

# The Limits of the Evolution of Female Characters in the *Bioshock* Franchise

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## ABSTRACT

In this article, a multimodal framework is proposed to track the character development of female characters in the *Bioshock* franchise. The language part of the framework focuses on appraisal analysis. The appraisal framework is applied to understand the player's interpretation of the linguistic resources found in the characters' utterances. The non-linguistic part of the framework utilizes Kress and van Leeuwen's framework of visual analysis with Lim's system of gesture. The integrated framework is applied to compare the different multimodal representations of the female characters in the narrative and gameplay. Through the analysis, I show there is some advancement in the depiction of female characters in the *Bioshock* franchise in terms of their increased independence. However, the female characters' representation is still limited by the male player (character's) perspective. A detailed account of the role of female characters over the *Bioshock* series of games is provided in this article.

## Keywords

multimodal analysis, appraisal theory, female characters, *Bioshock franchise*

## INTRODUCTION

This study proposes an integrated framework for tracking the development of the semiotic representations of the female characters in the *Bioshock* franchise. The games in the franchise include *Bioshock* (2K Boston 2007), *Bioshock 2* (2K Marin 2010), and *Bioshock Infinite* (Irrational Games 2013). *Bioshock* is a first-person shooter video game series. The first game takes place in 1960, in the fictional underwater city of Rapture and the player controls the protagonist Jack who is unknowingly guided by Atlas, a revolutionary to overthrow Andrew Ryan, Rapture's founder in his attempt to escape from Rapture after his plane crashes nearby. *Bioshock 2* takes place in the same setting eight years after the first game in Rapture. The player controls a Big Daddy, a genetically modified human being whose goal is to reunite with the Little Sister, Eleanor Lamb whom he was bonded to and tasked to protect prior to his death. *Bioshock Infinite* takes place in 1912 in Columbia, a city in the sky. The player controls Booker DeWitt in his quest to rescue Elizabeth from her imprisonment on Monument Island to pay off his debts.

## Rationale and Female Character Introductions

The rationale for the choice of the *Bioshock* franchise to analyse is that as newer games are released, increasingly "independent" female characters are depicted in the gameworld.

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On the surface level, newer female characters appear to be more “independent” but I aim to show using the proposed framework that these characters are still portrayed from a patriarchal perspective. For a list of characters analysed, see Table 1 below.

Video Games	Female Characters		
<i>Bioshock</i>	Brigid Tenenbaum	Little Sisters	
<i>Bioshock 2</i>	Brigid Tenenbaum	Sofia Lamb	Eleanor Lamb
<i>Bioshock Infinite</i>	Elizabeth		

**Table 1:** Female characters analysed.

Brigid Tenenbaum is a German scientist who appears in both *Bioshock 1* and *2*. She discovered the substance ADAM that can be used to produce tissue and functions that would not normally be present in the human body. Her role is to provide backstory and gameplay support for the player character. The Little Sisters appear in *Bioshock 1* and *2* and they are young girls who have been genetically altered and mentally conditioned to reclaim ADAM from the corpses around Rapture. Their character role is to support the player character in the gameplay by providing him with gameplay rewards.

Sofia Lamb is a clinical psychiatrist and the primary antagonist of *Bioshock 2*. Her character role is to obstruct the player character’s gameplay progress. Eleanor Lamb is Sofia Lamb’s daughter and a previous Little Sister. Her character role is to support the player character in the gameplay. She provides him with gameplay rewards and hints in the first half of the game and fights alongside the player character in the final part of the game after she obtains the Big Sister suit.

In *Bioshock Infinite*, Elizabeth’s rescue from imprisonment on her tower on Monument Island is a gameplay goal of the player. Although she can take care of herself and will not be hurt during the gameplay, she plays a supporting character role to the player character in the majority of the game. She also turns against the player character at the end of the game after she regains her powers.

### **Problem and Goal**

The depiction of female characters in video games has been described as problematic (Kennedy, 2002; Consalvo, 2003; Jansz & Martis 2007; Williams et al., 2009; Chess, 2011). However, an exact categorization of any particular character is difficult, especially when the role changes during the game. In this paper, I introduce a multimodal framework to analyse characters across role changes and game titles. These linguistic and visual analyses will not only give a better understanding of how gender roles are constructed, but will also provide a way for game designers to assess their work in regards to stereotypical depiction. This article investigates whether female character development in *Bioshock* heads towards a more balanced depiction in regards to

stereotypical character roles or if they are still loosely portrayed based on patriarchal categories such as “damsels in distress” and support it.

In the *Bioshock* franchise, one might also argue that the overall problem is not only with the female characters, but more so with highly stereotypical gender roles in the series. This would mean that both genders need to be presented in a more diverse way. The framework focuses specifically on appraisal analysis. Appraisal analysis offers a relevant approach which enables the analyst to uncover how the characters appeal emotionally to the player in relation to their character role in the video games. This study specifically aims to show the ideology underlying the language used by the characters and their behavior, through the comparative analysis of the female characters in the *Bioshock* franchise. This analysis can serve as a model to understand the representation of female characters in video games through linguistic and multimodal perspectives. Game designers will be able to understand how to create more diverse representations of female (and male) characters by understanding the stereotypical female (and male) representations in video games from a multimodal perspective.

To achieve this study’s aims, constituents correlating with the female characters’ development (or lack of) that underlie their depiction in the narrative and gameplay are analysed. Specifically, the study analyses the language used by the characters and the visual elements; I focus on the characters’ representational structures in the narrative in relation to the player’s action. From a multimodal perspective, the primary objective of this study is to propose an integrated framework to highlight the limits of the evolution of female characters in the *Bioshock* franchise. This framework is then applied to show the specific semiotic representations of female characters that do not evolve or are limited in terms of their evolution in the different *Bioshock* games. One underlying issue of the study is the definition of “stereotypical female role” which is based on the proposed framework. For instance, in *Bioshock*, specific characters like Brigid Tenenbaum behave in a specific way, such as assisting the player in the gameplay or providing backstory but seldom appear in the gameworld. The framework would code Tenenbaum’s behavior as “circumstance: means” and “verbal process” respectively. When the same category is dominant in the different parts of the game, the coding from the framework would serve as a marker for stereotypical female behavior. The analysis section below will provide examples of how the framework can be applied to code the linguistic and process/gesture tokens for analysis. In the next section, I provide a brief outline of the framework used for this study.

## **THEORETICAL DISCUSSION**

This section gives a brief overview of the appraisal framework. It first introduces the language part of the framework. This is followed by the visual part of the framework which includes gestures.

### **Overview of the appraisal framework**

This section gives a brief overview of the appraisal framework. A more detailed description of the appraisal framework is available online at The Appraisal Website (White 2005). Appraisal here refers to the “systematic resources used to negotiate emotions, judgments, and valuation, alongside resources for amplifying and engaging with these evaluations” (Martin 2000, 145).

The analysis of the (non) prototypical behavior of the female characters in terms of verbal and/or visual resources may be used to highlight the characters' evolution. Due to space and time constraints, only the affect analysis will be conducted on the transcribed data.

### **Kress and van Leeuwen's framework of visual analysis**

Kress and van Leeuwen's (1990, 1996, 2006) framework of visual analysis is metafunctional. Like language, the meaning potentials of visual communication can be considered in terms of Ideational, Interpersonal and Textual metafunctions. In this article, I will only utilize the ideational metafunction from their framework, namely the narrative structure (Kress and van Leeuwen 1996) for the analysis. Representational structures are distinguished by *vectors*. For instance, narrative structures are depicted by the presence of vectors, and represent "unfolding actions and events, processes of change, transitory spatial arrangements" (Kress and van Leeuwen 1996, 56).

Process refers to the types of unfolding actions that are represented in image texts but they can also be used to analyse characters' actions in video games. Three out of the five process types, namely, the action process, reactional process and speech/mental process which are relevant to this article are outlined below. The other two process types that are not outlined include the conversion process and geometrical symbolism.

An action process can refer to a transactional action process and a non-transactional action process. In a transactional action process, a participant acts on another participant or object realizing the roles of *Actor* and *Goal* respectively. Using the action process for analysis can enable the analyst to track the changes of the character from being a goal of the player to the actor in the different *Bioshock* games. In this article, I also integrate Lim's (2011) gesture framework into the transactional action process. This enables the analysis of the characters' gestures to find out if they are positively inclined or negatively inclined towards another character. The gesture framework is outlined in the next section. In a non-transactional action process, there is only one participant, that is, there is only *Actor* but no *Goal*.

A reactional process is defined by the gaze when a participant or *Reactor* looks at another participant or *Phenomenon* inside or outside the frame of the image. It can be distinguished into transactional and non-transactional types without a *Phenomenon*. In addition to the gaze, I also include the participant's hearing of the *Phenomenon*. Using this process for analysis enables us to understand how passive or active the female characters are depending on whether the character is under or out of the player's control.

A speech process is realized through the dialogue spoken by the characters. A mental process is realized through a flashback in *Bioshock* or can be found in the audio tapes when the characters recount what they think of the gameworld events. The mental process may be triggered by the characters' movement, is solely a verbal recount of their thought processes or when they touch a specific object in the gameworld.

Circumstances are additional information related to the main participants in narrative structures and consist of Locative, Means and Accompaniment. These circumstances are not only limited to narrative, but apply to all modes of discourse, such as gameplay. An overview of the types of circumstances is provided below.

A locative is a circumstance where characters function as *Setting* to other characters in the video game. The audio logs or characters' dialogues explain the different characters' backstory, motivations or what is occurring in the setting to the player. These explanations may serve as a gameplay goal to motivate the player on how to overcome the gameplay challenges to proceed the gameplay. Means are tools used in action process. Characters can function as tools to the player in the gameplay where they can serve as a means to achieve the gameplay goal. In *Bioshock*, the Little Sister is an example. Accompaniment includes secondary characters that are seen to be in a relationship of accompaniment to the main characters (Kress and van Leeuwen 1996, 71–73). Elizabeth is an example in *Bioshock Infinite*. However, Elizabeth is a complex character and her character role changes as the narrative progresses. She is not always an accompaniment to the male player character, Booker DeWitt. Sometimes, her character role is a *goal* in the action transactional process when the player or the other characters act upon her.

### **Lim's (2011) system of gesture**

Lim (2011) builds on Martinec's (2000, 2004) and Hood's (2007, 2011) systems of gestures to analyse classroom discourse. In this section, I outline Lim's (2011) system of gesture which will be used to analyse the characters' gestures.

From a systemic functional perspective, Lim (2011) develops and builds on Martinec's (2000, 2001, 2004) system of gesture by adding ideational meanings to presenting action, ideational, interpersonal, and textual meanings to representing action, and ideational, interpersonal, and textual meanings to indexical action.

Performative gesture is a gesture without intention to convey a meaning, but is movement performed practically to execute a task (Lim, 2011, 157). As performative is related to the linguistic term in pragmatics which is associated with a communicative consequence, Toh (2013) modified Lim's (2011) terminology to performance gesture to avoid a conflation of the linguistic term with the term in the gesture framework. Performance gesture includes presenting action.

A communicative gesture is one that conveys a meaning to an addressee. Communicative gestures can be subdivided into representing action, that is understood without the use of speech to decode its meaning (language independent gesture), or they co-occur with speech, but their meanings can be accessed and interpreted without relying on the accompanying language (language correspondent gesture) (Lim 2011, 157). Indexical action is a language-dependent gesture, that co-occurs with language and requires the accompanying language to fully access and interpret its meaning (Lim 2011, 157).

#### ***Ideational meanings in representing and indexical action***

Indexical actions are communicative gestures and language-dependent gestures because they necessarily accompany language, and require it for interpretation (Lim 2011, 177). Although language-dependent gestures usually co-contextualise with language, they do not replicate the exact meanings, but the interaction brings an additional ideational dimension to the meanings made through the gestural realization (Lim 2011, 177). Thus, an important difference between indexical and representing action is that the former requires language to disambiguate its meaning, while the latter does not.

Lim (2011, 179) mentioned that the representation of (positive) receptivity is typically instantiated by open palms along with regular rhythmic arm movement. The indexical

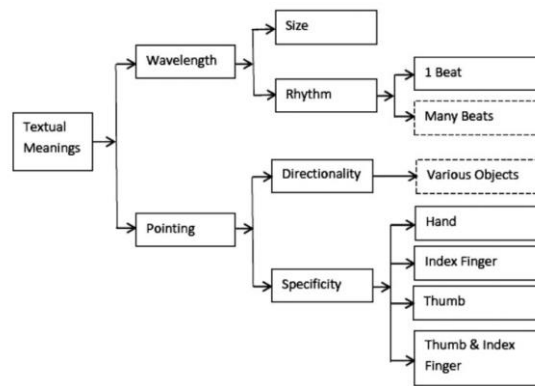
action which realizes the representation of receptivity indicates welcome and openness (Lim 2011, 179). Negative receptivity indicates an antagonistic or oppositional stance. It is typically realized by closed palms with fast rhythmic arm movement. Relation is realized as pointing which is an indexical action (Lim 2011, 181). These gestures have to be interpreted in their contexts of use.

*Interpersonal meanings in representing and indexical actions*

Graduation refers to the movement of the character’s gestures, which may be fast, medium, or slow. These gestures are categorized in terms of the number of beats in the gesture’s movement. A fast movement consists of more beats than a slower movement.

*Textual meanings in representing and indexical actions*

Lim’s (2011) textual meanings in representing and indexical actions are shown in Figure 1.



**Figure 1:** Textual meanings in representing and indexical actions.

In the next section, I apply the proposed framework to highlight the depiction of the female characters in the *Bioshock* franchise. To support the discussion, I select concrete examples for analysis from the respective video games to show the limits of the evolution of the female characters in the *Bioshock* video games.

**ANALYSIS**

This section applies the proposed framework discussed in the previous sections to show how the respective components of the proposed framework can be used to analyse the semiotic representations of the female characters in the *Bioshock* franchise.

In this section, I give an example of how the coding scheme can be applied to understand the role of the female characters in video games. In the beginning of *Bioshock Infinite* where Elizabeth is the gameplay goal of the player to be rescued, there is a dominance of “insecurity” and “inclination” linguistic tokens. For instance, the utterance where Elizabeth mentions that Songbird (her mechanical jailor) is coming for her is coded as “insecurity” because Elizabeth is worried about what Songbird would do to Booker if he finds him with Elizabeth. The utterance where Elizabeth asks Booker for the key to unlock the door for her escape is coded as “inclination” because she desires to escape and Booker provides her with the way. These linguistic tokens are correlated with Elizabeth’s dependence on Booker to escape from imprisonment.

The analysis data uses the gameplay recordings of other players. *Bioshock*'s gameplay recordings are taken from my game study's participants. The remaining *Bioshock* games' data are taken from the video recordings of YouTubers. I take video games as dynamic texts where the choices and possible narrative variations are limited. Firstly, even though the players are presented with the notion of choice, and *Bioshock* and *Bioshock 2* have multiple endings, the game guides the players' actions to a large extent. *Bioshock* games are not sandbox games and players have to conform to a specific pathway when playing.

Secondly, and more importantly, within the restricted variability in the narrative and gameplay, the semiotic representations of the female characters do not change much. In *Bioshock*, the Little Sisters will still help the player escape from Frank Fontaine after he takes over Rapture even if the player character "harvests" (kills) all of them. The data from the other players' choices made in the other pathways can be obtained from other YouTube video recordings if necessary. However, I analyse only the female characters' representations as a result of the player's choices made in the "good" pathway (defined as saving the Little Sisters in *Bioshock* and the various NPCs in *Bioshock 2*) as this is the typical pathway taken by most players on their first play through (Lange 2014).

The language, behaviour and gestures of selected female characters are transcribed. (See Appendices A & B).

### **Linguistic analysis of female characters in *Bioshock***

The analyst first obtains a transcript of the characters' utterances. The manual transcription of the dialogue is performed. After the dialogue is transcribed, the analysis is done by the labelling of the appraisal categories such as affect, judgment, and appreciation from the ATTITUDE subsystem on the transcription. (See Appendix A).

The analysis is presented in the form of a table. (See Appendix C). This section provides the linguistic analysis of two selected female characters in *Bioshock*.

The analysis of Tenenbaum's tokens (where a token is a single instance of an appraisal category) shows there is a significant number of capacity and valuation tokens. The tokens with the greatest quantitative difference in their valence are the "capacity", "tenacity" and "valuation" tokens. Capacity tokens highlight Tenenbaum's character role as a strong scientist. In the first half of *Bioshock*, the audio logs (voice recordings that are left behind by the former inhabitants of the area the player is exploring) depict her as the scientist who discovered the substance, ADAM from the sea slug which can be genetically manipulated to produce tissue and functions that would not be normally present in the human body. Valuation tokens highlight what she finds appropriate, effective and helpful in assisting her to achieve success in her scientific experiments. Tenacity tokens highlight her loyalty to the player character on the "good" play through where the player chooses to rescue all the Little Sisters. She sends gameplay rewards to the player via the Little Sisters' presents and her veracity tokens indicate that she kept her promise. Towards the latter half of the game, Tenenbaum dispenses gameplay advice to the player to assist him. The equal number of positive and negative propriety tokens highlight Tenenbaum's character development from an objective scientist to an emotional and nurturing character. After she realised the consequence of her experiments, she sought to make amends.

There is no large quantitative difference in the Little Sisters' tokens with positive and negative valences. This highlights that the simple characterization of the Little Sisters.

The player can either choose to save or “harvest” them. Before the Little Sisters are saved, they are “disinclined” (appraisal category which refers to their opposed stance) to the player but after they are saved, they become loyal to the player. On the “good” play through, the Little Sisters consistently bring gameplay rewards to the player. The Little Sisters do not display complex emotions. They are either happy or unhappy due to their conditioning. Once saved by the player, they regain their free will and become “capable” of independence. The Little Sisters play a supporting role to the player character and do not directly interfere in the gameplay. For instance, in the final boss fight with Frank Fontaine, the Little Sisters provide verbal support to the player. They do not directly assist the player in fighting Frank Fontaine in the gameplay.

### **Visual analysis of female characters in *Bioshock***

The visual analysis of Tenenbaum’s token indicates the dominance of verbal process, followed by mental process, and circumstance: means. In the first half of the game, Tenenbaum’s backstory is highlighted to the player through the audio logs where she talks about how she discovered the substance ADAM from the sea slugs. The audio logs also describe her character development from an objective scientist to an emotional and nurturing person after her maternal instincts were awakened due to sympathy for the Little Sisters. Tenenbaum consistently provides gameplay rewards to the player via the Little Sisters. In the latter half of the game, Tenenbaum guides the player in the gameplay. This is highlighted by the large number of “circumstance :means” tokens. Tenenbaum’s physical presence in the game is minimal and she only appears twice in the game. She serves a supporting role to the player.

The visual analysis of the Little Sisters’ tokens indicates they are more passive than Tenenbaum. A majority of the visual tokens is the “transactional action process :goal” where the Little Sisters are the goal of the player who requires salvation. There is no mental process. It indicates the simple characterization of the Little Sisters where their thought processes are not revealed. There is the presence of some “transactional action process :actor” tokens when they support the player. They help the player open doors and provide him with the ADAM needle to defeat Frank Fontaine at the end of the game. They do not help the player directly in the gameplay. They are tools that enable the player to progress the gameplay, highlighted by the “circumstance :means” tokens.

### **Linguistic analysis of female characters in *Bioshock 2***

There are not many tokens for Brigid Tenenbaum because she only makes a brief appearance in *Bioshock 2*. When she appears, her main character role serves to support the player character. This is indicated by the most number of “inclination” tokens which highlights her allegiance to the player. It is complemented by “reaction :quality” and valuation tokens which emphasise her admiration of the player character. The next most frequent token is “reaction :impact”. These tokens highlight Tenenbaum’s guidance of the player during the game’s beginning by pointing out important gameplay objects and goals. “Tenacity” tokens highlight both her loyalty and dependence on the player to save her when she was attacked by Sophia Lamb’s splicers.

A large quantity of negative valence is found in Sophia Lamb’s tokens. This highlights her character role as the antagonist to obstruct the player’s gameplay progress. The highest quantity of negative tokens is “reaction :quality”, followed by “disinclination”. These tokens highlight her negative emotions towards the player character. She perceives him as an obstacle to her creation of utopia. The greater quantity of positive “valuation” tokens than the negative tokens highlights her perception of her daughter,



Eleanor Lamb as her most important tool in bringing to life her vision of utopia. The negative valence tokens such as “dissatisfaction” and “unhappiness” occur in the gameplay background when she responded negatively to the player character’s action as he disrupted her plan. The greater quantity of positive “capacity” tokens over negative tokens highlight her possession of power in Rapture as she nurtures Eleanor Lamb to become her powerful tool to control Rapture. This power is taken away as the player character progresses in the game and shapes Eleanor Lamb according to his actions before eventually freeing her from Sofia Lamb’s control. Positive and negative “Tenacity” tokens are almost equal in quantity. Positive “tenacity” tokens highlight Sofia Lamb’s dependence on Eleanor Lamb as her tool while negative tokens highlight her antagonistic relationship with the player character and other non-player characters who have betrayed her. A large quantity of negative “propriety” tokens highlights her perception of ideal society and what actions are (un)ethical according to her beliefs.

The greatest quantity of Eleanor’s token is “tenacity” followed by “inclination” and “capacity”. “Tenacity” and “inclination” tokens highlight her reliance and loyalty to the player character throughout the game as she constantly helps the player by providing him with subtle hints and gameplay rewards to progress the gameplay. Of particular note is the occurrence of “reaction :quality” tokens which highlights her admiration of the player character as a Big Daddy which she as a Little Sister perceives as a “knight in shining armour”. Eleanor also addresses the player character as “father”. This highlights her relationship with him. In the first half of the game, Eleanor is passive as she is a captive of her mother, Sofia Lamb. She is only able to indirectly assist the player in the gameplay by controlling the Little Sisters to help the player. This is highlighted by the “incapacity” tokens. Towards the latter half of the game, after the player finds the Big Sister suit for Eleanor, she becomes a powerful and active character in the game who works together with the player to overcome the gameplay challenges. This is highlighted by the “capacity” tokens. However, a large quantity of “reaction :impact” tokens also indicates Eleanor Lamb serves as a gameplay tool for the player by highlighting important gameplay objects and goals that has to overcome to progress the gameplay. She is also a summonable skill of the player character and is thus bound to him.

## **Visual analysis of female characters in *Bioshock 2***

Tenenbaum appears for only a brief moment in *Bioshock 2*. The majority of her visual tokens is verbal process where she remains in the game’s background to provide backstory and gameplay hints. Continuing her characterization as a nurturing character from *Bioshock*, Tenenbaum’s motivation in *Bioshock 2* is to save the Little Sisters from Sofia Lamb. This explains her allegiance to the player character and the Little Sisters where all of her gestures are inclined towards them.

Similar to Tenenbaum, Sofia Lamb only appears briefly as a physical form in *Bioshock 2*. The majority of her visual tokens is verbal process (204 tokens) while her presence is felt constantly in the background. She continuously talks to the player through the radio and taunts him. She provides motivation and a reason for the player to fight against the gameplay challenges. This is highlighted by the 47 “circumstance :locative” tokens in the analysis. A small number of “mental process” highlights her thought process and her ideology. She is only physically present at the beginning and middle of the game. At the beginning, she controls the player character in an attempt to get him to commit suicide, which sets her up as the main antagonist. In the middle of the game, her attempt to stop Eleanor’s heart temporarily is meant to stop the player character from rescuing her.

However, her “material process” of suffocating Eleanor Lamb serves as a catalyst to transform Eleanor to become the Big Sister. There is no character development for Sofia Lamb and she remains opposed to the player throughout the game.

Eleanor is the “daughter” and Little Sister of the player character, Subject Delta. The analysis of Eleanor’s visual tokens (23 transactional action process) indicates that she is more active than Tenenbaum and Sofia Lamb. She is acted upon only twice in the game as a goal of the other characters. First, when Sofia Lamb attempts to suffocate her and second, when the Little Sister brings her the Big Sister suit. In the first half of the game, Eleanor is similar to Tenenbaum and Sofia Lamb as she only talks to the player through the radio and assists the player indirectly. Her character role is limited to providing backstory (45 circumstance: locative tokens) and gameplay support by leaving behind weapons and plasmid powers (35 circumstance: means tokens). In the second half of the game, after she obtains the Big Sister suit, her supporting role is expanded to include assisting the player to fight against the enemies in the gameplay (31 circumstance: accompaniment tokens). Eleanor also highlights important obstacles in the environment which are the gameplay goal that the player has to overcome to progress the game (35 reaction: impact tokens).

The player character drives the game progression. For instance, if the player does not activate the button in the pediatric ward within the gameworld, Eleanor will not proceed to rescue the Little Sisters. Her character is not independent from the player. She is to a certain extent a consequence of the player’s gameplay actions. Furthermore, both Sofia and Eleanor told the player that the male player character’s (Subject Delta) actions and choices in the game shapes Eleanor’s attitudes and goals and how she turns out by the game’s ending. In the data analysed which contains the “good” ending, Eleanor’s gesture towards her mother, Sofia Lamb when she was drowning was “representing action, attitude :positive, engagement :expansion and graduation :fast”. This token highlights her as a savior instead of a murderer in the bad ending. Similarly, Eleanor will save the Little Sisters (representing action, attitude: positive, engagement :expansion, graduation fast) in the pediatric wards which follows the player’s choice of saving the Little Sisters throughout the game. Hence, the choices that the male player character selects serve as a role model for Eleanor that contribute to his “daughter’s” identity.

### **Linguistic analysis of female characters in *Bioshock Infinite***

The highest quantity of Elizabeth’s tokens is “reaction :impact” (572). This highlights Elizabeth as a guide that draws the player’s attention to important narrative and gameplay information in the gameworld to facilitate his progress. Of significance is the 31 “insecurity” tokens. The occurrence of this token type provides characterization for Elizabeth as a character that is dependent on Booker to escape from captivity. At the game’s beginning, Elizabeth is imprisoned by Comstock. The player’s gameplay goal is to find her and help her escape from the warden, Songbird. The second main occurrence of “insecurity” tokens is where Elizabeth discovers Booker lied to her as he does not intend to bring her to Paris but intends to deliver her to the Luteces to wipe off his debt. Upon this discovery, she embarks on a brief escape from the player character. However, she eventually reunites with him as she is dependent on him to reach Paris. The third main occurrence of “insecurity” tokens occurs in the game’s final stage when Elizabeth is recaptured by Songbird and imprisoned by Comstock to transform her into his successor. When she gets imprisoned, she becomes dependent on the player character, Booker to rescue her.

There is a larger quantity of “capacity” tokens than “incapacity” tokens. This emphasizes Elizabeth as a “powerful” character because of her ability to open “tears” (portals to parallel universes). This ability plays a supporting role to the player character in both the gameplay and narrative. For instance, she supports the player during the gameplay fights by throwing him ammunition and medical supplies when he runs low. At the end game, Elizabeth offers her power of commanding Songbird to the player. Elizabeth can open tears that enable herself and the player character to enter into a parallel universe to progress the plot. This tear opening ability is arguably evidence that Elizabeth is a strong female character. But it is ultimately up to the player’s actions and choices that progresses the gameplay and narrative. For instance, Elizabeth will not open tears by herself except for specific scripted narrative events. One of these events is when she escapes from Booker after she discovers he lied to her. Another instance is when she becomes omnipotent after the Siphon is destroyed by Songbird as her power is restored completely. In most instances, Elizabeth will only open tears upon the command of the player. In the last gameplay fight, Elizabeth will ask the player for permission to use Songbird on specific targets. She does not act independently of the player. This gameplay behavior is also how Eleanor is represented in *Bioshock 2*.

The presence of “-propriety” and “-reaction :quality” tokens highlights Elizabeth as an innocent character at the game’s beginning. She vocalizes her negative emotions when the player uses violence to resolve conflicts. Even though Elizabeth also engages in violence when she kills the freedom fighter, Daisy Fitzroy in cold blood, it is done because Elizabeth wants to protect the child Daisy is about to kill. Elizabeth still maintains her moral stance of her disinclination to violence. She shouts to Booker to dissuade him from killing Comstock towards the game end at the final confrontation on his airship. However, in the majority of cases, Elizabeth cannot do much to prevent Booker from using violence. One exception of this occurs when Elizabeth opens a tear to bring in food supplies for the hungry civilians so the player need not have to kill them. The moral stance of Elizabeth somewhat conflicts with her support of Booker during the gameplay fights as indicated by the “capacity” and “tenacity” tokens when she pulls in gameplay ammunition and medical supplies to facilitate the player’s use of violence in the fights. Elizabeth’s behavior could perhaps be explained by her dependence on the player character initially as she would be unable to travel to Paris by herself. Thus she has no choice but to support Booker to achieve her objective. Her supporting actions of the player also emphasize her nurturing attribute as a female character who takes care of the player when he needs assistance.

Elizabeth has a character development after she has undergone Comstock’s treatment to transform her into his successor. After this torturous experience, Elizabeth becomes motivated by revenge to find Comstock and stop him from turning her into his tool. She starts to exhibit attributes traditionally associated with masculinity such as independence, dominance, self-confidence, violence, threatening behavior, physical and verbal aggression towards Booker DeWitt. These stereotyped masculine traits were found by previous studies of gender representation on television (Baker & Raney 2007 & Johnson 2005). For instance, when Booker wants Elizabeth to open a tear to Paris after he rescues her, she disobeys and threatens him verbally (“-tenacity” and “-reaction :quality” tokens) and physically by creating a tear with tornado. Later, when Booker wants to confront Comstock alone and asks Elizabeth to remain behind, she threatens him again (“disinclination”, “-tenacity” and “-reaction :quality” tokens). She insists that she wants to confront Comstock together or she will do it by herself.

## Visual analysis of female characters in *Bioshock Infinite*

Just as Eleanor is the player character, Subject Delta's "daughter" in *Bioshock 2*, Elizabeth is also revealed to be the player character, Booker's daughter by the end of *Bioshock Infinite*. The highest quantity of Elizabeth's visual tokens is "circumstance :means" whereas the highest quantity of Eleanor's visual tokens is "circumstance :locative". This is because Elizabeth appears physically throughout *Bioshock Infinite* whereas Eleanor only appeared physically near the end of *Bioshock 2* after she obtained the Big Sister's suit from the player character. Elizabeth's primary gameplay role (432 "Circumstance :means tokens" and 329 "Representing action, attitude :positive, engagement :expansion, graduation :fast" tokens) is to support the player character by assisting him during gameplay fights to throw him ammunition and medical kits when he requires them. On the other hand, Eleanor's primary role in the first half of *Bioshock 2* is to provide backstory to immerse the player in the gameworld and to a lesser extent, support the gameplay by leaving gameplay powers and weapons for him. In the second half of *Bioshock 2*, Eleanor's role expands to support the player character directly in the gameplay fights and to guide him in the gameplay. Elizabeth's secondary role (285 "Circumstance :locative" tokens) is to provide backstory to the player character to motivate him in the gameplay. In the majority of the game, Elizabeth accompanies (75 "Circumstance :accompaniment" tokens) the male player character. Both female characters are similar as they are the goal to be rescued by the male player character.

Compared to Eleanor Lamb who is shaped by the player's choices and actions, Elizabeth is much more diverse in her emotionally expressive gestures. Thus, she appears to be both dependent and independent from the male player character. Her dependence, independence from and "defiance" of the male player character fluctuates during the course of playing the game. In the game's beginning, after she is rescued by the player character, she expresses her innocence and happiness. She leaves the player and goes to dance with the crowd by the music (non-transactional action process, indexical action, receptivity, attitude :positive, engagement :expansion, graduation :fast, pointing :self).

In Battleship Bay, there is an ambush set up by Comstock as the player character is heading through the turnstile to the ticket stand. Comstock intends to reacquire Elizabeth right before the section where the player chooses to pull the gun on the ticketer. Elizabeth shows her independence when she defends herself by punching Comstock's man who is trying to grab her (transactional action process :actor, representing action, attitude :negative, engagement :contraction, graduation :fast, pointing :no object). When Elizabeth discovers that Booker DeWitt lies to her and is not taking her to Paris but is instead bringing her to New York to pay his debts, she expresses her defiance to the player character. She knocks him unconscious (transaction action process: actor, representing action, attitude :negative, engagement :contraction, graduation :fast) and runs away from him (-circumstance :accompaniment). However, she still returns to the player character as she depends on him to reach Paris (transactional action process :actor, indexical action, receptivity, attitude :positive, engagement :expansion, graduation :slow, pointing :player). At the game's beginning, her powers of tear manipulation are constrained. Furthermore, she lacks real-life experience due to her confinement on Monument Island by Comstock.

Part of Elizabeth's dependence on the player character is because of Songbird, a large, robotic bird-like creature who has been both her friend and warden but has also been programmed to feel betrayal should Elizabeth try to escape. This dependence is exemplified by Elizabeth's utterance "if it comes to it, you will not let him take me back"

in Emporia after they exit Grand Central Depot. They are nearly intercepted by Songbird, and only manage to hide. Elizabeth's gesture of taking Booker's hand and putting it on her neck (transaction action process :actor, indexical action, relation, attitude :positive, engagement :expansion, graduation slow, pointing :self) foreshadows her dependence on Booker to save her when she is recaptured by Songbird.

Towards the game end, after Elizabeth is rescued by Booker, she experiences significant character development. Elizabeth becomes motivated by vengeance to find Comstock to stop him from turning her into his successor. Her character becomes less stereotypically "female" when she displays attributes of greater independence from and defiance towards the player character. These attributes are highlighted by the appearance of "-circumstance :means" tokens where she no longer obeys Booker DeWitt's orders. When Booker asks her to open a tear to Paris, she tells him they are not leaving and she is going to find Comstock. She threatens Booker by opening a tear with a tornado (transactional action process :actor, indexical action, -receptivity, attitude :negative, engagement :contraction, graduation :fast, pointing :no object) so he has to obey her. When Booker asks Elizabeth to remain behind while he confronts Comstock alone, Elizabeth defies him by saying that they are doing it together or she will do it alone (- circumstance :means).

When Booker drowns Comstock in the fountain of water, Elizabeth attempts to stop his violent actions by yelling at him (-circumstance :means) but is unable to stop him physically. Booker's action of murdering Comstock ironically foreshadows Elizabeth's final transformation into Booker/Comstock when she adopts his masculine attribute of violence. After the Siphon is destroyed by Songbird, Elizabeth's tear creation powers are restored. Elizabeth transports them to the place where Booker is to receive the baptism. After showing Booker he is Comstock, all the Elizabeths from the multiple dimensions murder (transactional action process :actor, indexical action, -receptivity, attitude :negative, engagement :contraction, graduation :fast, pointing :no object) him. They emulate Booker's action of murdering Comstock on his airship which continues the circle/cycle of violence. The analysis of Elizabeth shows that she is similar to Eleanor. The male player character's actions define the female character who learns to behave like the male character by adopting his traditionally masculine attributes of independence, violence and dominance.

## CONCLUSION

In this article, I have developed a multimodal framework to track the character development of the various female characters throughout the *Bioshock* franchise. This framework combines Martin and White's (2005) appraisal system for linguistic analysis of the characters' utterances, and integrates Kress and van Leeuwen's visual framework (1990, 1996, 2006) together with Lim's (2011) system of gesture for the analysis of the female characters' behavior and gestures. From the findings of the analysis, it is shown that from the first *Bioshock* to *Bioshock Infinite*, there is some advancement in the depiction of the female characters in the different games. Female characters from the *Bioshock* franchise, especially in the first few games are highly passive and exist in the game's background to provide backstory (Brigid Tenenbaum), to serve as a gameplay goal (Little Sisters) and to obstruct the player's gameplay progress (Sofia Lamb). Two of the strong female characters are Eleanor in *Bioshock 2* and Elizabeth in *Bioshock Infinite*. However, the analysis has shown that there are also limits to the representation of these female characters. Although Eleanor is able to fight alongside the player character towards the end of *Bioshock 2* after she obtains the Big Sister suit, her identity is shaped by Subject Delta, the player character. Although Elizabeth is a strong female character as

she can take care of herself and possesses the tear manipulation ability, she supports the player character, Booker DeWitt in most instances of *Bioshock Infinite*. Elizabeth is initially dependent on Booker to reach Paris and to uncover the secret of how Songbird is controlled. After she undergoes Comstock's treatment and sees the actions that Booker utilizes throughout the game, she becomes influenced to use actions traditionally ascribed to masculinity to achieve her aims. In this article, the female characters' actions are coded as masculine or feminine based on the notion of the performativity of gender (Butler, 1999). According to the gender performance theory, the discourse of gender is bodily and nonverbal and it also does not accept a stable and coherent gender identity. By the game's end, the player's actions and choices let Elizabeth assume a "male" role, in which she uses violence to drown Booker when she discovers he is Comstock.

Based on the analysis of the different female characters' representation in the *Bioshock* franchise, it is shown that there is a limit to their representation, as they are portrayed in a traditional role of supporting the male player character. Game designers could use this framework for improved games. For instance, based on the analysis of Elizabeth's ATTITUDE and visual tokens, they would be able to track the shift of Elizabeth's attributes which are traditionally associated with femininity in the majority of the game to masculinity in the final part of *Bioshock Infinite*. In this way, they would be able to understand that Elizabeth's characterization in terms of her multimodal representation is one-dimensional in the different parts of the game. Thus, the paper provides a detailed account of the role of female characters over a series of games.

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