Interactive Frame Narrative and Player Evaluation-based Story Evolution in Ace Combat Zero: The Belkan War

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Abstract  In general, the Playstation 2 game "Ace Combat Zero: The Belkan War" is classified as a "Flight Shooting" game. However, unlike other games of this genre, Ace Combat Zero exhibits a unique depth of narrative that is atypical of the Flight Shooting genre. This is primarily achieved through the use of two major mechanisms: 1) a hidden player evaluation system which guides the evolution of the game narrative, and 2) a multi-faceted interactive frame narrative construction which contextualizes the consequences of the player's actions during missions. Both of these mechanisms work in concert with each other to provide a uniquely-molded story experience upon each playthrough.

In this paper, we attempt to deconstruct the relationship between these two mechanisms within Ace Combat Zero. We will analyze and discuss the effects, merits, and demerits of the combination of the hidden player evaluation system with respect to the interactive frame narrative construction of the game in order to gain new insights into the literary merit of this game and others like it. We conclude that while the hidden nature of the story evolution mechanic may preclude players from exploring all possible story branches, this unique recipe of game mechanics can still result in a deeper, customizable narrative capable of creating and employing potent multi-layered metaphors.

Keywords  Game Studies, Literary Merit, Frame Narrative, Evaluation System, Narratology

1. Foreword

Namco's Ace Combat Zero The Belkan War (1) is a peculiar Flight Shooting/Flight Simulator game, as far as games of this particular genre are concerned. This is due to its rich depth of story which serves as the context in which the gameplay is conducted. Woven between and blanketing the entirety of the gameplay is an over-arching narrative that contextualizes the gameplay of each battle as an individual unit of a story which inhabits ten fictional years and can be potentially viewed from a myriad of perspectives. This is quite a lot to throw at the average player of a Flight Shooting game who may typically just looking for the simulated experience of supersonic dogfights. However, it is in this way that AC0 represents a unique example of just how potent a frame narrative construction can be in a video game, particularly even in one whose genre is relatively far removed from the conventional storytelling games. Furthermore, AC0's frame narrative construction receives certain unique benefits from its implementation into the video game medium, where player interactivity is the catalyst for direct story evolution and allows the game to read the player and react accordingly.

Yet, it is also critical to note that while an interactive frame narrative can potentially be effective for certain storytelling situations in games, it is by no means a silver bullet when it comes to interactive game narrative. As with many literary or storytelling devices employed in other storytelling mediums, the "weapon of choice" and modus operandi of any storytelling endeavor is set (to a considerable degree) by the authors of that work (in this case,
the game designers), and is selected for the appropriateness of the type of story the author is attempting to tell. Having noted as much, each endeavor requires unique, case-by-case evaluations in order to discern any larger trends in storytelling in any medium.

To that end, it is the express aim of this paper to conduct a close critical reading of AC0 in order to discuss these unique storytelling advantages in detail. In particular, our analysis will center specifically on the role of player interactivity as the fuel by which the story progresses and changes. Furthermore, we will analyze and discuss the somewhat hidden nature of the story evaluation system employed by the game to branch the story. Through such discussions and analyses, we hope to encourage the further analysis of other similarly-structured story games from the Japanese industry and lay the groundwork for more scholarly effort in this direction.

2. Background

2.1 Frame Narrative in Conventional Media

Frame Narrative is basically a "story within a story." It is a literary device employed by numerous authors since time immemorial to convey stories and to steer the reader's attention in a particular way or as a method to establish metaphors [1]. Examples of Frame Narrative can be seen very readily in all forms of storytelling media, such as in literature (ie The Odyssey, Frankenstein) and cinema (ie. The Princess Bride<1>, Inception<2>), among others. Figure 1 below displays a conventional Frame Narrative structure.

2.2 Frame Narrative in Games

Something like Frame Narrative fits in very comfortably in the medium of video games, and commonly manifests as side quests which illustrate some aspect of the story that is not accessible if one remains in the central narrative. Frame Narratives can be found in games such as Final Fantasy VII and Starcraft II. In such cases, Frame Narrative is employed as a means to elaborate on a story that one of the characters is telling within the context of the greater game (story within a story) by allowing the player to take up a the role of a different character (or different version of that character) temporarily. With the case of Final Fantasy VII (2), the player actually plays through protagonist Cloud Strife's flashback which tells the tale of the destruction of his hometown (Fig. 2). In Starcraft II (3), the player can temporarily play as the Dark Templar Zeratul (a supporting character) in missions which constitute the side-story of a dark, alien prophecy (Fig. 3). In both of these cases, Frame Narrative offers players a very direct, hands-on way to experience several dimensions of the central narrative of a game by allowing players to go a level (or two) deeper than the outermost layer of the narrative. Conventionally, it is this outer layer that is both the central (main) narrative and the realm involving the most gameplay.
that occurred ten years prior, he comes across frequent references to a mercenary fighter pilot who exerted significant influence during the war, whose reputation and skill are unparalleled. While the name of this pilot remains unknown, they are continually referred to by their fighter pilot callsign, "Demon Lord." Inspired by this new vein of evidence, the journalist begins to investigate the stories surrounding the Demon Lord in an effort to tell the story of the greatest fighter pilot of the war. Ultimately, despite the journalist never actually finding or meeting the Demon Lord in person, he does succeed in interviewing nearly all the pilots shot down in battle by the infamous Demon Lord. It is through these interviews (presented in the form of cinematic cutscenes) that both the narrative context and portrayal of the Demon Lord is constructed.

By contrast, the inner layer of the Frame Narrative of AC0 consists of the events which occurred ten years prior during the very war which the journalist in the outer narrative is investigating. The player assumes the role of the Demon Lord himself, and this section of the game constitutes the actual historical missions (relative to the game fiction) which the Demon Lord undertakes and are therefore the portions of AC0 which can actually be played by the player. During these missions, which are more typical of Flight Shooting type games, the game is constantly measuring the aggressiveness of the player. During each of the game's missions, a player is free to 1) destroy just the mission-designated targets, 2) destroy anything they can target with their fire control systems, or 3) perform some combination of the prior two actions. It is these actions (or varying combinations of these actions) which act as the indicators for the game to rate the player's aggressiveness. That is to say, an excessively-aggressive player can be considered one who downs anything in sight, whereas a scrupulous player is one who focuses only on mission objectives, ignoring all extraneous (yet destructible) agents/objects. After the successful completion of each mission, the game ranks the player according to a scale of
aggression with the "Mercenary" end of the scale indicating the "Most Aggressive Play Style" and the opposite "Knight" end of the scale signifying the "Least Aggressive/Most Focused Play Style." All other designations between these two extremes fall somewhere on the so-called "Soldier" gradient, representing varying degrees of balance between Aggressive and Focused Play Styles. This Mercenary/Soldier/Knight gameplay mechanic is displayed in Figure 4 below, and plays a very important role in terms of the overall Frame Narrative of AC0.

Figure 4: The 3-rank Aggression Gradient Gameplay Mechanic of Ace Combat Zero

The game bosses of AC0 arrive in the form of enemy Ace squadrons which are considerably more difficult to defeat than the majority of the other enemies within the game. Furthermore, the Ace squadrons which the player will face at designated points in the game vary according to the player's aggression classification at the time of the encounter (1)(2). For example, at the first of these Ace engagements, a player with an extremely aggressive rank of Mercenary will find themselves facing the "Rot" Squadron. By contrast, Knight-ranked players will be confronted with the similarly-styled "Indigo" Squadron, and Soldier-rank players will have to try their mettle against the evenly-balanced "Grun" Squadron.

The canonical history of AC0's story is constructed in this very fashion--successfully defeating an enemy Ace squadron essentially means that the Demon Lord (the Player Character) has shot down that person during the Belkan War, and consequently, during the documentary frame of the game narrative set 10 years later, it will be that particular enemy Ace's testimonial that we as players/audience members will witness during those cinematic cutscenes [5]. This play mechanic manifests at several key points in the game, and it is possible for a player who begins the game as a certain type (Mercenary/Soldier/Knight), to change their gameplay/aggression style multiple times throughout the course of the game during the innermost narrative layer, thereby creating a wide variety of narrative portrayals of the Demon Lord character in the outermost layer of the narrative.

Figure 5: The Overall Frame Narrative Gameplay Experience of AC0

As described in Fig. 5 above, what this primarily means is that the Frame Narrative of AC0 is a reactive relationship between the actions of the player in the innermost narrative layer (gameplay layer), and the reactions of the outermost narrative layer (narrative layer) to make changes to its structure based on the aggression level of the player upon each successfully-completed mission. As a whole, AC0 progresses in a back-and-forth manner between these two layers of narrative, telling the story of the journalists' efforts...
to investigate the myths and portrayals of the Demon Lord in the outermost layer, and allowing the player to "tweak" and fine-tune that portrayal via the gameplay sections of the innermost layer (Fig. 6). It is in this fashion that AC0 distinguishes itself as a particularly intriguing candidate for study in terms of how Frame Narrative manifests in and benefits from the player interaction inherent to the video game medium.

Figure 6: The conventional Frame Narrative Model modified to show the effect of aggression-ranking-based story branching in AC0.

3. Analysis and Discussion

3.1 Frame Narrative Conventions and Authorial Agency

As mentioned prior, authors of conventional literature make use of Frame Narrative to exert a unique control over the setting of their story in order to guide the reader's attention to something within the story that is of particular note. In the aforementioned example of Mary Shelley's 19th Century Gothic Fantasy Novel Frankenstein, Shelley uses Frame Narrative in one important instance (out of many) to illustrate the world of the monster and his perception of it [3]. At this point in the novel, the narrative transitions the frame border from Victor Frankenstein's personal account of his pursuit of the monster to the monster's own personal account of his wretched life up to that point. By enabling the reader to hear the monster's tale from his own mouth and in his own words, this construction affords the readers very direct access to the perception of the monster. In this case, the use of Frame Narrative here is to give the reader a much more direct, first-person account of the short life of the monster up to that point in the narrative, and in doing so, help to more quickly establish some sense of sympathy for that character.

Epic Poem, The Odyssey [4]. Per the writing conventions of Homer's time, The Odyssey begins as the tale of a bard who relates the story Odysseus. Within the context of the bard's story, the protagonist Odysseus then begins to tell his own story in his own words. This point constitutes the narrative shift from the bard's narrative layer to Odysseus' narrative layer. Furthermore, it is in this layer of the narrative strata that the majority of The Odyssey is conveyed. In this manner, we as readers get the story straight from the source, so to speak. We are privy Odysseus' thoughts and actions as related to us directly by him. The Frame Narrative construction of The Odyssey allows this direct connection to take place and affords us as readers a unique insight into the very worldview of the protagonist.

In other words, Frame Narrative can be effective in traditional printed literature as a potent device for guiding readers to the more pertinent aspects of a story. However, Frame Narrative in fixed, static media is fundamentally an authorial agency. More specifically, with printed media, the choice of whether or not to use Frame Narrative, and how to use it, are all questions that remain solely within the jurisdiction of the author of that work.

By contrast, in the dynamic medium of video games, Frame Narrative construction can be employed in order to pass along a considerably degree of authorial license to the player. In the case of AC0, Frame Narrative is used by the gameplay mechanic to allow the player to decide (whether purposefully or not) which portions of the narrative get told, and by extension, this then points to which areas of the
narrative are important to the player. In a sense, the narrative of AC0 actually reacts to the player interaction (specifically, the degree of aggression of the player) and through the course of the playthrough, will mold its narrative content to present the player with a portrayal that is befitting and reflective of that particular player’s style of play. In passing the authoritative control to the player in this fashion, the Frame Narrative of AC0 achieves two significant and intriguing storytelling benefits.

3.2 Branching Mechanics: Overt vs. Hidden

The first unique advantage afforded by the game mechanic of AC0 is that it allows for a much more subtle and intuitive way to fit the narrative to the player. Since the AC0 blackbox is always grading the player during the mission portions of the game, it can be thought of as constantly observing the player and making data-based inferences on their playing style. In constantly ranking that player on the Knight/Soldier/Mercenary scale, the game mechanic itself is always monitoring just what sort of player is in the pilot seat at all times, and consequently makes changes to the narrative in the outermost narrative frame accordingly. In this way, AC0 is reading the behavior of the player and making subtle, silent decisions about how to tailor the story to the particular player. Conversely, this sort of action/reaction relationship between player interactivity and story structure usually manifests in games as a bald-faced question posed to the player in a directly-asked bit of dialog. This can be considered the conventional method of letting the player decide how to shift the story.

A common example of this sort of direct solicitation of the player’s story-altering input can be seen at various points throughout the single-player campaign mode of Starcraft II (3). In that game, moral conundrums surface at key points in the game that overtly force the player to choose between two different courses of action. The consequences are labeled plainly for the player in clarified text below each of the options, so that the player knows that once they have made a choice, there is no going back (Fig. 7).

Figure 7: The typical "What would you do?" scenario as presented in Starcraft II. The decision point is clearly delineated and the outcomes of each decision branch are precisely defined.

Another example of this sort of Story Branch Scenario nextii can be found in Konami’s renown title, Metal Gear Solid (4). In that game, the player's ability to "resist torture" during a pivotal part of the game will directly determine which of the supporting characters survives to the end of the game. During this scene, the antagonist character Revolver Ocelot issues instructions to the protagonist Solid Snake (Player) which are semi-disguised as intimidating dialog ("Press the Circle Button repeatedly to regain your strength...And don't even think about using Auto-Fire, I'll know..." (4)). Through this interaction, the player knows both how to attempt to navigate this choice nexus and the consequences should they fail to keep up with their button taps (Fig. 8). While not as overt as the aforementioned Starcraft II example, the example presented here from Metal Gear Solid still follows the same conventions of somehow directly informing the player that a choice has been presented, must be taken, and has consequences for the story outcome of the game. In both the examples of Starcraft II and Metal Gear Solid, players are aware of the fact that they must act in order to progress/change the story.
Figure 8: In Metal Gear Solid, even if the instructions have some subtlety to them, most decision points are forced, obvious affairs. In most cases, the player knows without a doubt that there is a plot-influencing choice.

By contrast, AC0's method of informing the player that a story-altering choice is at hand is so silent as to almost be a non-event. Although the game mechanic is clearly and sufficiently explained in the accompanying instruction manual for the game [2], AC0 makes no overt mention that it is ranking your performance in order to use that rank to initiate gradual yet meaningful changes to the game narrative. Players who neglect to read the manual of AC0 may not even notice that the game's outer narrative is malleable until a second or third playthrough, and that is only if that same player played the game from start to finish at a different level of aggression. Even then, there is still a chance that the player will not realize the causal connection between their own ferocity of play and the changes which occurred to the plot. The result is that the game mechanic of AC0 manifests rather stealthily as an unobtrusive petition for player input.

The ultimate advantage that this "stealth approach" accrues is that the game has less of a need to bother the player with its very presence as a game. It helps to create an immersive story-game experience by not reminding the player that it is a game. It has less of a need to break the so-called 4th Wall and break the illusion of the game world. Subsequently, it allows the game to truly maintain the Suspension of Disbelief, and in doing so, adds to the realism of the game story and raises the quality of its narrative altogether.

3.3 Cause-Effect Contextualization

The second unique advantage afforded by the game mechanic of AC0 is that the interactive Frame Narrative serves to contextualize the player's actions as having direct historical consequence (relative to the game world). Actions committed by the player in the innermost Narrative Frame directly affect the history being constructed in the outermost Narrative Frame. Through this cause-effect link, which according to the game spans over ten years, the cumulative narrative of AC0 can succeed in portraying a deep aspect of geo-political realism: that actions undertaken in military operations have far-reaching consequences. This depth of contextual meaning is not common for typical Flight Shooting-/Flight Simulation-type games, which typically sufficiently render the singular experience of being able to fly a jet airplane which would otherwise be limited to qualified real life military personnel or countries. In such games, this is sufficient to be able to label it a Flight Shooting Game, but without an incorporated plot, these games are merely a string of simulation tasks aimed at affording players a flight (and perhaps fight) experience.

On the other hand, by incorporating a dynamic interactive Frame Narrative to express its plot, AC0 not only allows players to experience jet flight and combat, it also illustrates and reflects the geo-political consequences of real life Flight Missions. The game's mechanic of showing the player the face of the enemy that has been shot down establishes, maintains, and extends the metaphor of plane and pilot, equating the two with each other and conveying the idea that a fight between fighter jets is not simply a competition of machinery and skill, but rather, a fight carried out on multiple levels: it is the fight between men, between nations, but most importantly, the fight between ideologies. This is a metaphor that is not easily seen in real life or other Flight Shooting games. However, when put into the context of a historical Frame Narrative separated by an ocean of time ten
years long and widened by the legends of the Demon Lord's exploits, this metaphor does not only become visible, it becomes undeniable.

3.4 Negative Effect on Replay Value

While both of these incurred advantages serve to highlight the benefits which a frame narrative structure could bring to an interactive medium such as games, it is important to note that frame narrative as a storytelling device is by no means a one-stop/solve-all solution, nor is it a unified methodology that must be strictly adhered to in order to create narratively-effective games. In fact, utilizing a hidden interactive frame narrative mechanic has a trade-off and potentially negative influence on a game's replay value.

Replay value is an aspect that is significantly important to games and other related media such as films and music. Essentially, the more times a person is encouraged or motivated to enjoy a particular thing, the better it is from a variety of perspectives such as (but not limited to) marketing, entertainment, reputation, etc.

Particularly, replay value in games is driven by factors such as having a wide variety of a plurality of "options." And in this case, "options" can mean anything from a huge selection of obtainable supplementary items, attainable character skills/weapons/armor/cosmetic looks, etc.

For the purposes of our analysis, it is important to note that a large factor influencing the replay value of a game is the presence or lack of multiple story-paths and/or multiple endings. Specifically, the presence of multiple story-paths and endings constitutes a wholesale positive effect on the replay value of a given game, while the lack is conversely negative. When this function is considered, it becomes evident just how replay value may be affected by an inherently stealthy story branching mechanic.

While AC0 lacks multiple endings, there is still a considerable variety of story paths available to the player, and consequently, a plurality of story permutations which can potentially result from any single nuance on each unique playthrough, so this is not much of an issue for the replay value of the game. However, because the story branching mechanic of AC0 is unconventionally subtle, a player may not actually be aware that they are influencing or playing through a multi-faceted story at all. This has the potential to lower the replay value of the game as a whole, as it is essentially the perceived lack of story options. While AC0 may potentially offset this lowering of its replay value with a wide offering of real-world fighter aircraft for the player to acquire through mission rewards, the fact remains that a hidden story branching game mechanic for frame narrative, while being able to render a narrative that is purely reflective of each players' style, will ultimately have to work against its perceived lack of story options, and therefore, its potentially lowered replay value.

3.5 Final Verdict (for now)

Naturally, issues of player agency, hidden vs. overt game mechanics and replay value are the concerns and factors that the creators of any game should strive to address. In particular, the decision to utilize frame narrative, and the way of using a frame narrative in an interactive medium such as a game will admittedly never be a completely binary relation of a simple "Yes, it should be used" or a "No, this will never work." Rather, as we have seen in this analysis with the example of AC0, the question of the effectiveness of an interactive frame narrative is one that raises even more questions. However, despite this somewhat daunting insight, we can see that while the use of a frame narrative structure in an interactive game is by no means immune from design pitfalls and the perils of lowered replay value, it still retains the potential to tell a story in a uniquely effective way.

4. Conclusion and Future Work

Experts in the field of Game Studies have historically discussed the validity of the contention that games and stories are wholly independent from each other, and that a game is not necessarily a story and vice-versa [5][6]. The
discussions in this paper are admittedly insufficient to
invigorate or lay such contentions to rest. Rather, it has been
the contention of this close critical reading to at least point
out that even if stories and games are independent of each
other, there can still be some very intriguing examples of
how a game can enhance a story which has been
incorporated into its digital fabric with some workable
degree of literary finesse. We contend that this is precisely
what is occurring in the interactive Frame Narrative
structure of Ace Combat Zero: The Belkan War. By using a
game mechanic which subtly reads player aggression levels,
the game is able to tweak its narrative on the fly in order to
present a meaningful story to the player which may either
reflect or be satisfyingly compatible with that particular
player, on that particular playthrough. It is a unique
phenomenon which has the potential to expand the game
itself outside of its own definitional boundaries into a realm
of art that is neither game nor story, but somehow effectively
both. However, while such storytelling advantages can be
gained from employing an interactive frame narrative and a
subtle story-evolution mechanic, it is still susceptible to the
trade-off between replay value and the potential ability to
"match the story to the player" in an intuitive way.

In essence, our story through this paper has been the story
of how the dynamic potential of the video game medium can
allow for the telling of meaningful stories, and our story is
far from over. Future academic efforts in this spirit must
include considerations for other games which incorporate
interactive Frame Narrative in their gameplay mechanics to
significant effect. There is also a need for more analysis
(from all research aspects) on games produced in Japan.
Game Studies continues unabated in America and Europe on
games produced in the West, but there is an appalling lack of
similar studies on games from the Japanese gaming industry.
The word "video game" used to be synonymous with
"Japan," and deplorably this is no longer so. Regardless of
the reasons for this phenomenon, this fact should illicit a call
for action. This paper has been an effort to loudly and
enthusiastically answer that call.

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「Ace Combat Zero: The Belkan War」におけるインタラクティブ枠物語について

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概要 一般に「Ace Combat Zero: The Belkan War」（AC0）はフライトシューティングゲームとして分類されるが、同ジャンルのゲームと比較すると、「AC0」は複数の物語から構成され、枠物語の技法が用いられている特徴をもつ。本稿では、「AC0」において、枠物語の技法と三段階の評価システムが物語に与える影響を、インタラクティブ性の観点から分析、考察することで、「AC0」に対する文学性の新たな洞察を得ることができる。

キーワード ゲーム研究，文学性，枠物語，評価システム，物語論