

Lexia: Undergraduate Journal in Writing, Rhetoric & Technical Communication

Volume V

2016–2017

[Mechanically Derived Narrative through Perception
of Video Game Characters]

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Abstract

This paper aims to explain how various interactive design choices in video games including (A) Player Choice, (B) Control Scheme, and (C) Non-Player Character Interaction serve to influence the impression players feel toward a game world and its characters. To do this, a survey of current research in game studies has been compiled along with practical implications evidenced in currently available video game titles. Surveyed materials are analyzed for indication of the target design choices (A,B,C), and their corresponding effect on the player's sense of the game world. In this sense, it may serve as a guiding example of how interactive elements of a video game, termed herein as "mechanics" can work constructively with its storytelling or role-play intentions, referenced throughout the essay as "narrative goals". The intention being to provide an effective counterpoint to current game design and scholarship which in recent years has looked to define game-play and story as independent variables within game authorship and production.

Due to the broadness of genre that video games span, as well as the relative universal applicability of this guide, the survey calls upon games of various types and studies of equal variance in subject. Doing so helps to highlight the practical use of presented design principle as widely applicable in terms of genre and details a foundational or compositional approach, as opposed to one which is more specific to game or subject as some game studies have chosen to focus. This has the adverse effect, however, that in some cases, be it due to genre or subject, the stated principle may only partially apply or be open to some contextual interpretation. This paper addresses this "flexibility" in use case near its culmination during analysis of the game *Animal*

Crossing. This suggests that the principle can have an inherent limitation in some cases. In the same fashion, it also presents its advantage as a universal, yet detailed design tool in other cases.

Introduction and Contextual Background

The study of games, known as ludology, at least within the realm of video games, saw its inception with the body of research produced in the mid to late 1990's which aimed to study the effect violent video and board games could have on the aggression levels of young children.

While this specific area of psychological study continues to be a point of research today, for the purpose of this paper, it marks the point at which ludology began to look at the messaging power of game-play beyond its cultural significance. Prior to this period, game studies were predominantly an anthropological study of the cultural implications of physical games present in various communities, such as the study of Trobriand cricket on colonial acculturation exhibited in the 1976 film *Trobriand Cricket: An Ingenious Response to Colonialism* (Leach, Kildea).

The study of how video games influence players through game-play has by now expanded beyond the simple elicitation of violence or physical representation of cultural facts, however. As video games have progressed into a mainstream medium with an accompanying multi-billion dollar industry, research into their psychological impact has become common place. Prominent game development studios like Valve Software, developers of the Steam platform, *Team Fortress 2*, and *DOTA 2*, consistently employ behavioral psychologists to assist with the impact of their game design and payment structures. With game studies' expansion in research scope has come a delineating opinion regarding which part of a game is the most important; splitting many game designers and scholars into two opposing camps; ludologists and narratologists. Henry Jenkins, an American media scholar and a Provost Professor of Communication,

Journalism, and Cinematic Arts at the University of Southern California recounts the state of the debate in his article, “Game Design as Narrative Architecture”, “At a recent academic Game Studies Conference, for example, a blood feud threatened to erupt between the self-proclaimed, ludologists, who wanted to see the shift onto the mechanics of game play, and the narratologists, who were interested in studying games alongside other storytelling media” (Jenkins). Within this contrast, Jenkins also defines the two fundamental elements of a game’s composition. A game’s mechanics, or the elements the player interacts with constitutes the actual “play” of the game. On the other hand are those elements pertaining to a game’s thematic, aesthetic and messaging delivery that constitute the “narrative” goals of the game, reminiscent of other storytelling mediums.

Interestingly though, the contrasting views Jenkins observed about the importance of a game’s mechanics on the side of ludologists and narrative goals on the side of narratologists do not appear valid within the current state of the industry. In the modern video game climate, games appear to, in fact, use their mechanics to achieve their narrative goals in a way that many other mediums are incapable, making use of their unique elements of interactivity with the player. This paper then, seeks to analyze how interactivity of mechanical choices in video games intersect with the impartation of their narrative goals. Using currently available games and their scholarly examination, this research intends to frame the relationship between a game’s narrative and its mechanics as acting in a state of symbiosis wherein mechanical choices make narrative ones more impactful. The practical goal being to provide a guide for game designers, writers and scholars on how best to conduct their endeavors with a holistic view of

games as complex interactions between mechanical and narrative elements. To accomplish this, the essay will focus on how a player's social orientation to the characters they play and interact with are, and have been, heavily connected to the mechanical choices which link their interactions.

Perception of In-Game Characters

Within a narrative medium, such as a book or movie, authors usually want their audience to develop a view of the characters they have created in some negative or positive way. That is, for the audience to determine some emotional perspective toward the characters being depicted and then further decide how they orient themselves in accordance to those decisions. To do this, creators must present a situation for their characters wherein audience members are likely to feel resentful, sympathetic, or any number of other emotions toward them. For example, in all incarnations of the Batman origin story including the 1989 film, "Batman", as well as the original comics, it is revealed that Bruce Wayne's parents died when a thug shot them at gunpoint. Bruce, experiencing their murders as a young and defenseless child, then commits his life to vigilante crime fighting. The experience is intended to invoke a sense of sympathy from the audience so they come to understand Batman's motivations as positive. Viewers subsequently feel allied with his intent to establish justice as the hero, while simultaneously viewing the criminals of the story as the defined enemy. Many video game narratives endeavor to accomplish these goals as well, however games do not have to rely solely on the plot they depict. Games can also use several game-play elements, or mechanics, in order to encourage a player to feel an emotional connection to a game world's characters. This connection can be surmised as the player's "perception of

characters”, and constitutes the principle this paper is most readily concerned with. The three mechanical elements to be analyzed under this principle are: (A) player choice, (B) control scheme, and (C) interaction with other non-player characters.

Player Choice

One unique feature of interactivity in video games is that the real-world player can influence the choices of their avatar, or the character they manipulate in the game through the various interactions the game presents. The ability to choose how an avatar reacts to the in-game world and its threats or challenges helps to build the player’s impression of the character they control and their social presence, be it villain, hero or otherwise, that character occupies in their world. A *New Media and Society* study entitled, “Avatars are (Sometimes) People Too”, found player-avatar relationships were either “avatar-as-me” or “avatar-as-other”. Players who distinguished their avatars as “other” saw them as distinct entities while “avatar-as-self” players felt they were stepping into the shoes of their avatar during play. Interestingly, the study found that language usage exhibited by players who saw their avatars as distinct social actors (other) suggested they, “may feel less in control of avatars or game-world events” (Banks, Bowman, 16). This distinction is key in that it suggests there is an important connection between how much control a player perceives over the choices of their avatar’s life and the kind of relationship they then associate with that avatar as an entity. The same principle has been extended to emotional relationships between avatar and player in currently released games. For example, in the *Mass Effect* series of games, the player is allowed to choose how their avatar will respond to other non-player-characters (NPC) inquiries and actions. These responses can be negative or positive depending on



Figure 1: Avatar from Mass Effects

how the player perceives their avatar's personality (**Figure 1**).

If the avatar is consistently good or kind in response, positive situations may arise in the story. If they are generally evil or mean in response, the player may confront negative versions of events. For instance, a player may be

given the choice to kill a wounded enemy and take their armor, or spare them. If the avatar kills them, friends of the enemy may notice the armor at a later time and attack the player. If the avatar decides to spare the enemy, they might offer some helpful reconnaissance on a later mission. In this way, player choice is a determinate in the role-playing of their avatar and they may establish where in the social order of the story they stand as the hero, or the villain.

In a similar fashion, player perception of their character's goals can be determined by how much finite movement control they are allowed. Many older games like *Pac-Man* exemplify this as long, extensive story threads, later termed cut-scenes, would be memory and hardware intensive in comparison to narrative communication through the game's predominant concern of game-play. In *Pac-Man*, players control the iconic cheese-wedge shaped Pac-Man as he tries to eat a stage full of pellets while avoiding deadly ghosts. The player alone controls Pac-Man's destiny by choosing his movement direction through the joy stick.

While *Pac-Man* does have intermission animations between stages with ghosts chasing the character around, they do not at all communicate his origins, motivations or

character. Yet, character investment in Pac-Man's goal of eating all the pellets in the maze remains the driving factor for play, clearly defining Pac-Man as the hero and the ghosts the enemy. If Pac-Man exhausts his three lives, the game is summarily over and it is entirely by the fault of the player. This illuminates how giving a player full control of their avatar can establish an inherent desire to achieve their goals and denounce the goals of their enemies.

As can be seen, it becomes vital to consider how much choice a player is given from the perspective of their desired relationship to their avatar. How much a designer wants the player to feel a part of the avatar's life, in what light they want the avatar to be perceived, and how strongly they desire avatar goals to be achieved are all prominent narrative factors under direct control of what choice mechanics the player has available.

Control Scheme

Control schemes in video games are defined by the physical medium by which a player interfaces with a game. These mediums, commonly called controllers, can be based on motion as with a Wiimote, body tracking as with virtual reality headsets and technology like Kinect, keyboards and mice as with computer gaming, or the more classical physical button and analog stick "game-pad" combination (**Figure 2**) which is typical of the last two generations of mass market consoles.

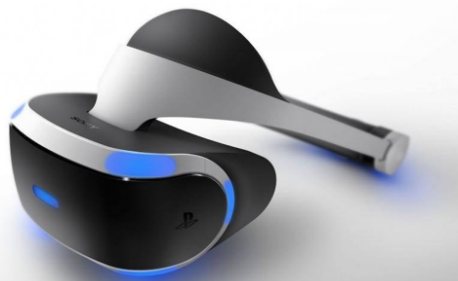
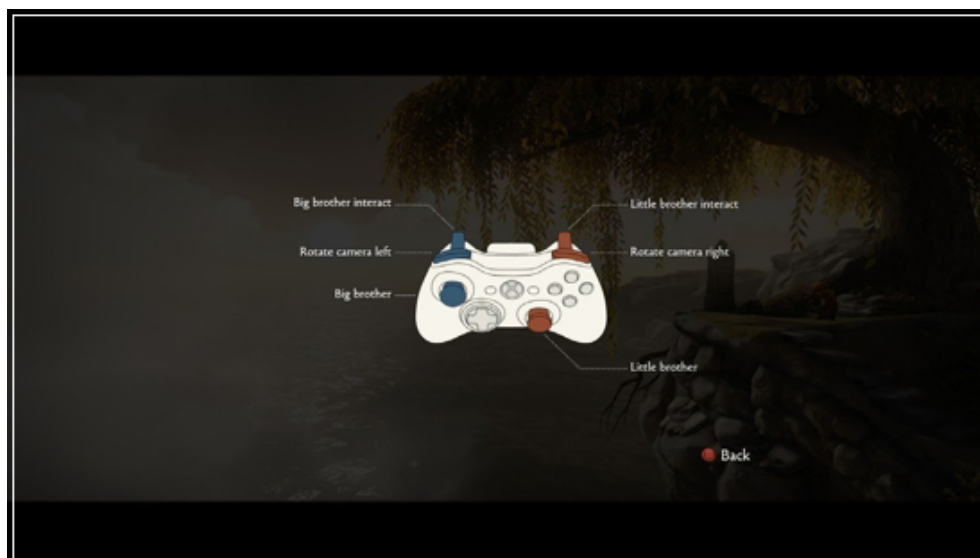


Figure 2: Game controllers: Playstation VR, Xbox, and Wiimote

Recent research has begun to hone in on how much the choice of controller, especially in their various types, has impacted game-play experience and feelings of connection with characters and avatars. A study presented for The SIGCHI Conference on Human Factors in Computing Systems entitled, *Control Your Game Self* found that after testing various controller types and doing personality evaluations of participants, controller type did in fact impact how players perceived their in-game personality. For instance, they found that using Kinect made players react more “agreeably” while a game-pad encouraged feelings of neuroticism toward others (Birk, Regan, 8). The findings suggest that design of a game should incorporate what type of controller should be used as it influences how players perceive the personality traits of their avatar in game environments and therefore to what degree they are predisposed to connect with them.

Such conclusions are mirrored in the success of recent games that experiment with new control schemes as well. The favorable critical and consumer reception of games such as *Brothers: A Tale of Two Sons*, a puzzle game with a unique control layout



wherein each brother is controlled independently by an analog stick (**Figure 3**), exemplifies

Figure 3: Anatomy of a controller

this. Player's initial struggles with the new controls reflected the thematic struggle that the brothers faced, tasked with the arduous recovery of a far-off cure for their terminally ill father and grief over their drowned mother. However, as they became more comfortable with the controls, so too did the brothers with one another, solving mounting puzzles more efficiently and effectively. The game's use of an intentionally difficult control mechanism contributes greatly to the effectiveness of its attempt to portray a story of brotherly bond and perseverance. In this way, the game provides a succinct example of how novel controller selection can produce an impactful connection between characters in the eyes of the player.

Interaction with Non-Player Characters

Non-player characters, hereby referred to as NPC's, in games constitute any character or group of characters that are not under the direct control of the player in question, namely those that are not their avatar(s). This means they can either be controlled by another player through an on-line, coop, or asynchronous environment, or be controlled by the game's artificial intelligence which provides them with predetermined scripting which dictates how they act and what they do. The mechanics through which the player avatar interacts with NPC's can often determine the social qualities of a game environment, and influence the player's view of inter-character social relations.

For those NPC's who are controlled by other humans in any multi-player environment, the choices they are allowed to make in respect to the player avatar determine if they are acting cooperatively or competitively. If they are acting cooperatively, the player is likely to associate their relationship as friendly and valuable to their avatar, whereas if they are acting competitively they are likely to see them as a

challenge or obstacle that their avatar should conquer.

Basic design patterns like “shared goals” and inter-player specific “synergistic abilities” (Rocha, 74) are likely to encourage a cooperative play style while competition based rewards like transferable loot and leader-boards encourage antagonistic behavior. Sometimes, as in games like *DayZ*, the choice to approach fellow players either cooperatively or competitively constitutes a large part of the narrative appeal. Whether a



Figure 4: Shooting scene from DayZ

player intends to shoot another in the head for their gear or save them from a zombie hoard allows a player to characterize their avatar within the apocalyptic world as anything from skittish to conniving to heroic (**Figure 4**).

These dynamic design elements have allowed the game to stand out as a world for expansive role-play and procedural creativity.

Meanwhile, the game *Journey* allows players to assist one another cooperatively, but limits meaningful communication beyond nondescript “chirp” noises. Unlike the open voice and text chat featured in *DayZ*, these chirps cannot facilitate complex role-play or interpersonal development. Additionally, the moment at which players will come across one another is out of their control and in-game names are obscured. When, or if, one player meets another is both random and fleeting, as they have no way to contact one another ever again. Limiting player to non-player interaction through such obscure mechanics has the thematic effect of making encounters with others feel meaningful,

rare and mystical much like the aesthetic of the world.

It is important to distinguish, however, that some research suggests designers should be aware when choosing the type of multi-player mechanism they want to implement that some may resonate more effectively with certain players in comparison to others. A study done for the journal, *Computers in Human Behavior* titled, “Does it Matter with Whom You Slay?” concluded that after studying the interpersonal states of players in both competitive and cooperative goal structures, cooperative players more readily trusted one another after their initial interaction.

Meanwhile, competitive players were no more likely to be aggressive toward one another during subsequent interactions (Waddell, Peng). What this shows is that in multi-player settings, cooperative mechanics instill lasting connections while competitive do not. As such, it would be far more productive to design long term goal structures, such as events lasting a period of months or weeks, around cooperative play between distinct partners than it would to do so for aggressive or competitive goals.

On the other hand are NPC’s who are controlled by the game itself. These characters mechanically function in a similar way to multi-player characters but have the distinct advantage of being predetermined, and thusly will always make the choices which the developer designs them to. Unfortunately, this also comes with the challenge of making interactions between characters feel genuine, as they lack the dynamic nature introduced by fellow human decision makers. Creating NPC’s that can react in a believable manner is a considerable resource investment for many developers and it is important to distill which mechanical aspects of an NPC are the most valuable in contributing to their believability. An analysis of one NPC in *The Elder Scrolls*:

Oblivion, Claudette Perrick titled *Game-play Design Patterns for Believable Non-Player Characters* produced several of these guidelines borrowed from cinema studies, “Descriptions of humans require several qualities for people to experience them as believable: human body; self-awareness, intentional states, and self-impelled actions; expression of emotions; ability to use natural language; and persistent traits” (Lankoski, Bjork).

When used as a rough guide, these qualities can help steer the design process in terms of character interaction goals. Video games exist on a sliding scale between extremes of realism and fantasy, and as such different qualities can become more or less prominent from title to title. This variance presents an issue when applying this paper’s principles to every type of game in every situation. *Animal Crossing*, for instance, a game about living in a rural town with anthropomorphic animals, does not necessarily require the use of human forms, as there is a certain suspension of disbelief inherent in the acceptance of its premise. However, it does rely heavily on those mechanics which emphasize self-impelled actions and ability to use natural language to make its characters feel believable. Because the predominant narrative goal of the game is to simulate a small town, the characters, like any townspeople, have their own schedules throughout any given day and will often offer novel dialogue responses to the player (**Figure 5**).



Figure 5: Dialog from *Animal Crossing*

If NPC's simply stood in one place at all times and only offered singular and wrote responses, the player might quickly become disillusioned by the idea that there is any connection between their avatar, the villager and his or her neighbors. In his paper, *The Rhetoric of Video Games*, philosopher and game designer Ian Bogost describes the process of mechanical authorship through compliance with thematic directives as “procedurality” expounding that, “Procedurality gets its name from the function of the processor—procedurality is the principal value of the computer, which creates meaning through the interaction of algorithms” (Bogost). *Animal Crossing* in this instance shows that this procedurality is also selective, that in order to achieve the ultimate meaning, equal amounts of importance should be placed on choosing how mechanisms interact with one another and with the player. In this way, *Animal Crossing* provides an example of how mechanical design, like NPC interaction, can be relative to the specific intentions of the game being designed or analyzed.

These limitations do not invalidate the value of taking broader principles into account when creating or critiquing games, however. Failing to account for these distinctions can easily break the connection between player and characters. A requirement that *The Last of Us* developers, Naughty Dog and *Bioshock Infinite* developers, Irrational Games, had to take into account when creating their respective game's follower characters (Corriea; Farokhmanesh). Followers are NPC characters who are scripted to follow around the player's character through what are often combat or stealth encounters with enemies. A common criticism of followers stems from the fact that they break player immersion because they are impervious to damage or being spotted by the enemy. This makes follower NPC's seem fake and shallow, which is the

opposite of the intent of the two mentioned games wherein the follower characters and their vulnerability are integral to the emotional conceit of the game's themes. This common issue illustrates a failure to consider a character's "persistence in state" when one moment they are suggested to be vulnerable to their environment and the next they are shown to be completely impervious to it.

In an attempt to remedy this, developers put time and effort into making the characters mechanically consistent with their emotional presentation. As Irrational Games lead programmer, John Abercrombie, explained to game site Polygon, "We wanted Elizabeth (the follower) to keep her distance while the player is moving," [He] said. "But having her move too far ahead was impersonal, and having her too close would allow players to blast past her" earlier having admitted that, "Making her 'live' so players would invest in and become attached to her was one of the programming team's greatest challenges" (Corriea). The team's experience with ensuring their character appeared realistic both mechanically and narratively outlines the distinct value in designing player's NPC game-play interactions with narrative intent in mind.

Conclusion

Based upon the materials explored in this survey there appears ample evidence that focusing on player choice, control scheme, and NPC interaction from a mechanical level can and does assist in constructing a desired relationship between a player and the game. The establishment of such relationships allows game authors to guide players toward orienting themselves in particular ways in relation to their avatar as well as NPC's, which can also further feed into overarching thematic intents. From a game studies standpoint, the survey also outlines a viable approach to game analysis

predicated on mechanical-narrative synergy, especially in respect to behavioral and immersive impacts on game players. Additionally, though the scope of the paper from both a scholarly and authorship standpoint remains focused on player orientation to characters, the principles used to do so are broadly applicable so long as there is a clear or stated set of narrative goals and subsequent mechanical “game-play” to either compose or observe in such a way that those narrative goals are mechanically derived.

Works Cited

Anatomy of a Controller. “*Brothers: A Tale of Two Sons* Review.” Killapenguin. 2017.

<http://killapenguin.com/gamereviews/brothersataleoftwoons/>.

Avatar from *Mass Effects*. Bioware Russian Community. 12 December 2007.

<https://forum.bioware.ru/topic/1232/>

Banks, Jaime, and Nicholas David Bowman. “Avatars are (sometimes) people too: Linguistic indicators of parasocial and social ties in player–avatar relationships.” *New Media & Society* (2014): 1461444814554898.

Birk, Max, and Regan L. Mandryk. “Control your game-self: effects of controller type on enjoyment, motivation, and personality in game.” *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 2013

Corriea, Alexa Ray. “The Long Road to Building AI for BioShock Infinite’s Elizabeth.”

Polygon. Vox Media, 2014. Web. 25 Nov. 2016.

Dialog from *Animal Crossing*. “Why *Animal Crossing: New Leaf* Keeps Making Me Laugh” by Daniel New. 22 August 2013. <http://www.thumbsticks.com/why-animal-crossing-new-leaf-keeps-making-me-laugh/>.

Farokhmanesh, Megan. “How Naughty Dog Created a Partner, Not a Burden, with Ellie in *The Last of Us*.” Polygon. Vox Media, 2014. Web. 25 Nov. 2016.

Jenkins, Henry. “Game Design as Narrative.” *Computer* 44 (2004): 53.

Lankoski, Petri, and Staffan Björk. “Gameplay design patterns for believable non-player characters.” *Situated Play: Proceedings of the 2007 Digital Games Research Association Conference*. 2007.

Leach, Jerry W., and G. Kildea. "Trobriand Cricket: An Indigenous Response to Colonialism."

Documentary film (1975).

Playstation VR. Playstation VR Image Gallery. 2017. <https://www.playstation.com/en-us/explore/playstation-vr/gallery/>.

Rocha, José Bernardo, Samuel Mascarenhas, and Rui Prada. "Game mechanics for cooperative games." *ZON Digital Games 2008* (2008): 72-80.

Shooting scene from *DayZ*. "DayZ Standalone— August 2013 Gameplay DevBlog" by Dean Hall. 2013. <http://www.dayzstv.com/video/dayz-standalone-august-2013-gameplay-devblog/>.

Waddell, Julia Crouse, and Wei Peng. "Does it matter with whom you slay? The effects of competition, cooperation and relationship type among video game players." *Computers in Human Behavior* 38 (2014): 331-338.

Wiimote. "Nintendo's Wiimote Has Unfinished Business." By Sean Thomas. 13 March 2015. https://www.vice.com/en_au/article/nintendos-wiimote-has-unfinished-business-740

Xbox. Xbox One. 2017. <http://www.xbox.com/en-US/xbox-one>.