focalization (Jahn, 2007, p. 101). Similarly, these elements have proven to be highly integral to most if not all of the above analyses, yet crucially, the medium of games is perhaps the only one which enables the observer (or player) to directly influence how the narrative develops.

As shown in the section on Narrative Structures, of the games studied in this article, external focalization is typically embodied via a single protagonist, of which the obvious limitation is that of diluting the incentive for repeated play. In all but two of the chosen titles, the player assumes the role of the protagonist and may obtain a full experience of the narrative through completing the game. However, no additional points of the view of the narrative are offered during repeated instances of play. In slight contrast, the only notable exceptions, *Resident Evil Code Veronica X* and *Final Fantasy X*, allow the player to assume the role of separate protagonists at different sections of the game, thereby permitting alternative perspectives on their narratives. Although the same narrative is offered during repeated play, these examples nevertheless demonstrate an expanded use of internal and external focalization by placing the player into the roles of different leading characters. In view of these observations, gaming narrative has great capacity for expanding the types of focalization that may be offered. Used in conjunction with temporal developments and structures that foster greater narrative depth, more wholesome, varied, and believable interactive experiences may be achieved.

Future in-depth studies should also bear in mind the limitations encountered in this study and the opportunities they present, particularly given the genre

investigated (action adventure, first-person, and role-playing games), which required a sizable investment of time (in some cases, over 40 hours of play for just one game), and hence places telling restrictions on the total number of games that could feasibly be included in a study. As also discussed in the two essays, the player used in this study can be considered as one with “average” gaming experience and was tasked with solely pursuing the main narrative. This stipulation is therefore reflected in the proportions of narrative with respect to total game time provided in this analysis. Future studies can thus investigate variations in play and the narrative experience according to player skill and the extent of exploration embarked upon by different players. This point may be especially relevant for games such as *The Godfather* and *Shenmue 2*, where the playing experience may also change significantly due to a player’s prior experience and knowledge of the film (in the case of *Godfather*) or the original *Shenmue*, particularly as the narrative in these games are highly dependent on existing franchises. However, due to the way in which these games are constructed where new sections or levels are only made available on successful completion of pre-determined points, notable variation might only be expected for overall game time rather than any differences in the prescribed content (such as back stories, length of narrative scenes, and the prevalence of archetypes) examined in this study. The final avenue that warrants further development is a more objective measurement of emotions, where future studies could introduce additional validations of gathered data via multiple participants to obtain interrater agreements and reliability values. Extra efforts may also be expended on an evaluation of the use of sounds and music, which contribute toward the creation of certain moods, atmospheres, and emotions. These additions would certainly help to enhance the integrity of judgments made by researchers and their interpretation of emotions portrayed in games.

Notwithstanding these unique challenges and areas for further expansion, interactive narrative is becoming a cornerstone for mediating and structuring play. In an industry where pressure is placed on the creation of new experiences and innovative forms of interaction, narrative represents an intriguing component of design, which allows developers to integrate context and meaning into what players do, how they do it, and why. This, of course, links to another debate concerning the extent of narrative required for various game genres. In titles where it may be argued that little or no narrative is necessary—such as sports (the FIFA series, *Wii Sports*, etc.), puzzle (*Tetris* and *Brain Training*), and party games (*WarioWare* and *Mario Party*)—and games where player-defined narratives or objectives take precedence: namely massively multiplayer online games or communities (*World of Warcraft*, *Second Life*, *Home*, etc.) and simulations such as *Flight Simulator* and *SimCity*, different requirements and considerations would have to be placed on the unique nature of their respective narratives. Indeed, it has been contended that even in games such as *Tetris* where there is no identifiable story, a narrative (however meaningless or self-contrived) can still exist through its gameplay (Atkins, 2003, pp. 111-135; Miller, 2004, p. 66; Montfort, 2007, p. 183; Murray, 1997, pp. 52, 53, 88). Thus, future

studies ought to extend on the current analysis by examining the specific narrative characteristics and requirements for different game types. These issues aside, it is hoped that the results presented here provide a useful starting point from where greater understandings of narrative structures may be gleaned for the creation of new and more believable interactive experiences.

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### **Bio**

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**Table A1.** Summary of Various Modes of Narrative Intervention

Title	Method of Intervention	Number of Occurrences	Total Time	Percentage of Total Narrative	Percentage of Total Game Time	Average Duration of Each Intervention	Average Time Between Interventions
The Legend of Zelda	Narrative cut scene	5	45 s	30	<1	45 s	30 min
	Narrative simultaneously presented as cut scene and on-screen text	1	1 min 4 s	40	<1	1 min 4 s	
The Secret of Monkey Island	Passive game screen (visual cues, prompts, level completion, etc.)	11	40 s (time may vary depending on how quickly each screen is bypassed by the player)	30	<1	4 s	
	Narrative cut scene	19	17 min 52 s	16	5	1 min 3 s	4 min 26 s
	Narrative simultaneously presented as gameplay, cut scene, and on-screen text	41	1 hr 9 min	63	17	1 min 46 s	
	Short game prompts (mission hints or pointers) presented as cut scene	14	3 min 22 s	3	1	14 s	
Flashback	Short game prompts (mission hints or pointers) presented as integral part of gameplay	14	17 min 9 s	16	4	1 min 14 s	
	Credit roll and ending sequence	1	2 min	2	<1	2 min	
	Narrative cut scene	12	12 min 24 s	98	3	57 s	14 min 17 s
	Narrative presented as on-screen text	3	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as on-screen text	11	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as cut scene	2	16 s	2	<1	8 s	

(continued)

Table A1. (continued)

Title	Method of Intervention	Number of Occurrences	Total Time	Percentage of Total Narrative	Percentage of Total Game Time	Average Duration of Each Intervention	Average Time Between Interventions
Shenmue 2	Narrative cut scene	64	2 hr 26 min	50	13	2 min 17 s	6 min 19 s
	Narrative presented as on-screen text	2	Dependent on player intervention	NA	NA	NA	
	Narrative simultaneously presented as gameplay, cut scene, and on-screen text	16	57 min 21 s	20	5	3 min 35 s	
	Short game prompts (mission hints or pointers) presented as on-screen text	12	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as cut scene	73	1 hr 06 min	23	6	55 s	
Resident Evil Code Veronica X	Short game prompts (mission hints or pointers) presented as integral part of gameplay	6	17 min	6	2	2 min 49 s	
	Credit roll	1	5 min 40 s	1	<1	5 min 40 s	
	Narrative cut scene	46	1 hr 23 min	85	15	1 min 49 s	5 min 59 s
	Narrative presented as on-screen text	1	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as on-screen text	1	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as cut scene	42	8 min 36 s	9	2	12 s	
	Credit roll	1	5 min 26 s	6	1	5 min 26 s	

(continued)

**Table A1. (continued)**

Title	Method of Intervention	Number of Occurrences	Total Time	Percentage of Total		Average Duration of Each Intervention	Average Time Between Interventions
				Narrative	Game Time		
Final Fantasy X	Narrative cut scene	137	7 hr 5 min	77	15	3 min 6 s	11 min 2 s
	Narrative presented as cut scene and on-screen text	16	47 min	8	2	2 min 57 s	
	Narrative presented as on-screen text	2	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as on-screen text	1	Dependent on player intervention	NA	NA	NA	
	Short game prompts (mission hints or pointers) presented as cut scene	82	1 hr 6 min	12	2	48 s	
Half-Life 2	Short game prompts (mission hints or pointers) simultaneously presented as cut scene and on-screen text	11	9 min 46 s	2	<1	53 s	
	Credit roll	1	6 min 38 s	1	<1	6 min 38 s	20 min 43 s
	Narrative cut scene	3	2 min 1 s	44	<1	40 s	
	Narrative simultaneously presented as gameplay, sound, and textual cues	25	Dependent on player intervention and game progress	NA	NA	NA	
	Short game prompts (mission hints or pointers) simultaneously presented as gameplay, sound, and textual cues	6	Dependent on player intervention and game progress	NA	NA	NA	
	Credit roll	1	2 min 35 s	56	<1	2 min 35 s	

(continued)



**Table A1. (continued)**

Title	Method of Intervention	Number of Occurrences	Total Time	Percentage of Total		Percentage of Total		Average		Average Time Between Interventions
				Narrative	Game Time	Narrative	Game Time	Duration of Each Intervention	Time	
Fable	Narrative cut scene	50	58 min 21 s	64	11	64	11	1 min 10 s	5 min 53 s	
	Short game prompts (mission hints or pointers) presented as cut scene	38	17 min 57 s	20	3	20	3	28 s		
The Godfather	Short game prompts (mission hints or pointers) simultaneously presented as gameplay, sound, and textual cues	2	Dependent on player intervention and game progress	NA	NA	NA	NA	NA		
	Credit roll	1	15 min 7 s	16	3	16	3	15 min 7 s		
	Narrative cut scene	93	1 hr 6 min	96	9	96	9	43 s	6 min 17 s	
	Narrative simultaneously presented as gameplay and sound cues	2	Dependent on player intervention and game progress	NA	NA	NA	NA	NA		
Halo 3	Short game prompts (mission hints or pointers) presented as cut scene	14	3 min 5 s	4	<1	4	<1	13 s		
	Short game prompts (mission hints or pointers) simultaneously presented as gameplay, sound, and textual cues	3	Dependent on player intervention and game progress	NA	NA	NA	NA	NA		
	Narrative cut scene	16	39 min 47 s	92	7	92	7	2 min 29 s	25 min	
	Short game prompts (mission hints or pointers) presented as cut scene	4	1 min 23 s	3	<1	3	<1	21 s		
Halo 3	Short game prompts (mission hints or pointers) simultaneously presented as gameplay, sound, and textual cues	3	Dependent on player intervention and game progress	NA	NA	NA	NA	NA		
	Credit roll and ending sequence	1	2 min 14 s	5	<1	5	<1	2 min 14 s		

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