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The Ludic and the Narrative in Bioshock: A Case Study Examining the Place of Video Games in Academia

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THE LUDIC AND THE NARRATIVE IN *BIOSHOCK:*

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This study aims to compare the often opposed disciplines of ludology and narratology as they pertain to the study of contemporary video games. Despite recent theoretical developments, the debate continues over whether games are configurative sets of computational rules and sequences of events meant to embody the game's coding or immersive worlds designed to facilitate a narrative experience. In order to test the merits of each approach, each will be applied to analyses of *BioShock*, a first-person shooter released in 2007 by Irrational Games and 2K Boston. *BioShock* is fitting for such an analysis because of the way its narrative elements and gameplay mechanics make connections to other texts both textual and digital, including Ayn Rand's *Atlas Shrugged* and Irrational Games' *System Shock 2*. The goal of these analyses is to propose approaches that foster interdisciplinary, subjective critique that enriches noth the academic and popular gaming discourse.

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CHAPTER 1

THE LUDIC AND THE NARRATIVE IN *BIOSHOCK*: AN INTRODUCTION

As our modes of expression evolve, so do our methods of evaluating them. As our literary forms have grown and changed, so have our critical theories. As technology has advanced and come to influence literary and scholarly thought, our analytical methods have changed accordingly. While some immediately write video games off as simple entertainment, others have approached them as cultural media productions worthy of scholarly analysis. The problem, again, is that there is little consensus regarding how to approach such analyses.

Critics have particular trouble managing the supposed break between ludology, the study of games, and narratology, the study of narratives. There is a lingering tension between these two disciplines when it comes to the analysis of video games that stems from the tension regarding the analysis of new media. Some argue that because these contemporary productions are "digitized for sight, sound, and/or movement by machines that use code, databases, and algorithms to mediate, permutate, and/or compute what a composer and a clicking, sampling, cutting-and-pasting, or morphing user cocreate (Morris, 8)." Such digital artifacts have evolved, as Adalaide Morris suggests, from the post-World War II theorization of the Memex by Vannevar Bush, a sort of file storage and retrieval system that displays data at a user's request on screens and organizes data by codes that allow for "speedy retrieval and recombination (10-11)." Since then, the world of digital texts has grown to encompass a variety of forms, even moving into its own poetics. As Morris asserts regarding the place of digital poetry,

> Unlike hypertext narrative, the digital poem does not normally depend on the lexias or blocks of semi-autonomous text joined by hot links into variable user-

> driven configurations; unlike computer games, it does not usually depend on a combination of rules, a simulated game world, or traditions of gameplay; unlike interactive fiction, it doesn't require a simulated world, or world model, and a built in parser to accept and analyze natural language input from the interactor. Unlike print poetry, finally, new media poems are not often lineated or rhymed, do not necessarily maintain stable or consistent configurations, and seem by nature to bend—if not break—the founding constraints of narrative. (7)

While the direct focus of this project is not digital poetry, this definition proves useful in that it establishes the potential breadth of focus in new media studies. Furthermore, it presents a basic framework for the sort of assumptions about ludology that tend to inform a number of the critics featured in this analysis: that game mechanics are instantiations of the rules and simulation established by a game's designers.

Those who approach games through the lens of narratology are using a much different framework. Narratology is a field of textual study, born out of the Structuralist and Russian Formalist movements, the focus of which is the representational features of narrative. The key elements of narratology are typically the relationship between story and plot, stemming from Viktor Shklovskii's "distinction between the *fabula*, the raw material of a story, and the *sujet*, the way a story is organized (Cobley)." The way these two aspects of narrative, *fabula* relating to story and *sujet* relating to plot, relate to one another and are presented to a reader form the crux of narratology, revealing the ways in which works make use of "representational systems" to create a narrative through which meaning can be comminucated (Cobley). Numerous ideas have developed out of these concepts. Vladamir Propp is frequently cited as one of the largest influence on narratology for his work in *Morphology of the Folktale.* Propp analyzed a hundred

Russian folktales in order to establish a series of moves that such tales feature and the order into which they typically fall (23-24). The specific moves that are outlined are based on the functions of the *dramatis personae*, the characters featured over the course of a given tale, and how those functions interact to create the events and developments throughout the tale (20-23). Propp's approach requires such a degree of specificity that it becomes deterministic; the particular moves he outlines rely on formal and cultural influences (9), potentially limiting them to the particular set of tales that Propp selects for analysis.

By contrast, approaches taken by French theorists Roland Barthes and Gerard Genette break away from deterministic formulations in favor of analyzing the structures at work beneath the surface of narratives, eschewing content specificity. In *S/Z,* Barthes suggests that five codes are at work in narratives that weave together, opening up a wealth of potential meanings that can be accessed through a variety of entrances (20). Genette, on the other hand, examines narrative as though it has a syntax which the reader works through. This syntax is based on the various devices that organize a narrative, such as the order in which events take place (39-40) and the relationship of the length of an event to the length of its textual representation (95), and that frame a narrative for a reader, such as the perspective through which a narrative is focalized (189-190). While these approaches address different narrative features, they can work in conjunction to strengthen a reading of a narrative.

While it is possible to apply such methods of analysis to video games, doing so can be considered a form of misappropriation or intellectual colonization. The theories surrounding legacy media, like folktales or print fiction, are considered by some to be incapable of properly accounting for certain aspects of video games as a medium that play into their production and their overall experience. Some suggest that it is more appropriate for video games to be studied

in academic departments that focus on their media-specific features; however, the study of gaming narratives has still managed to thrive, making use of the legacy approaches like those mentioned above. It is suggested by Morris that such concerns surrounding which discipline should study are intricately wrapped up with issues of the allocation of academic resources and a sense of academic prestige for a critic's discipline, not just "discursive categorizations and their implications of interpretation (5-6)." Such issues of resources are not the focus on this particular project. One of the goals of this study is to juxtapose legacy approaches to approaches that take into account the specific structures and features of video games as a medium. However, for some critics, such a specific examination of video games can serve as a new mode of analyzing game narratives.

Janet Murray focuses on issues of immersion and narrative. In *Hamlet on the Holodeck: The Future of Narrative in Cyberspace,* she asserts that the spatial and participatory aspects of digital media give readers/users a more in-depth narrative experience, allowing them to explore three-dimensional worlds and interact with items and people within those worlds. She suggests that this immersion is motivated by an interest in narrative and that digital forms function in this way through the various spatial, procedural, participatory, and encyclopedic elements of the work play into a narrative experience (*Hamlet on the Holodeck*, 71). Murray refers to games as "cyberdramas," placing the narrative as the central factor in a player's experience of a game ("From Game-Story to Cyberdrama," 10). Murray's approach manages to position the features of video games within the context of legacy media, as what facilitates the narrative experience for the player. However, some scholars have criticized this approach to game criticism as inappropriately literary.

Aarseth, on the other hand, prefers to address issues of ergodics and intrigue in *Cybertext: Perspectives on Ergodic Literature*. Aarseth asserts that an ergodic text requires a "nontrivial effort" for a reader/user to navigate and understand it and presents breaks between the author and the narrator and between the narratee and the reader/user (113). This plays nicely into his theory of intrigue, as it positions the reader/user as the key element of a narrative, the outcome of which depends on the "cleverness and experience of the player" and is not guaranteed to be reached (112). While this seems to lend itself well to video games, Aarseth goes out of his way to establish that many games differ from works of digital literature in that they typically revolve around some sort of contest, such as accumulating a high score or completing a specific goal or quest as opposed to engaging with or immersing oneself in a medium or a narrative. However, this arbitrary exclusion, and even the ideas of intrigue behind it, has come into question.

Sandy Baldwin views digital immersion much differently than Aarseth or Murray when it comes to video games, specifically to first-person shooters (FPSs). Contrary to Murray, Baldwin positions immersion as the prerequisite of the spatial and encyclopedic experiences of digital media; what Murray suggests create immersion Baldwin suggests are side-effects of immersion (Baldwin, 1). Contrary to Aarseth, Baldwin establishes that the outcome of a game/narrative is predetermined regardless of a particular player's skill level or ability to cope with difficulty; the ending is part of the construction that is the game and its world, and thus exists regardless of whether the player gets to it (7). He states that immersion is something "incoherent and continuous (1)," that "[t]he poetics of immersion are in the heuristic playing out of bodies placed in an imaginary that is not reduced to but rupturing symbolic frameworks of inscription. The poem is what de-scribes inscription to the real (2)." For Baldwin, immersion looks more like

Aarseth's proposed break between narratee and reader/user, as the player is immersed in a game by metaphorically stepping out of their own body and into the position of a player-character. This can be particularly powerful in a FPS, which forces the player to share the gaze of the player-character.

Baldwin specifically refers to Valve's FPS *Half-Life*, in which players step into the experiences of rogue physicist Gordon Freeman as a rift in space-time releases violent parasitic creatures into our world. He establishes that the world of *Half-Life* is specifically designed to disorient and confuse the player, engulfing their vision in darkness, water, oil, blood, or other blinding substances (2). In this way, FPSs are designed to prevent the sort of spatial immersion that Murray endorses. FPS games are designed to create situations and worlds in which the player feels alienated or disoriented. In addition to this, Baldwin highlights the scripting of events into game code, causing the player to trigger them by moving within certain distances from objects or fulfilling other criteria (6). The combination of such factors can make for a particularly startling gaming experience, as players attempt to blindly navigate game areas and trigger enemy attacks. While useful observations, they are in some ways specific to *Half-Life* in that Baldwin refers directly to contexts from the game and applies his analysis to his own poetic modification of the game, which he did using tools created specifically to modify this game.

While Baldwin's manipulation of *Half-Life* elements are fascinating, they do not tend to apply to games played on home consoles. The modification, or "modding," of console games is not impossible, but it is not typically attempted by average gamers; the tools available to mod PC versions of games are not generally made available for consoles, which have different interfaces. While Baldwin's approaches are certainly useful, they do not address the question of where an average game experience in terms of narrative and of media specifics—unmodified, played as

released by the publisher—would fit into academia. This issue becomes more complicated when we take into account that ludologists like Aarseth and Murray frequently cite scholars of literature and narratology. Aarseth specifically bases many of his ideas on the structuralist approaches of Roland Barthes and Vladimir Propp, such as their concepts of readerly/writerly texts and repetitive plot structures, respectively. In fact, this focus on narrative studies in reference to games is not uncommon; Montfort mentions that half of the articles in the inaugural issue of Aarseth's journal *Game Studies* dealt with game narratives. So the questions remain: what place do video games have in academia and how does that place relate to the ways games are experienced by players? What follows is a case study in which these questions will be addressed as the ideas of narratology and ludology will be applied to 2K Games' and Irrational Games' 2007 release, *BioShock*.

BioShock is a FPS in which players are stranded at the entrance of an underwater city, Rapture, built by Andrew Ryan, one of the world's most successful and intelligent electrical engineers and an avid Objectivist. Players arrive in the city in 1960, shortly after a full-scale war between Ryan and Frank Fontaine, an ambitious criminal who sought to usurp Ryan's control through manipulation of the free market that Ryan mandated. Players are guided through Rapture over radio by a freedom-fighter known as Atlas, who explains to them the way things work in Rapture since the war and the supposed death of Fontaine. Ryan, who perceives you as a potential CIA or KGB agent, uses his genetically-altered henchmen, known as Splicers, to stop you from meddling in his dilapidated dystopia. Its game mechanics and narrative features, which will be discussed in depth in the coming chapters, make it a particularly useful object analysis as they evoke powerful responses both positive and negative, both thoughtful and emotional.

For the purposes of this case study, the narrative features of *BioShock* will initially be analyzed apart from the media-specific game elements. In order to properly contextualize the game narrative, it will be juxtaposed with the narrative of Ayn Rand's *Atlas Shrugged*. *BioShock's* story and world are inextricably tied to Rand's text and philosophy; project lead Kevin Levine has stated in interviews that Rand's Objectivist philosophies and fictions are a key inspiration and act as "the glue that holds it together (Crecente)." While some criticize (and others laud) the game as a condemnation of Objectivism, Levine suggests that it is more of a critique of an absolute, unyielding adherence to an ideology (Crecente). The purpose of this analysis will be to highlight the parallels between these narratives and to examine how such connections give games access to unique representations and modes of expression, manipulating legacy devices in ways that only a digital medium can. The approaches used by both Barthes and Propp will be taken into account, including Barthes concepts of readerly/writerly texts and his five codes of narrative signification, as well as elements of Propp's archetypal scenes. In addition to this, Gerard Genette's elements of time, mood, and voice will used to help contextualize the often unsettling narrative of *BioShock* as literary. These particular approaches have been chosen because of the frequency with which their ideas have been cited by key ludologists referenced throughout this project, such as Janet Murray, Espen Aarseth, and Ian Bogost.

The game-specific analysis will pull from the work of multiple ludologists to examine the effects of the media elements of the game—the visuals, the audio, the game interface, and opportunities and limitations presented by the gameplay itself. While approaches used by the like of Murray, Aarseth, Baldwin, and Ian Bogost will be taken into account, the game will also be examined in relation to another game developed by the same team, *System Shock 2*; Levine has stated *BioShock* is seen as the "spiritual successor" of *System Shock 2*. Comparisons will also be

made with *Half-Life 2* and *Unreal Tournament 3* due to the key structural elements they share with *BioShock*. Given this close relationship to other games of the same genre, part of this analysis will focus on *BioShock* as a commentary on the form of the FPS.

One final chapter will compare and contrast the findings of the narrative and ludic chapters in order to evaluate the relationship between these approaches as they pertain to *BioShock*. This relationship will be used as the basis for a discussion of the academic place of video games to show how interdisciplinary approaches to video game criticism allow for a more contextually thorough analysis. This chapter will also address the schism between these academic approaches and the mainstream representations of video games to explore how both sides of this division tend to exclude the way games are experienced by actual players. Such exclusion hurts game criticism and allows popular discourse to be framed by parties looking to censor or limit the video gaming industry. Before these issues can be elaborated upon, the waters of Rapture must first be troubled. *BioShock*'*s* narrative takes players on an adventure that tests more than their nerves and their morals; it tests the expressive power of video games as a medium.

CHAPTER 2

A MAN CHOOSES, A SLAVE PLAYS: NARRATOLOGY, *BIOSHOCK*, AND *ATLAS SHRUGGED*

BioShock pulls players into a gorgeously rendered world filled with abject horror, violence, and intrigue. While the game's lead designer, Ken Levine, is cited most often as the driving force behind the game, he sees *BioShock* as much larger effort. In an interview with Michael Thomsen, Levine states, "I threw out huge drafts of scripts and things like that; artists threw out whole sequences. And that's because we all, at the end of the day, said, 'What is the audience going to think of this? How is the audience going to react to it?'" While *BioShock* cannot be held as only Levine's accomplishment, there are aspects of his background that have played directly into the development of the game and its story. In reference to some of the inspiration behind the game, Levine said,

> [W]e knew we had this theme of biological experimentation. That was at the heart of where all the players' powers and all of the creatures from the game came from. From this biological intentional mutation I wanted to build a world where that would happen and be believable and not in the far future, but something that we could speak to, like something we're dealing with now -- with stem cell research and the moral issues that go around. And I have my useless liberal arts degree, so I've read stuff from Ayn Rand and George Orwell, and all the sort of utopian and dystopian writings of the 20th century, which I've found really fascinating. (Perry)

Like any other cultural production, *BioShock* was not created in a vacuum. As Levine establishes here, more went into the game than the various weapons and powers available to the players to kill enemies. As Levine told Kotaku's Brian Crecente, the main goals for *BioShock* were to

create a believable world and "to have players pull content from the game rather than push it at them."

This idea of players "pulling content" suggests that Levine and his team at Irrational Games want players to think about what they experience and make meaning for themselves. This is reminiscent of Roland Barthes' "writerly" text, a text which positions the reader as a producer instead of a passive recipient of meaning (Barthes, 4). Barthes proposes, "the writerly is *ourselves writing,* before the infinite play of the world (the world as function) is traversed, intersected, stopped, plasticized by some singular system…which reduces the plurality of entrances (5)." It is this concept that helps us open *BioShock* to a narratological reading. By using the techniques of narrative analysis, such as those suggested by Barthes, we can gain a deeper understanding of *BioShock*'*s* narrative form and its connections to other works. While Levine cites Orwell above and at times Stephen King's *The Shining*, the strongest allusions are made to Ayn Rand's *Atlas Shrugged*. Levine confirms that the ideology of Objectivism present in Rand's works act as "the glue that holds the aesthetics together" in *BioShock*. Indeed, there are references to another of her works, *The Fountainhead*, but they are minor mentions such as the protagonist Howard Roark's name appearing on an advertisement or bottles of wine labeled Fountainhead Cabernet Sauvignon. The connections to *Atlas Shrugged* are much deeper and more meaning can be pulled from these connections through narratology. This analysis will be done using elements of Barthes' five narrative codes and Genette's conventions of mood, voice, and time.

While the previous chapter makes note of Vladimir Propp's work in *Morphology of the Folktale*, his theory will not be included in this chapter. While his approach to the study and classification of folktales does bear some significance for this project, the specificity of his

approach prevents it from being applicable to the narrative of *BioShock*. The game does not follow the same moves that Propp outlines, and exists outside of the specific cultural contexts which Propp addresses. Aspects of his work will be taken into account in chapter 4 in order to illustrate certain connections between narrative and ludic approaches to the study of video games. With this in mind, this chapter will begin with the approaches established by Roland Barthes.

In *S/Z*, Barthes establishes five codes which he feels are at work in any given text as the building blocks of narrative meaning. These codes are the hermeneutic (HER), proairectic (ACT), semic (SEM), symbolic (SYM), and cultural or reference (REF). Aspects of a narrative that can be labeled as HER are those "whose function it is to articulate in various ways a question, its response, and the variety of chance events which can either formulate the question or delay its answer…constitute an enigma and lead to its solution (17)." Anything that creates a question or mystery for the reader to investigate through their experience with the text, "by which an enigma can be distinguished, suggested, formulated, held in suspense, and finally disclosed (19)," fits into this code. The ACT code identifies actions taken throughout a narrative, in which "the discourse, rather than the characters, determines the action (18)." This covers various actions or objects of actions and the sequences in which they appear throughout a text. These two codes work together to form the bulk of the narrative experience, the HER shaping the overarching narrative discourse and urging the reader to continue their readerly pursuit and the ACT providing a prescribed path through that pursuit.

The remaining codes build connotations that can be used to pull additional meaning about the characters and the narrative world. The REF code is the simplest of these, referring to anything in the text that makes a connection to a body of knowledge outside of the text, whether

it is literary, historical, scientific, anatomical, etc (18). The SEM code deals with connotations in discourse that reflect aspects of characters, such as age or wealth. Somewhat differently, the SYM code focuses on metonymic breaking of taboos through narration/the narrator, usually focusing on the rhetorical, sexual, and/or economic standards and transgressions they experience (19). While these codes help readers pull more meaning from their narrative experience, they function aside from the HER and ACT; the REF, SEM, and SYM codes help readers make additional connections that assist in their experience of the narrative's actions and enigmas.

Genette's approach works more as syntax for narrative experience as opposed to a set of tools for interpretation, detailing widely applicable concepts that can help readers identify narrative tropes. He manages this focusing on the ways time, mood, and voice are featured in narratives. His theories on time, which cover order, duration, and frequency, are applicable across entire narratives. Order refers to the organization of a narrative in terms of where events fall chronologically and textually (39-40), as well as the devices that sometimes complicate such organization like advanced notice of future events or snares to mislead readers (75-77). Duration refers to the devices that affect perceptions of the passage of time in narratives relative to their actual story or discourse time, which is represented by the amount of text dedicated to an event or action (95). Frequency refers to how often an event occurs in relation to how often it is referenced and how such interaction can trigger new meanings in later iterations of an event (114-116).

Mood and voice deal with the reader's perception of the narrator of a text; Barthes' SEM and SYM work in a similar fashion, but are not limited by focalization or voice. The narrative mood is established through the distance created by the style of narration (162) and the perspective afforded to readers by the text's focalization (189-190). This can be difficult to

determine at times, as "use of the 'first person,' or…oneness of person of the narrator and the hero, does not at all imply that the narrative is focalized through the hero (192)" and "[a]ny single formula of focalization does not…always bear on an entire work, but rather on a definite narrative section, which can be very short (191)." Voice refers to the relationship in narration between the role the narrator plays in the story s/he is telling (217) and whether or not that story is his or her own (228). Like mood, it can shift or vary within a given story, and is thus entwined with the potential levels of narration in the story's diegesis, whether concerned with the main narrative (diegetic, or intradiegetic), a potential framing narrative (extradiegetic), or a narrative contained within the diegesis (metadiegetic) (248).

While ideas such as those listed above, particularly those of Barthes, have been frequently referenced in game studies, it may seem unclear how exactly they pertain to the study of video game narratives. After all, several of the Barthes' and Genette's concepts are dependent on particular uses of textual language, some examples of which are dependent on tense and gender changes in French texts. How do such ideas translate into a medium that relies primarily on graphic representations as opposed to textual ones? Despite the specificity of those examples, the ideas leading to them are still applicable to game narratives, as will be shown below in regard to *BioShock*. However, before delving into how Barthes' and Genette's ideas apply to this study, it is worth asking what exactly can be considered a narrator in a video game.

As Genette establishes, a novel features narration that is focalized in a certain way, offering readers a specific perspective on the series of events that makes up a narrative. While there are times when the narrator/narration can be co-opted by devices or entirely altered, they inevitably rely on text to orient the narration and reader. Video games do not have quite the uniform mode of narration that textual media do. *BioShock* in particular seems a bit unclear on

this throughout much of the game. As a first-person shooter (FPS), *BioShock* frames the screen as though you are seeing what your character avatar sees; the only part of your avatar you see is your hands. FPS protagonist avatars are meant to focalize players in order to create the illusion that the player is actually performing the actions of the avatar. This can be complicated by other factors. The avatar may have his or her own voice and dialogue that is heard throughout gameplay, as with the eponymous protagonist of *Duke Nukem Forever*. The first-person perspective may be broken for the sake of cinematic cutscenes in which the character avatar is completely seen, as in the *Halo* series. Other games offer the option for players to switch between first- and third-person perspective, the latter of which positions the character avatar in full view, as though a camera were following. *BioShock*, while strictly first-person, complicates this slightly. The game's protagonist appears to lack any personality; he has no dialogue, his face is never seen, and he is only briefly named in the opening scene of the game on a letter addressed to "Jack."

In a sense, Jack appears to position the player in the very center of the narrative. In Genette's terms, Jack manages to limit distance to the narrative. As he does not have his own dialogue, or even inner monologue, the entire experience of controlling Jack creates more of a state of mimesis than a pure narrative experience. Jack never reports on his experiences in the city of Rapture; players are simply thrown into the chaos through his eyes, experiencing his fight for survival simultaneously as it occurs. Genette claimed that no narrative can actually "show" its story, that

> [a]ll it can do is tell it in a manner which is detailed, precise, 'alive,' and in that way give more or less the illusion of mimesis—which is the only narrative

> mimesis, for this single and sufficient reason: that narration, oral or written, is a fact of language, and language signifies without imitating. (163-164)

Genette's statement obviously could not account for a simulated experience as vivid as *BioShock*, which creates exactly the sort of mimesis which he deemed literature and language incapable. However, that is not to say that there are not other distancing factors involved with the *BioShock* experience.

First, Jack's entire experience in Rapture is guided by an unseen ally who goes by the name of Atlas. From the moment that Jack arrives in Rapture, Atlas reaches him through a handheld radio found in the bathysphere that brought him. As the player moves Jack through the shadowed and debris-strewn halls of Rapture, Atlas offers advice, warnings, and context for what is seen. It is Atlas that advises you to arm yourself. It is Atlas that leads you to your first plasmid. It is Atlas that directs you through hidden smuggler's passages. And it is Atlas that prepares you for the menace of Andrew Ryan. Second, as a corollary to Atlas' aid, the game features text directions that appear at the beginning of a new objective. These instructional blurbs usually follow statements made over the radio, from Atlas or from some of the seemingly more sinister denizens of Rapture still cognizant enough to address you. After a moment on screen, these directions are occasionally replaced by a rotating arrow directing the player toward important goals. These devices serve to ensure the movement of the story and to keep the player moving toward a particular goal within the narrative.

As Jack is silent and essentially lost within Rapture, these directive features seem to serve as a proxy for textual narration. However, they do not appear to detract from Jack or the player's focalization. Atlas demonstrates an in-depth knowledge of the city and its workings, which could suggest a nonfocalized narrative, but every event in the game necessarily passes through Jack as

an internalized focalization in order to facilitate the player's experience. The textual directives serve as reiterations of what has been presented in dialogue, usually with simpler phrasing to ensure the objective is understood. In a way, these instructions are the closest approximation of Jack's acknowledgement of his goals, accepted through the actions of the player. It is this focalization and perceived lack of narrative distance that sets the groundwork for a deeper critique, as it becomes the link between the game's narrative and its Randian themes.

Questions are raised for the player from the very start of the game. As Jack's plane crashes in the middle of the Atlantic and he rises to the water's surface to find himself surrounded by flames. A lighthouse is seen in the distance, backlit by a full moon. This moment, as simple as it may seem, embodies two of Barthes' codes, the HER and the REF. The abrupt crash and writhing inferno limiting the player and guiding Jack toward the lighthouse beg the question, "Can I find safety there?" This question establishes the main HER enigma that persists throughout the game, that being, "How will I survive this situation?" However, the REF in this moment hints that such a feat will not come without terrible struggle. As Gèrard Kraus establishes, the image of the lonely lighthouse bathed in the light of a full moon is taken from the iconography of gothic horror, suggesting that what lies inside (or in *BioShock's* case, what lies beneath) is bound to be terrifying or grotesque (89). This situates Jack's and the player's stumbling upon Rapture as a connection to a particular literary tradition, one which the game does not take long to live up to.

As the player enters the lighthouse and its door closes behind them, they are immediately greeted by a large, imposing golden bust. Under the bust hangs a banner that reads, "No Gods or Kings, Only Men." The bust is of Rapture's founder, Andrew Ryan. A staircase leads the player down into the basement of the lighthouse, in which they find a golden bathysphere. The walls of

this room bear enormous gold or brass plaques emblazoned with the words “SCIENCE,” “INDUSTRY,” and “ART.” The bathysphere takes the player down into the ocean, but momentarily blocks the view beneath the sea to present the passenger with pre-recorded message from Andrew Ryan himself. The message, which follows an advertisement for the Incinerate! Plasmid by Ryan Industries, begins as follows:

> Is a man not entitled to the sweat of his brow?
>
> No, says the man in Washington, it belongs to the poor.
>
> No, says the man in the Vatican, it belongs to God.
>
> No, says the man in Moscow, it belongs to everyone.
>
> I rejected these answers…

The screen then lowers just in time to reveal Rapture, Ryan’s massive art-deco answer to the demands of the surface world on the ambitious industrialist. Ryan claims that the city was meant to give the “best and the brightest” refuge from being “bound by petty morality,” “where the great would not be constrained by the small.” Kraus holds this up as an example of how Andrew Ryan acts as an “uncompromising advocate of rational individualism,” much like *Atlas Shrugged* author Ayn Rand (Kraus, 90). This mentality fuels the motivations of the central characters in *Atlas Shrugged*, as well.

From railroad tycoon Dagny Taggart to engineer/philosopher/urban legend John Galt, several characters of Rand’s exist to perpetuate this individualist, Objectivist philosophy. The story of *Atlas Shrugged* follows Taggart as she attempts to prove that she can successfully operate Taggart Transcontinental despite changes to United States law that are designed to destroy competition amongst businesses and move the country away from capitalism. As she works with steel-maker Hank Rearden to create new railways capable of unprecedented speeds,

she is frustrated by the disappearances of several innovative employees and unparalleled tycoons at a time when they are needed most. More and more people begin to ask the question, "Who is John Galt?" Out of spite for the phrase, which she takes a sign of hopelessness and passivity, Dagny reclaims it as a sign of mindful industrious success when she christens her new railway the John Galt Line. When Dagny Taggart finally finds the real John Galt and the missing industrialists, she learns that they have all been convinced by Galt to retreat from American society and go on strike, taking the oath that "I swear by my life and love that I will never live for the sake of another man, nor ask another man to live for mine." After Galt manages to spread his message over the radio waves and is captured, Dagny and other strikers come to his aid. The rest of the United States, thrown into violent chaos, is left without its great thinkers and creators as they retreat back into Galt's Gulch.

Andrew Ryan's declaration that Rapture will exist to foster creation and research without restriction or governmental interference positions it as a sort of undersea Galt's Gulch. In that sense, the entire game setting serves as a REF. While there is no evidence of the same political and economic turmoil present in *Atlas Shrugged*, it evokes the same desire for an Objectivist utopia. Rapture itself could even be considered a play on Galt's ideal location. At one point in the novel, Galt is described to Dagny Taggart as "a man of inestimable wealth" who saw the mythical city of Atlantis; the sight was "of such a kind that when one had seen it, one could no longer wish to look on the rest of the earth." Legend has it that Galt sunk his own ship, along with its crew, to descend to the beauty beheld beneath the sea. Rapture is certainly a beautiful sight to behold, comprised of stylish towering high-rises (skyscrapers feels like an inappropriate term) linked together with transparent bridge passages and covered with neon advertisements, giving the city a glow and hum and stands out amongst the shadows and creatures of the ocean's

depths. Levine has stated that Irrational's art team took photos of several art deco buildings built in the 1950s in New York City , further establishing a historical and architectural REF worked into Rapture. However, it is the Randian connection that comes across more powerfully as the game continues.

Players quickly learn that the set-up of Rapture is more than an indication of an era. As the bathysphere pulls into the city, players are greeted with daunting shadows framing faint light coming in from a window directly across from the bathysphere door. A silhouette stands in the light, urging you to hurry out of the bathysphere. Before long, his warning becomes clear as someone else drops from the ceiling, wielding two metal hooks. The hooked figure quickly kills your greeter and then turns to the bathysphere. After the aggressor flees, Atlas first addresses the player. Taking the first few steps out of the bathysphere reveal structural debris, random garbage, abandoned tools, and picket signs that read "Ryan Doesn't Own Us!" and "Let it end! Let us ascend!" This room once functioned as a welcome center to Rapture's newest arrivals, but now it only leaves players wondering, "What happened here?" How exactly does such a grand utopian scheme turn to such horrible squalor? What did Ryan do to create such dissent amongst his best-and-brightest citizenry? What role has Atlas had in the whole mess? As this HER is introduced, Jack is recruited by Atlas to help him find his wife and child so that they can escape Rapture together. In return, Atlas offers to help you survive as you navigate Rapture.

This serves as a breaking point for some. Game designer Clint Hocking, creative director of *Splinter Cell: Chaos Theory* with a M.F.A. in creative writing from the University of British Columbia and a degree in visual fine arts from Langara College ("Biography"), feels that this aspect of what he calls the "narrative contract" of *BioShock*—helping Atlas—is at odds with the ideas of Randian rational self-interest. He suggests that various elements of the game,

particularly the player's choices regarding the Little Sisters which will be discussed below, are meant to align players with the idea of rational self-interest, and that helping Atlas is anathema to a true Objectivist ("Ludonarrative Dissonance in *Bioshock*"). This is a problematic position to hold, as it presumes the player must buy into Rand's philosophy in order to be successful in the game; this will be discussed further in the next chapter. Indeed, reaching out a helping hand to a complete stranger would seem to go against the "I will never live for the sake of another man" ethos, but this view as imposed by Hocking ignores the context in which players of *BioShock* find themselves at the start of the game: stranded in the middle of the Atlantic, lost in a city that appears to be home to mysterious psychopaths, and armed with nothing but what you find lying around. In such a situation, would it not be in one's self-interest to accept help in order to survive? This is the situation the player enters upon their arrival at Rapture, and Atlas is the only one offering any help.

That Atlas would do such a thing would seem to be more out-of-character than Jack or the player helping him; Atlas, as a citizen of Rapture, would supposedly have bought into the rational self-interest that Ryan was promoting. This raises another HER: Who exactly is Atlas? As the player moves through Rapture, it becomes abundantly clear that most of the citizens did believe Ryan's rhetoric, at least until civil war broke out. The story of what happened in Rapture before Jack's arrival in 1960 is told visually in a number of instances, such as the "Happy New Year 1959" signs that are still left out, the contrasting propaganda that is posted throughout various areas, but it is more fully fleshed out audibly. As the player explores Rapture, they find audio diaries strewn throughout the debris. These recordings serve multiple functions. They can direct the player to special areas where they may find important items or stashes of health and ammunition; they can provide codes to get the player into secret or restricted areas; but, most

importantly, they tell the story of Rapture's civil war and characterize the people who lived and worked in Rapture.

These diaries can feature a wide variety of characters, allowing the recordings to span numerous perspectives of the conflicts in Rapture. Some detail the discovery of the substance ADAM, which allows for the altering of genetic code and is highly addictive. Some add background to the lunatics still loyal to Ryan whom players encounter in the game, such as J. S. Steinman, the famed plastic surgeon whose ADAM addiction caused him to have hallucinations of Aphrodite telling him to "do something about symmetry," or Sander Cohen, the artist who subjects his apprentices to horrific and sometimes life-threatening tortures to push them to perfection. Many of these diaries provide background for the civil war, including characterization, event, and aftermath surrounding Atlas, Andrew Ryan, and the gangster Frank Fontaine.

These diaries function, in Genette's terms, as a series of completing analepses, meaning that they retrospectively fill in gaps in the main narrative. This may seem complicated, as many of these recordings feature characters and events that players never encounter during gameplay, with the exception of some of their prominently displayed corpses. However, given the state of Rapture upon Jack's arrival, it is more apt to consider the aspects of the story revealed through the diaries as part of the same narrative—homodiegetic as opposed to heterodiegetic. Kraus refers to Rapture's situation in the present as "post-apocalyptic (87)," but it comes off more as mid-apocalyptic; despite the reported death of Frank Fontaine, Ryan still maintains a despotic stranglehold on Rapture and appears to be struggling against Atlas. All of Ryan's signs of control from the civil war are still operating in every area players explore, every security camera and defense turret. The countless violently-addled Splicers, the genetically altered psychopaths left

throughout the city, are still rampaging and fighting for ADAM. And a paranoid Ryan, who Atlas refers to as "the bloody king of Rapture," periodically addresses the player directly to accuse them of being a CIA or KGB agent attempting to take Rapture down or to issue threats.

While many of these recordings shed light on the enigma, the HER, of what happened to bring Rapture into such a terrible state, they also create another enigma: Who exactly is Jack? There are key diaries that reveal aspects of Rapture that make it seem entirely too convenient that Jack has gained entry in the first place. The first comes from Sullivan, who establishes that Rapture's bathyspheres are under a genetic lockdown, limiting their use to "Ryan and his inner circle." Another comes from a Jasmine Jolene, an exotic dancer at the club Eve's Garden who is advertised as "Andrew Ryan's Favorite Gal." Her diary, titled "Pregnancy," reveals that she slept with Ryan and soon after sold her fertilized egg to Dr. Tenenbaum; at this point other diaries have established a link between Fontaine and Tenenbaum. As spread out as these analepses are, they appear to be innocuous to the player paying only minimal attention. However, their significance is bolstered by visual cues that are triggered during key moments.

At several points, a sepia-toned photograph of a young man standing between his presumable mother and father flashes briefly upon the screen. Different instances of this focus in on different parts of the photograph. The first occurs in the Smuggler's Hideout, just as the player moves in to attempt to rescue Atlas' family, and the image is accompanied by the sound of a distant scream or blood rushing through one's ears. Another follows a ghostly manifestation that presents itself to Jack in Eve's Garden; such manifestations appear in a number of locations in Rapture—perhaps a REF to cinematic hallucinations, particularly in *The Shining* as Levine had mentioned— but this particular instance carries the most narrative and visual significance. The static apparition runs to a closed room at the end of a hallway backstage, where a sinister red

light and moving shadows can be seen under the door. Behind the locked door Jolene is pleading for Ryan to forgive her, but her cries go unheard. As a gunshot fires, the red light disappears with a flash and the door creeps open, revealing Jolene's corpse and her audio diary; upon approaching the bed, the family photo appears again, this time focusing in on the mother. This happens again as the player moves toward the Hephaestus Core to sabotage Ryan's power system. As Ryan taunts the player with the idea of family, the picture appears again, this time focusing on the father figure. As the player continues to Rapture Central Control to finish Ryan off, to make him pay for blocking your every chance to escape the hell that is Rapture and for killing Atlas' family in the process, they stumble upon a small office with a startling display posted on the wall. A series of pictures are connected in particular ways by red strings, pictures of Ryan, Jolene, Tenenbaum, Suchong, and Fontaine. On the counter beneath this relationship map lies the picture of the family the players have seen throughout their journey, as well as a picture of a farmhouse that appeared to the player in Arcadia. Scrawled across the wall in red paint is the phrase, "Would you kindly?" Atlas has said this to Jack several times throughout the game:

> Would you kindly pick up that short wave radio?
>
> Now, would you kindly find a crowbar or something?
>
> Would you kindly lower that weapon for a moment?
>
> Head over to Fontaine Fisheries when you're ready, would you kindly?
>
> Would you kindly get this thing crafted?
>
> Would you kindly leg on over to the 'sphere and get on down to Hephaestus?
>
> Now would you kindly head to Ryan's office and kill the son of a bitch?

As is revealed by a trio of diaries from Dr. Suchong in Rapture Central control, two of which are in this small office, “Would you kindly” is a trigger phrase he implanted in a small child to force him to obey commands without hesitation; the child in question was genetically engineered to age at an accelerated rate, causing it to weigh “58 pounds, and have the gross musculature of a fit 19-year-old” at the age of one. The other recording reveals that Ryan only allowed the Vitachambers, the revival mechanisms that bring the player back upon a total loss of health, to be tuned to his “genetic frequencies.”

The next door leads into Ryan’s office, in which he is calmly practicing his putting. He reveals to you the fact that you were designed to complete the exact task with which Atlas has charged you. He then orders you about the room like a dog using the “Would you kindly” commanding, in the end handing you his putter and ordering you to “kill.” As the player watches Jack repeatedly bury the putter into Ryan’s skull, he proclaims, “A man chooses! A slave obeys!” until he can do so no longer. Ryan resigns himself to death at the hands of his illegitimate son, knowing that he can do nothing to prevent it. Afterward, Atlas asks the player if they would kindly disable Ryan’s destruction sequence and unlock the controls of the city. Upon doing so (whether the player likes it or not), Atlas reveals himself to be the long thought dead Frank Fontaine, and he sends security drones down to kill the player, his pawn. The player is lead away by Little Sisters to safety.

This sequence appears to resolve two enigmas. The player now knows that Jack is Ryan’s genetically-manipulated son and that Frank Fontaine has been posing as Atlas as part of a con to usurp control of Rapture. This supposed resolution serves to alter the original enigma, that of survival and escape. Now that the player has killed Andrew Ryan and been left for dead by Fontaine, the path out of Rapture appears to lie with Fontaine, who claims that he plans to leave

the city in a Bathysphere to reach the surface and commandeer a submarine that he is nearing the area of Rapture. However, this path is complicated by the player's choices, specifically those regarding the Little Sisters. Depending on the player's decisions to rescue the Little Sisters from their state as ADAM-producing beings or harvesting them for the ADAM-creating sea slug living inside of them, Jack can leave Rapture to live a peaceful life and raise the Sisters as his family or to follow Fontaine's lead and hijack a submarine with an army of splicers. This outcome is indicative of more than just the player's choices: it is but one of *BioShock's* sensational devices, serving as a REF to literary sensationalism and *Atlas Shrugged* in particular.

As Thomas Bertonneau states regarding *Atlas Shrugged*, Rand had specific intentions in mind for her characters, that as far as she was concerned, "*She* makes the background, *she* moves the characters…she puts the words in their mouths; they are glorious or repellent according to *her* plan (Bertonneau, 301, italics his)." The characters and events of *Atlas Shrugged* were specifically tailored to suit Rand's philosophical goals, each entity designed to represent her ideals or their antithesis. John Perich derides Rand's writing style as "melodramatic," "where every gesture is violent and every statement passionate." This sort of writing is sensational because it is meant to entice the reader's senses and emotions, to get them to feel a certain way. Bertonneau asserts that Rand attempts to build a specific catharsis for her readers:

> Homer, in *The Odyssey*, takes care from Book 1 forward, to heighten the boorishness and menace, the aggression and gluttony, of the suitors, the better the readers might participate vicariously in the hero's slaughter of them in the climax. A story without *catharsis* is hardly a story at all. Rand knows this demand of fiction and she draws her villains in broad strokes; she does this is prepare *us*, her

> readers, to participate in something [like yet unlike the climax of *The Odyssey*]. (301-302, italics his)

There are several of such instances in which the events depicted in *Atlas Shrugged* are set up to convince the reader of Rand's positions: Dagny Taggart's naming of the John Galt Line in defiance of the destructive negativity she sees in the commonplace utterance of the name (Rand, 201); Dagny's discovery that Ellis Wyatt's oil fields have been set ablaze (335-336); Hank Rearden's comparison of the proposed sacrifice of his proprietary metal and his business to self-immolation and the description of those opposed to his statement as slack-jawed and "maliciously unkempt" (481); the prolonged list of anti-individualists trapped in the Taggart Comet when it is destroyed (605-607); and John Galt's torture, during which he calmly instructs his captors in the repair of their torture device (1143-1144). Rand purposefully uses her ideology to in these scenes to play on the emotional and philosophical charge in particular utterances and occurrences, pushing her readers to buy into her Objectivism through the trials and tribulations of her protagonists.

A number of characters in *BioShock* perform similar functions. Ideologically, Atlas and Ryan each bear resemblance to John Galt. Atlas takes the position of the "destroyer," which is the first perception of Galt that Rand's readers are given as Dagny thinks on the disappearance of the nation's finest industrial minds (Rand, 379-380). Ryan is more of a parallel to Galt's own goals as espoused in the radio address given before his capture and torture (Perich). During his lengthy address, Galt makes several proclamations which bear a striking resemblance to Andrew Ryan's messages upon the player's arrival in Rapture and during their traversal of the city, proclamations against the interference of government or religion and championing free thought, choice, and industry (Rand, 1000-1069). The player experiences much of this relationship

through Ryan and Atlas/Fontaine's interactions and diaries throughout the game, but other diaries and the context in which they were found add to the player's sense of Rapture's fall and Ryan's slip from a John Galt figure into a market- and power-obsessed tyrant and do so in a particularly sensational manner.

The most striking of these diaries come from the characters Dr. J. S. Steinman, Diane McClintock, Bill McDonagh, and Mariska Lutz. Steinman's diaries offer a particularly troubling experience for the player, as they detail his obsession with using ADAM in his practice of plastic surgery, his hallucinations of Aphrodite telling him to "do something about symmetry," and his eventual brutal slashing of patients' faces and bodies. The screams, protests, and mania heard in his audio diaries come full circle for the player when they confront him in the medical pavilion; Steinman is found in his operating room surrounded by the corpses of three of his patients.

Diane McClintock's diaries show her change of heart toward Andrew Ryan. Originally Ryan's mistress, McClintock was repeatedly stood up by Ryan until she was caught in the New Year's Eve explosion that marked the beginning of Atlas' rebellion. Ryan ordered Dr. Steinman to perform surgery on her, but his efforts left her disfigured. As Ryan continued to ignore her, McClintock eventually joined with Atlas, falling for him with a similar fervor she had held for Ryan. Fontaine's diary "The Longest Con" suggests that he killed McClintock after she nearly discovers him speaking without Atlas' Irish accent.

Bill McDonagh's recordings tell a story of like-minded individuals drifting apart to an unfortunate extreme. McDonagh earned a position of trust with Ryan by refusing to install low-quality fixtures in the industrialist's Park Avenue apartment. He oversaw the construction of Rapture and sat on its governing council, but did not see eye-to-eye with Ryan's demand for an aesthetic focus; he told Ryan to build Rapture "like a bathtub" to prevent leaks, but Ryan refused

to listen. When Fontaine was thought to be killed and Ryan seized his assets, McDonagh pleaded that Ryan leave Fontaine's business interests alone for the sake of the ideals with which they built Rapture, the ideals that the citizens believed in. When Ryan proceeded to "nationalize" Fontaine Futuristics, McDonagh resigned his position and developed a plan to assassinate Ryan so that Rapture could continue on it intended course. The player finds McDonagh and several other would-be assassins skewered to the pillars outside of Rapture Central Control, just before confronting Ryan.

Possibly the most emotional of these testimonies is that of Mariska Lutz, a mother who fled to Rapture with her family in order to start a new life and seek their fortune. The player finds her first diary in a locked room. The only light on the room shines faintly from a television tuned to a dead channel. The audio diary reveals that Mariska's daughter, Masha, was taken to become a Little Sister. Mariska was told that her daughter was needed to save the city—to provide a source of ADAM in the fight against Atlas. Mariska laments what will happen to her family as the fighting continues to escalate. As the diary ends, splicers emerge to attack the player. A dim light is triggered upon their entrance, allowing a better view of the room and revealing a corpse on a sheetless mattress; from the tone of Mariska's audio diary, this is likely her or her husband. Another diary of Mariska's can be found later in the game, in which she claims to have seen Masha as a Little Sister; Mariska called out to her daughter, but received no response as the girl continued to drain blood from a splicer's corpse.

What is fascinating about these accounts, particularly those that flesh out the wider context of Rapture beyond the conflict between Ryan and Fontaine, is that they illustrate the nature of choice in Rapture. Ryan and Fontaine chose to pursue their individual interests to the point that they reached conflict and eventually war. Those close to Ryan chose to stay loyal to

him and descend into madness, like J. S. Steinman, or abandon him for the sake of their own integrity or spite, such as McDonagh and McClintock, respectively. Others, like those of Mariska Lutz, reveal the effects the choices of those in power have on the people who have none. This, taken into account with the player's overall experience of controlling Jack in Rapture, reveals the SYM that is at work throughout the entire game: agency. *BioShock's* narrative puts players in a position in which they must make choices—how to survive, what to do with the Little Sisters, whether or not to collect the audio diaries. The influence of *Atlas Shrugged* plays into this from the beginning, as the organizing principles of Rapture and Andrew Ryan stem from Galt's Gulch, in terms of ideological motivations and rhetorical sensationalism. It could be argued that *BioShock* acts as a critique of Rand's Objectivism through the thorough connections it has to *Atlas Shrugged*, due to the fact that Ryan's initial individualist impulse set the groundwork for the game's events, but the reality is that such an interpretation is left open to the player. The degree to which such connections influence their gameplay experience is dependent on the choices they make and the information they gather. It is possible for a player to complete *BioShock* and not pull such connections from the content, but the ways the HER, REF, and SYM described above function in relation to the way the story is organized for the player leave the option open. While the game itself is linear, the potential for meaning is plural

CHAPTER 3

SHOT FOR(*BIO*/*SYSTEM*) SHOCK: LUDOLOGY AND THE FIRST-PERSON SHOOTER

Game designer Clint Hocking believes that *BioShock* presents players with two "contracts," one ludic and one narrative. He claims that the ludic contract is "seek power and you will progress." The narrative contract, which was discussed in the previous chapter, he claims is "help Atlas and you will progress ("Ludonarrative Dissonance in *BioShock"*)." Hocking asserts that the game's mechanics are aligned with the ideals of Randian Objectivism, which he believes the player is meant to buy into for the purposes of the game. By this reasoning, it is expected that players will harvest the ADAM from Little Sisters in order to maximize their potential power. Hocking's problem stems from the narrative contract, which stands against rational self-interest and offers no Objectivist option; players cannot just abandon Atlas to explore Rapture on their own or side with Andrew Ryan. This perceived dissonance between the ludic and narrative contracts strikes him as "disturbing," but the game's twist—that Jack has actually been programmed by Frank Fontaine to return to Rapture and kill Ryan—turns it into an insult, as though the game "openly mocks us for having willingly suspended our disbelief in order to enjoy it ("Ludonarrative Dissonance in *BioShock*)."

The issue here is that Hocking assumes that the game needs to base every aspect of its mechanics on Rand's concept of rational self-interest. Hocking states,

> To be successful, the game would need to not only make me somehow adopt this difficult philosophy, but then put me in a pressure-cooker where the systems and content slowly transform the game landscape until I find myself caught in the aforementioned 'trap'. Unfortunately, when we take the first, ludic contract and

> map it to the game's second contract, the game falls apart. ("Ludonarrative Dissonance in *BioShock*)

While this approach could make for a compelling experience, it ignores aspects of *BioShock*'s overall experience as a game, specifically as a first-person shooter (FPS). The purpose of this chapter will be to perform a media-specific analysis of *BioShock*, examining its design and mechanics as they relate to the game's immersive and unit-operational aspects. When viewed in this respect, *BioShock* reveals itself as a reflection upon the FPS genre.

As the impressive environmental design of *BioShock* has already been established in the previous chapter, it would be useful to build on that by examining the immersive elements of the game. Janet Murray states in *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* that immersion in a digital medium is "the experience of being transported to an elaborately simulated place" and is facilitated by four properties: the procedural, the participatory, the spatial, and the encyclopedic (71). As Murray suggests, the procedural aspect of immersion is based on a computer's ability to "embody complex, contingent behaviors" which could foster compelling storytelling "if we can write rules for it that are recognizable as an interpretation of the world (72-3)." For video games, these rules are established by the gameplay mechanics. For *BioShock*, they facilitate the player's possible actions in Rapture. They limit where you can and cannot explore, based on Jack's inability to explore outside of the walls of Rapture on the ocean floor or open particular doors, because they are locked or permanently blocked. They dictate the effects of firing a machine gun or hurling a bolt of lightning, based on which type of enemy is hit, where they are hit, and what environmental factors are present; did the player shoot an explosive canister near the enemy or throw electricity into a pool of water? They signal combat situations with stressful staccato string music that closes out with the defeat of the last enemy in

an area and a terse crescendo. They dictate the amount of energy for plasmids, known as EVE, is expanded upon a power's use. They restrict the locations of items or ammunition to particular areas, such as vending machines, healing stations, abandoned weaponry, storage containers, or enemy corpses; the exception to this is hidden areas in which items have been presumably hoarded by Rapture's citizens or splicers during the civil war. Finally, they establish the ways in which the player can interact with object. The player can search through crates, corpses, vending machines, and trash cans; hack vending machines to reduce prices, health stations to damage unsuspecting enemies, safes to obtain potential valuables, and security equipment to raise alarms on enemies; pick up items, weapons, plasmids, gene tonics, audio diaries, money and food; or manipulate items or set pieces using plasmids to change their properties, clear paths, set traps, or improvise weapons. Many of these procedures are dependent on the game engine, which will be discussed in more detail later.

The participatory mode of *BioShock* extends from some of these procedural points. Murray asserts that clear, easily grasped rules and flexibility in acceptable human behavior make a game more compelling (79), and *BioShock* delivers upon this. The game's narrative establishes social and behavioral norms that are much different from those of our real world, thus giving the player the opportunity to genetically modify Jack as they see fit with the various plasmid powers and gene tonic upgrades they can find. Each of the weapons the player finds, with the exception of the wrench, can be also be upgraded and loaded with up to three types of ammunition. Gèrard Kraus uses this customizability and upgradability to position *BioShock* as a FPS with elements of role-playing games (RPGs) (87). A typical RPG features a protagonist and/or cast of characters who can grow in strength and learn more powerful abilities as they accrue experience points. While *Bioshock* has no experience point system, the abilities that players can acquire and equip

can be replaced with more powerful versions that typically cost more ADAM. However, this system becomes somewhat complicated when taking into account the Little Sisters.

The other major mode of participation comes from the player's decision to either rescue or harvest the Little Sisters. In order to acquire new plasmids and tonics, players must collect ADAM from Little Sisters. In order to do this, they must first take down the girl's protector, the Big Daddy. Early in the game, this is usually an experience in which the player repeatedly chisels away a small amount of the Big Daddy's health before being killed and subsequently revived in the nearest Vitachamber. Once the protector has been dispatched, the player must choose the fate of the Little Sister. Rescuing the girl from her horrific state returns her to normal neutralizes the ADAM-producing slug within her safely, which in turn produces 80 units of ADAM which the player can use. Harvesting the slug from within the girl involves actually killing her; the event is not shown on-screen, as the frame whites out and fades back into focus on a writhing slug in Jack's hand and no Little Sister to be seen. Harvesting results in twice the amount of ADAM, 160 units per Little Sister. Players can then use this ADAM at specialized vending machines known as Gatherer's Gardens to get new plasmids. At a glance, it seems almost insane from a gameplay perspective to even consider rescuing the Little Sisters—how could anyone expect to get through the game using so little ADAM? This seems to be the reasoning behind Hocking's claim that the game align's the player's actions with Randian self-interest, but it ignores the benefits that come with rescuing the Little Sisters. When the player first encounters Brigid Tenenbaum, she gives Jack a tonic that will allow him to save the young girls and claims she will find some way to repay such a kindness. If the player chooses to rescue the Little Sisters, Tenenbaum makes good on her promise, bestowing upon the player additional ADAM, health, items, ammunition, and plasmids. In fact, this is the only way the player can

access the Hypnotize Big Daddy plasmid, which gives them the power to make a Big Daddy protect them for a limited time as though they were a Little Sister. What's more, the player's decision regarding the Little Sisters affects the ending of the game. If the player chose to harvest more than just a few of the Sisters, then Jack returns to the surface to hijack a nuclear submarine and seize power as Frank Fontaine likely would have. If they chose to rescue, then they leave Rapture with a group of Little Sisters and live happily as a family until Jack's eventual passing.

Some, such as independent game developer Jonathan Blow, feel that the narrative tie-in with the Little Sister mechanic and the overall miniscule difference in ADAM received for either harvesting or rescuing every last Sister make the decision a throw-away point, that it makes little to no difference what the player actually does with them. This does little to describe the feelings that players have while they are actually making the decision; observations like Blow's and Hocking's are contingent upon a total retrospective view of the game which ignores the role such encounters play for the player's experience in progress. How a player experiences an event like the rescue or harvesting of a Little Sister is more than a repetitive selection. It is a part of their strategy for how to survive the horrors of Rapture. Moments like these play into the larger narrative—not just in terms of the ending the player earns, but in terms of the player's handling of the smaller events that take place in each part of Rapture—which is aligns them more with Murray's conception of immersion as a largely *narrative* undertaking. While the procedural and participatory modes certainly play a role, the spatial and encyclopedic modes do much more to facilitate narrative. This holds true for *BioShock,* as well.

When discussing the spatial elements of a digital work, Murray points out that "only digital environments can present space we can move through (*Hamlet on the Holodeck,* 79)." This space enables navigation that feels like physical exploration, as "when we enter

a…command, the screen display changes appropriately (80)." From the moment the player begins to explore Rapture, the various cracks and breaks in the lavish art deco architecture signal decay and destruction. The serenity of the undulating undersea world outside of the windows stands in stark contrast to the water rushing in through broken seals on bridges between buildings, splashing Jack and affecting visibility, or the frozen areas which did not receive proper maintenance. The debris of what used to be restaurants, markets, and apartments are left filled with destroyed property, propaganda or protest signs, corpses, security drones, and vicious splicers. Murray's suggestion that navigation is like a "dramatic enactment of the plot (83)" is not far off in regard to Rapture.

The encyclopedic mode allows game designers "potential to offer a wealth of detail, to represent the world with both scope and particularity (84)." *BioShock* manages to do this through the visual throwbacks to the civil war between Ryan and Fontaine/Atlas, but it is much more powerfully accomplished through the audio portions of the game. The player learns much about Rapture's civil war and the background of Andrew Ryan through the audio diaries, direct radio communications, and public address messages from Ryan. Through these messages, the players learns about actions taken by Fontaine, Ryan, and other major figures that lead to Rapture's downfall, including Fontaine's scheme to use Ryan's own illegitimate son against him; business and maintenance practices made possible under Ryan's system, such the sacrificing of an unquestionably water-tight construction for a more pleasing aesthetic, or the manufacture and sale of cheap cigarettes out of crushed sea shells; the desperation of Rapture's average citizens; the background of Ryan's life that lead him to adopt his philosophy; and the motives of those who came to oppose Ryan and what came of their dissent. Certain parts of this background knowledge are heard regardless of what the player does, as Ryan's formative experiences and

Fontaine's plot are heard either in specific areas of Rapture or after particular events unfold, like the killing of Andrew Ryan. However, others are optional, such as the information found on the audio diaries. While this information is not required for the completion of the game, players are encouraged to collect them as some reveal entrances to and entry codes for hidden areas, giving them a possible replenishment of health, EVE, or ammunition or a new plasmid/tonic for an added edge.

The issue of whether or not *BioShock*'s audio diaries can offer players gameplay advantages may fall outside the focus of Murray's concept of immersion. The most frequent critique of Murray's theories is that she centers on issues of narrative to the point that she neglects the aspects of digital media that make them unique. Espen Aarseth levels such a criticism in *Cybertext: Perspectives on Ergodic Literature*. According to Aarseth, ergodic literature requires "nontrivial effort" for a reader/user to attain understanding. Aarseth's assertion of "effort" depends on the positioning of the reader/user as the key element of a narrative via dissonance between the author/narrator and the narratee/reader in digital works. These breaks create a situation of intrigue in which a digital narrative appears to be open-ended, left entirely to the "cleverness and experience of the player (112)." This intrigue suggests that a digital narrative's successful outcome is not predetermined, but contingent on the reader/user's, or player's in the case of *BioShock*, ability to successfully work through the challenges presented to them.

In Aarseth's terms, *BioShock* would appear to function similarly to a hypertext work in the way it conveys its story. As the player progresses through the city of Rapture, they experience something similar to Aarseth's aporia-epiphany model of ergodic literature. The aporia comes in the form of missing pieces to the narrative that the player finds as they fight

through the game (91). Again, the audio diaries found throughout Rapture fill this role, as they reveal aspects of the story that require a chronological jump from the current state of affairs and may be missed if the player does not explore the city closely enough. The epiphany comes about as the pieces of the story the player collects or uncovers converge into a salient idea that replaces the aporia (92), such as the realization that Jack has been manipulated by Fontaine and can navigate Rapture because of Ryan's genetics. Should the player be unable to survive the onslaught of splicers and Big Daddies, the aporia remains. Thus, the game pushes the player to exhibit significant effort to overcome the aggressive obstacles barring them from epiphany. The broad customization options in *BioShock*, from weapons to ammunition to plasmids to gene tonics, allow the player to approach combat encounters in various ways. The player can stage a full-frontal assault with high-damage plasmids and a shotgun; sneak up on opponents after equipping the Wrench Lurker tonic to add significant damage to unsuspected wrench strikes; plant proximity mines or electrified tripwires as traps into which enemies can fall; or gang up on enemies with hacked security drones or hypnotized Big Daddies. Depending on the ADAM at the player's disposal, one strategy may be more feasible than another, which may influence their choices regarding the Little Sisters. While these options are open to players regardless of their diligence in obtaining the parts of the story revealed through the audio diaries, they inevitably end up coming to the same terminating point; the final confrontation with the ADAM-loaded Atlas that Frank Fontaine becomes; the game's ending is wholly dependent upon the player's choices regarding the Little Sisters, but the journey up to that point is linear, each player facing the same splicers, exploring the same rooms, hearing the same audio diaries, solving the same puzzles, and acquiring the same weapons and powers. These myriad factors play into a linear

representation of Rapture in its current state, similar to Aarseth's concept of the labyrinth that is both multicursal and unicursal at the same time, exhibiting linearity and open-endedness at once.

There are clear problems with this view of video games, particularly *BioShock* and other FPSs, which are highlighted by Sandy Baldwin in his essay "The Nihilanth: Immersivity in a First-Person Gaming Mod." Baldwin takes a different approach to immersion than either Murray or Aarseth, in that he acknowledges the intricately constructed experience of a FPS. Using Valve Software's 1998 release *Half-Life* as his example, Baldwin outlines the ways in which immersion in a FPS breaks down Murray's concept of immersion via spatial and encyclopedic modes of representation. He establishes that the world of *Half-Life* is designed to disorient and confuse the player, engulfing their vision in darkness, water, oil, blood, or other blinding substances (2). In this way, FPSs are designed to prevent the sort of spatial immersion that Murray endorses. FPS games are designed to create situations and worlds in which the player feels alienated or disoriented. *BioShock* manages to accomplish the same destabilization for the player, as every blow dealt to Jack momentarily blurs the player's view with flashes of light and wincing double vision, every explosion fills a room with smoke and debris, and every skirmish between splicers and Big Daddies that the player comes across has the potential to include wild gunfire or stray projectiles that cross the player's field of vision or force the player to change course. The player is even prompted upon starting a new game in *BioShock* to adjust the level of brightness so that fine details such as writing on walls can barely be seen; players are encouraged to put themselves at a visual disadvantage.

Baldwin goes on to acknowledge the inextricable link between embodiment and coding in video games. Using the example of the final boss fight from *Half-Life*, Baldwin reveals the specificity of the coded properties of objects in a game world. As the player approaches this final

battle against the monster known as the Nihilanth, they must cross a threshold before the battle automatically initiates. However, as Baldwin establishes, if the player stops moving toward the Nihilanth before reaching a certain point, the battle never begins. The player is able to just sit there as the Nihilanth stares back at them (5-6). *BioShock* has several moments similar to this in which the coded properties of in-game entities are shown. Just as the Nihilanth will not attack or move unless the player moves within a certain proximity, some splicers in Rapture will not attack unless encroached upon. Such splicers are usually meant to evoke a particularly troubling feeling, such as the splicer outside of the Welcome Center talking to a revolver in a bassinette as though it were a baby. This splicer will not turns to face Jack just as the player moves within a few feet. Others are meant to establish pity and desperation, such as the splicer "couple" Brenda and Charlie in the Kashmir Restaurant. Killing Charlie causes Brenda to emerge from her room, firing a pistol. Another gives the player an opportunity to learn to use the game's research camera, remaining completely still until a suitable photograph has been taken.

However, the greatest example of this sort of coding is seen in the encounters with Big Daddies and Little sisters. Ken Levine states that Irrational had a unique artificial intelligence system developed to manage the relationship between the Little Sisters, Big Daddies, and everything else (McCutcheon). Big Daddies roam the halls of Rapture freely, but if they are alone and the player has not rescued or harvested all of the Little Sisters on a given level they will approach the "hidey-holes" built into the walls to summon a Sister. Once the she emerges into the playable space, the Daddy's priority becomes her protection. If the player moves too close to the Big Daddy it will shove them away, but if the player moves too close to the Little Sister the Daddy will take a threatening defensive stance. This can include a warning shove, but if the attempts at intimidation are not heeded the Big Daddy will become enraged and lash out at

the player until one of them has fallen dead. The Big Daddy will focus in on any specific targets that attack it, but allows its rage to completely subside once all of the offenders have been dispatched; this means that a Big Daddy that has just killed Jack will not immediately attack him again when he returns from a Vitachamber. Big Daddies will also battle it out with splicers, as the ADAM addicts are eager to harvest Little Sisters for themselves. However, splicers are significantly weaker than Big Daddies, so they rarely manage to overpower the behemoths without assistance from other splicers or from the player; in this latter case, the splicer will then attack Jack instead of going straight for the Little Sister. The Sisters themselves never interact with the player or the splicers directly—at least not the living ones. Little Sisters will gleefully approach corpses, refer to them as "angels," and extract ADAM from them using a massive hypodermic needle. The only living beings that Little Sisters will interact with are Big Daddies. They will cower behind their protectors if the player or a splicer approaches too closely, they will weep before the fallen corpse of a Big Daddy, and they will playfully urge the Daddies on as though they were playmates, referring to them as "Mr. Bubbles" or "Mr. B." In accordance with Dr. Tenenbaum's and Dr. Suchong's notes regarding the Sisters, they are virtually invulnerable in their default state, making them impervious to the bouts of gunfire and explosions that so frequently occur around them. This specific and intricate relationship between the player, the Big Daddies, and the Little Sisters places players directly into the coded matrix of the AI. The player's possible actions put them in a position to influence the gameplay experience and the narrative's conclusion, allowing the player to experience a sense of embodiment in the game itself.

For Baldwin, it is this sense of embodiment that creates immersion. He states, "[t]he poetics of immersion are in the heuristic playing out of bodies placed in an imaginary that is not

reduced to but rupturing symbolic frameworks of inscription (2)." He sees immersion as something "incoherent and continuous (1)." Whereas Murray positions the spatial and encyclopedic as prerequisites for immersion, Baldwin thinks of them as side-effects. The spatial dimensions and properties of a game, the encyclopedic supplements, and the entire narrative arc are set and programmed before the player ever touches a controller, but the experience of these elements as they unfold before the player create immersion (2). With this in mind, it seems to make more sense to examine the various elements of a game as they play into a particular experience. While the concept of how a player becomes immersed in a game world is useful for analysis, it can take for granted aspects of contemporary gaming that influence the experience of games. Ian Bogost suggests an approach that focuses on the "practice of criticism through the discovery and exposition of unit operations at work in one or many source texts (*Unit Operations*, 15)."

In *Unit Operations: An Approach to Videogame Criticism*, Bogost suggests that unit operations are elements that make up a cohesive system or text and their functions in relation to one another, including observable objects or actions and abstract concepts or emotions (5-8). Unit analysis does not aim to determine set-in-stone functions or features; instead its focus is "modes of meaning-making that privilege discrete, disconnected actions over deterministic, progressive systems (3)." Unit operations offer a more open-ended configuration of game elements that is dependent upon the specific situation in which they are used, the specific context in which they are presented; Bogost states that they are "largely arbitrary, certainly contingent of a particular situation, compacted and taken as a whole (13)." According to Bogost, unit operations have four modes through which they influence media experiences: the material, the functional, the proprietary, and the discursive. While these modes are open and can encompass a

wide variety of features, the specific ways that they apply to any single game or text set them as confines. Bogost focuses part of his efforts specifically on the FPS genre, and the conclusions he comes to within those sections are that the contemporary FPSs cannot be viewed as isolated works; they have inextricable relationships at the functional and discursive level with other games within their genre. As Bogost states, "Videogames can be played as individual linear experiences that might in turn be described in narrative form, but such analysis is useful only as an exemplar for the broader abstract meaning the text's unit operations elucidate (71)." It is this connection that ultimately positions *BioShock* as more than just another FPS with features similar to those of other games. Upon a closer analysis of *BioShock's* unit-operations, the game emerges as a critique of the FPS genre.

Ken Levine has referred to *BioShock* as the "spiritual successor" to *System Shock 2*, Irrational Games' critically-acclaimed 1999 PC effort. This makes sense when making a direct comparison between the two games. As Kraus summarizes, *System Shock 2* "takes place on a spaceship whose occupants have been taken over by an alien force" and features a "guiding voice" and a series of recording through which the fate of various members of the ship's crew are revealed. *BioShock* parallels these features of an isolated environment, narrational guidance, and retrospective chronology (Kraus, 86). *System Shock 2* also features a wide variety of supernatural abilities, referred to as "psionics," which are made possible through cybernetic implants the protagonist has received. *BioShock* manages to simply this through the genetic modification of plasmids and tonics; while these are upgradable and can be customized by the player for a large variety of power combinations, *BioShock's* take on this mechanic is much simpler, as *System Shock 2's* version involves development along the lines of particular character classes and up to five different levels of powers. *BioShock* also manages to simplify *System*

Shock 2's classes and abilities; while the Naval class could use technical skills such as hacking and the OSA agent class had greater psionic proficiency, *BioShock* collapses hacking, supernatural powers, weapon proficiency, and the ability to research enemy weaknesses into Jack. *System Shock 2* also features enemies that charge the player if they detect them coming and ammunition and items that are frequently scarce, features which *BioShock* manages to emulate through its splicer encounters; despite the presence of vending machines in Rapture that carry health, EVE, and ammunition, money tends to burn a hole in the player's pocket and can leave one armed with only their trusty wrench.

The similarities between each of these FPSs largely stems from the fact that they were both developed by Irrational Games. Many of the designers that worked on *System Shock 2* stayed with Irrational for *BioShock*, including Ken Levine and director of product development Jon Chey, despite the developer being taken over by 2K Games (Thomsen). These aspects of the games—first-person combat, supernatural abilities brought about by technological/scientific innovations, isolated yet believable settings, inventory conservation, persistently aggressive enemies, etc—become unit operations of Irrational's games. This relationship goes even further into Irrational's work. As Bogost establishes, it was Looking Glass Studios, the predecessor to Irrational, that changed the expectations of FPS games:

> It was Looking Glass Studio's *Thief* series that turned the traditional discursive mode of the FPS on its head. The plot of most FPS games is to wage as much slaughter as possible; in *Thief*, the main goal is to *avoid* conflict, sneaking through the shadows and darkness to avoid detection. (*Unit Operations,* 63)

Both *System Shock 2* and *BioShock* carry on this mechanic, but in very different ways. While stealth still works as a unit operation in both games, it is framed much differently than in the

Thief games. Stealth is more of a necessity for survival than a skill, as the overly-aggressive enemies and potential lack of resources to fight back make hiding in the shadows the only sensible strategy in some situations; it would be a bad decision to walk headlong into a skirmish between a Big Daddy and a group of splicers with no ammunition, no EVE, and low health. These features become a sort of trademark of the intellectual property (IP) of Irrational Games, making them a unit operation of their work as a developer.

This does not necessarily mean that their games stand out significantly from other FPS games by other developers and studios; as mention above, Baldwin cites the similarly violent and shadowy workings of *Half-Life*, which he considers to be the exemplar of the FPS genre (3). However, the relationship between *System Shock 2* and *Thief* brings up another aspect of FPS unit operations that broadens the context of *BioShock*: they share a game engine. Bogost's analysis of game engines positions them as being of particular importance to FPS games, as they "construe entire gameplay behaviors, facilitating functional interactions divorced from individual games." Bogost elaborates,

> The engine's principal effort, rendering, has nothing to do with the actual gameplay. Game engines also abstract routines for characters and objects in the world; manage physics routines to keep objects from falling out of the world and to dictate their interaction; and provide sound management, artificial intelligence, network communications, scripting, and tools.

The role that such software plays in the creation of games is of the utmost importance and spans all four of Bogost's modes of unit operations. They are material in that they embody all of the code and protocols needed to facilitate the creation of a game's inner workings, granting developers "opportunity cost savings of staring from an engine rather than from scratch." They

are functional in that they power every possible action and experience which a player experiences in a game and establish specific tools for developers to build their games and worlds. They are proprietary in that developers can market their engines and license them for use in other developers' games, thus allowing for the saved opportunity cost mentioned above. This aspect of the IP implications makes them discursive, as these engines create shared standards of possibilities between games that share engines. These discursive and functional modes are what tie *Thief* and *System Shock 2*.

Thief runs on the Dark Engine, which Looking Glass used to power the stealth aspects of the gameplay. The same engine was used for *System Shock 2*, and maintains the same level of stealth that players of *Thief* would expect, but in a much different gameplay setting and context. *BioShock*, however, was not built on this same engine, despite featuring similar enemy detection s *System Shock 2*. *BioShock* was originally developed using the Unreal Engine, version 2.5, but was updated before release to run on Unreal Engine 3 (UE3). However, instead of running solely on UE3, *BioShock* also runs on Havok Physics. This creates a link between *BioShock* and two of the most recognizable FPS titles of its generation: *Unreal Tournament 3* and *Half-Life 2*; while there are a slew of games that feature these engines, these are easily the most recognizable given their popular and critical success.

UE3 allows *BioShock* to feature intricately rendered character models, diverse environmental terrain and textures, realistic light effects and ambience and shadow, multi-channel sound and "3D sound positioning." UE3 allows for the echoes of splicers muttering and music playing in nearby rooms, the dance of the ElectroBolt plasmid across pools of water, the glow of neon lights or flicker of flames, and the visible difference in the various materials used to construct Rapture. Artificial intelligence is also handled by UE3, but Irrational modified this

system to account for the complex interactions involving the Little Sisters and Big Daddies. The result of this tinkering on the part of Irrational, combined with the strategies for game design that the studio tends to take, is a gameplay experience that bears resemblance to *Unreal Tournament 3* but differs greatly. *Unreal Tournament 3*'*s* allure comes from the intense multiplayer aspect of the game, pitting players against each other in fast-paced, first-person, explosion-filled combat. This exemplifies Aarseth's assertion that many games are marked by aspects of a contest in which there is a clear-cut winner. While *Unreal Tournament 3* features a single-player campaign, it is largely designed to mimic the style of gameplay featured in the multiplayer modes and familiarize players with the maps on which they will be playing. *BioShock*, lacking a multiplayer component, uses the tools of UE3 to build a much different experience.

Conversely, *BioShock* uses the Havok engine to manage the physics of bodies and objects in collisions. It is Havok that allows the rag-doll effect of splicers when they are killed, the launch and trajectory of splicers and debris impacted by explosions, and the movement of items grabbed or violently thrown by Telekinesis. *Half-Life 2* uses Havok for similar purposes, though there are some differences. Some of the enemies in *Half-Life 2* have undergone much more severe mutations than the splicers in *BioShock*, causing some of them to move much more slowly and clumsily than the quick splicers, but they still fall as rag-dolls when gunned down. Others, such as the alien headcrabs or ant lions, behave differently to account for their unusual physiology, like slumping downward or rolling into a prone position. The effects of *BioShock*'*s* Telekinesis plasmid are mirrored by the gravity gun, a weapon that allows the player to pick up heavy objects and hurl them at high velocities at enemies. The borrowings made possible by Havok for *BioShock* are clear, and appear to establish more FPS unit operations: enemy deaths that signify a complete loss of function and the ability to manipulate surroundings with

weapons/abilities. What is surprising about this is that the borrowing from *Unreal Tournament 3* and *Half-Life 2* occurred in this fashion.

While UE3 and Havok have clear benefits for *BioShock*, these benefits feel like they should have come the other way around. Irrational used UE3 for everything that added to the aesthetics of the game and the results of the civil war narrative. The rendering of the splicers' faces and the animalistic masks they wear are necessitated by the effects of their ADAM addiction; the gorgeous and detailed environments, both those intact and those dilapidated, are signs of Ryan's hubris when designing and building the city; the AI, even before Irrational's modifications, allows for the aggression of the splicers and Big Daddies and the fast pace of the battle sequences. All of this came from a game engine originally designed to facilitate a massive science-fiction style deathmatch. Meanwhile, Irrational takes only the physics engine, only the means of managing rag-dolls and high-speed collisions, from the sequel of a game that has been hailed as having redefined the FPS—and a sequel that lives up to its predecessor. Unlike *Unreal Tournament 3, Half-Life 2* has a well-developed story that sees its protagonist return from a horrible alien dimension only to find the world held under a repressive police state by a mysterious group known as the Combine. The world is designed to reflect both the oppression of the Combine, with giant metal fences and barricades and propaganda spewing from television monitors, and the horror of inter-dimensional alien parasites bursting through the ground and feeding on anyone they can. The features, expressions, and voice-acting of the game's characters rival those of games released today, nine years after *Half-Life 2's* intial PC release. From this game that some refer to as a "masterpiece," *BioShock* manages to borrow the bare minimum.

This inverted relationship of mechanics involved in *BioShock's* unit operational relationship to *Half-Life 2* and *Unreal Tournament 3* takes on particular significance when

considered with some of the sentiments of FPS games that are presented by game scholars. Janet Murray writes off most shooters, stating that "as digital narrative develops into maturity, the associational wilderness will acquire more coherence and the combat games will give way to the portrayal of more complex processes." Bogost lauds the FPS genre for the way it "ushers in a new mode of cultural production" in the form of game engines, but claims that "the FPS will prove to be but a prehistoric artifact" as engines evolve and become more prominent. To an extent he is right, in that engines are much more widely used to develop games today; UE3 has been used in third-person shooters like *Gears of War*, science-fiction RPGs like *Mass Effect*, and massively-multiplayer games like *DC Universe Online*, while Havok Physics has been used in the likes of the action-adventure series *Assassin's Creed*, sandbox mayhem simulators like *Saints Row*, and online fantasy games like *Rift*. However, despite the developing diversity, FPS games like *BioShock* are still made using these and other engines, and are being heralded with popular and critical success.

BioShock's critique of the FPS appears to be that we should expect more of these games than just a successful killing experience or well-executed sequel, but that analysis misses an important point. The twist in the game's narrative—that Jack is Andrew Ryan's illegitimate son and was programmed to return to Rapture, take out Ryan's remaining loyalists, and assassinate Ryan himself so Fontaine could take over—suggests to the player that they had no agency whatsoever in the events they just spent hours playing out. If anything, this could be what made Clint Hocking so upset. Both Hocking's complaint and the idea that *BioShock* is just pushing for higher expectations of FPS games are surface observations, ignoring particular aspects of the experience of *BioShock*. Yes, the twist is shocking. Yes, it has meta-narrative connotations that could be considered controversial. However, when viewed with the various unit operations

brought about by *BioShock's* relationship with its studio and games with which it shares engines, it is clear that something more is happening. Just as the player gets to continue on and take revenge on Fontaine for usurping their agency, *BioShock* forces the player to think about their gaming experience and what it means to be so immersed. *BioShock* does not just ask us to want more from our FPS games; it wants us to want more from ourselves as FPS players.

CHAPTER 4

THE MANY HANDS ON THE GREAT CHAIN: BIOSHOCK AND THE PLACE OF VIDEO GAMES IN ACADEMIC AND POPULAR DISCOURSE

If we are to accept that *BioShock* is critical of the experience of video games, that it suggests that players and developers put forth more thought and effort, then a serious reflection upon the way we discuss and analyze gaming needs to take place. The previous two chapters have been dedicated to part of that discussion by applying two approaches that have been repeatedly pitted against each other in academia, the ludic and the narrative, but it is necessary that such discussion go further. The reality of such a dichotomous debate is that it excludes important facets of video games, namely how people actually experience them. The purpose of this chapter is to examine this debate more closely and analyze the current place of gaming in academia, but another step must be taken. The debate regarding games in academia is important but exclusionary. A rift exists between academic and mainstream discourse on video games in terms of who takes games seriously. The previous chapter demonstrates some of the ways in which game critics approach games as serious productions by examining the structures and functions at work in them. This chapter, in addition to addressing the place of video games in academia, will juxtapose academic approaches to mainstream perceptions in order to analyze the discrepancies that arise between them. The dissonance between the academic and the mainstream in terms of gaming reveals a need for gaming discourse to embrace an interdisciplinary approach that enriches both the academic and the mainstream and creates a stronger understanding of the experience of games amongst the public playing them and the legislators who would seek to censor them. This chapter will first examine the academic side of this discourse, comparing the analyses performed in the previous chapters, then draw comparisons to popular perceptions of

video games and the problems with the varying degree of seriousness with which they are viewed.

As Ian Bogost establishes, part of the problem with the academic side of gaming discourse is the fact that some approaches focus more on establishing a categorical theory as opposed to a critical theory. Bogost asserts that Aarseth's concept of the cybertext is meant to outline a particular classification of works, not a critical practice. Bogost says, "Taken to an extreme, cybertextual analysis could even be seen as a system operation; it seeks to constrict an ontological domain that includes and even excludes certain works by virtue of their overall function" (*Unit* Operations, 14). Aarseth's redefinition of a text reveals potentially overlooked similarities between some digital and codex works and differences amongst works of the same medium. It could be argued that Aarseth's broadening of the concept of a text is foundational for Bogost's cross-media approach to unit operations, but the work Aarseth performs in *Cybertext* is focused on how ergodic texts of various mediums push readers/users to exert effort and move from aporia to epiphany. While Aarseth works toward establishing specifics for a certain set of texts, Bogost works toward establishing an approach to interpretation and criticism.

While it may be important to identify the ways in which certain works function, that is not the sole factor in how a work can be analyzed or experienced. This applies to both the narrative and ludic approaches, as both sides are guilty of dealing absolutes. In *Hamlet on the Holodeck*, Janet Murray suggests that the classic cascading puzzle game *Tetris* is an allegory for the hyper-taxing everyday life of the average American citizen (144), which Bogost goes so far as to call an act of "interpretive violence (*Unit Operations*, 100);" Murray does nothing to take into account the actual functions or mechanics of the game, attempting "to find or forge a story at any cost, as games can't be games because if they were, they apparently couldn't be studied at all

(100).” Conversely, Bogost continues, Markku Eskelinen does the exact opposite of what Murray does, attempting “to conceal any worldly reference at any cost” (100). While the goal in the previous two chapters was to avoid such a problem while still performing a specific style of analysis, they ultimately run into the same problem that Bogost suggests comes from Murray and Eskelinen’s absolutes: “something is lacking (100).” *BioShock* presents players and critics with narrative and ludic experiences that are inextricably linked and influence interpretation of one another. The game’s central plot twist provokes both the depths to which society could sink in a world like Rapture by suggesting the manipulation of one’s agency and the illusion of a simple immersive escape by exposing the artificial constructs of player choice and the complex relations that such artificiality can bring.

The reality of the dichotomy of narratology against ludology, according to Bogost, is that critics like Aarseth and Eskelinen push against narrative in order to discourage approaches like Murray’s that come off as narrativist. Bogost states that narrativist approaches, as opposed to narratological approaches, “privilege narrative over simulation as the configurative output of a digital work” (69). Bogost continues,

> One the one hand, ludology in the strongest form, if it even exists, would seek to divest games of any engagement whatsoever with human experience; they would become mere abstract rule systems. Even the most extreme structuralists don’t take a position this strong. On the other hand, narrativism in the strongest form, again if it even exists, would see games only as producers of narratives, no matter what kind of configurative, unit operational structures might underlie such production. Each of these extremes is haunted by a functionalist ideology, albeit a very different one in each case. (70)

While the functional aspects of games are undeniably important to their criticism, when such an approach becomes an ideological tool of a set of disciplinary tactics it becomes detrimental to the analysis. It is of the utmost importance for gaming discourse that such functional fervor is kept grounded; otherwise, important aspects of a game are lost from its analysis and critics open themselves up to bizarre interpretations.

Such interpretations are entwined with what Adalaide Morris referred to as issues of institutional prestige, as was introduced in chapter 1; the discipline deemed best suited to study new media then allocates resources to such study, creating prestige for that department or discipline (Morris, 5-6). In this way, the analytical moves made by Murray and Eskelinen make use of particular ideas from their respective disciplinary positions in order to exemplify how particular approaches best suit the study of video games. While such moves are useful ways to showcase a discipline's malleability or specific insight, it limits the study of video games to a tug-of-war for academic and disciplinary prestige. This can cause game scholarship to lose sight of the games as cultural productions being experienced outside of academic institutions. While such analyses are useful and establish key aspects of media for analysis, they tend to limit the possibilities for interpretation and critique. This is how such academic delineations end up working as ideological barriers in analysis, limiting potential assertions based on what is seens as appropriate or inappropriate within a given discipline. The best way to counteract this is to incorporate more of the experience of a game into its analysis, opening up the discourse surrounding it to wider perceptions. Bogost begins this work in *Unit Operations*, establishing the ways in which the various unit operations in a game come together to create an experience that is both configurative and interpretive. However, there are issues that stand in the way of such a shift of analysis into the popular discourse, such as the degree of seriousness with which games

and game discourse is held. As it turns out, that degree is such that public discussion of video games is unusually lopsided.

Bogost faces this issue of seriousness in a couple of different ways by addressing the debate that surrounded Rockstar Games' *Bully* in 2006[1]. Bogost presents *Bully* as the story

> of a typical, but troubled adolescent. He's the product of a broken home and alienated from his parents…He's been in and out of schools and finds it hard to make friends… He acts out and gets in trouble, sometimes from boredom, sometimes from belligerence, and sometimes just to get some attention, since he doesn't get any at home. ("Taking *Bully* Seriously")

Bogost describes the game as though it was meant to be a thoughtful critique of the typical experience of American adolescent males and high school social issues, but does so in order to counterpoint the way the game was received: as a simulation of bullying and high school violence. In this sense, "the public detractors of *Bully* do take the game seriously, as a threat and a danger." Meanwhile, Rockstar Games maintained silence regarding the framing of the game being put forth by these detractors, allowing those crying violence and bad influence to dictate the way the debate surrounding the game played out ("Taking *Bully Seriously*"). Some players have even chimed in to opine that Rockstar only meant to "make a fun game" with *Bully*, not launch social criticism (Yuki). The problem with this is that attempting to judge a game based on whether or not it is "fun" does nothing to refute those that would attempt to censor games for presenting violent material.

[1] The original version of this piece from Gamasutra could not be found, so the relevant information had to be cited from multiple sources to compensate, including the opening found on Bogost's website, Clint Hocking's response to the article, Game Politics' summary of the article's key points, and a companion preface on Gamasutra that includes exceprts.

Bogost addresses this in *Unit Operations* through a discussion of how players engage with games. Johan Huizinga, theorist on the role of play in the development of culture, presents conflicting ideas regarding play. In *Homo Ludens*, Huizinga asserts that play is

> a free activity standing quite consciously outside "ordinary" life as being "not serious," but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. *It promotes the formation of social groupings, which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means*. (qtd. in *Unit Operations*, 115, italics mine)

Play, or fun, is somehow both a crucial organizing principal for society and beyond the bounds of everyday life. If this is true, then how would those social groupings manage to persist outside of the play that instantiated them? Huizinga treats fun as something beyond logic, as though applying critical analysis to anything fun or playful is an exercise in futility; Bogost says that his reasoning for this is to emphasize the idea that play "precedes all cultural structures," but it is all too easily twisted to suggest an abandonment of the intellectual critique of anything that can be labeled "fun" (117). This would appear to play into the sentiment that Bogost suggests prevented Rockstar Games from responding to the surface-level criticism leveled against *Bully*, but there are others in the gaming business that offer different approaches.

According to Bogost, Ralph Koster of Sony Online Entertainment takes a stance with the same cultural basis as Huizinga but reaches a much different conclusion. Koster agrees that fun and play "structure cultural behavior" but unlike Huizinga he "explicitly maps such behavior to

practice oriented mental mastery of problems of a general kind," asserting that games can move beyond "the current genres of war, alien invasions, driving, and sports." Koster claims that such limited genre options constrain the medium, but Bogost points out that this claim comes to work against him because his main criteria for advancing the medium is fun—"a singular expressive goal" that alone would serve to constrict the medium. While Koster acknowledges that fun is a very broad concept, that "we may be running into definitional questions for the word 'fun,'" he seems to brush off the issue from there (118). It comes down to the fact that video games are subjective, that they "participate in the struggle between authorial intent and interpretive freedom." The plurality of the potential unit operations at work in any given video game "require players to create a subjective understand of the synthesis of one or more unit operations. Games demand that players be capable of making this synthesis palpable in their own experience (123)." Just as a game developer or studio could have its source material and creative strategies that inform their intended meaning for a game experience, each player brings their own experiences and knowledge to the games they play—video games are not made or played in a vacuum. Despite the perception of her theories as narrativist, Janet Murray proposed similar ideas:

> A new genre grows from a community of practice elaborating expressive conventions. I would argue that we stop trying to assimilate the new artifacts to the old categories…We should instead think of the characteristics of stories and games and how these separable characteristics are being recombined and reinvented within the astonishingly plastic world of cyberspace. ("From Game-Story to Cyberdrama," 10)

The essay which is quoted above was published seven years after *Hamlet on the Holodeck*, showing Murray's willingness to reevaluate her approaches. It should be noted that Eskelinen

does not show the same willingness to adapt his approaches; in his essay "Towards Computer Game Studies," he focuses on the ways in which various time operations function as ludic constraints, but dismisses the idea that such concepts can have any narrative significance (42). Such a view is not only limiting in terms of functional ideology, but also in terms of subjective experience.

Between the insistence on shutting out contexts that could potentially bolster analyses and the lack of serious criticism in public discourse on games brought about through focuses on surface violence and what "fun" means, is it particularly surprising that no one within the gaming community—"reviewers, players, journalists, or developers," as Bogost specifies—attempted to defend *Bully* based on the meaning of the game based on their experience? Clint Hocking asserts that the treatment of *Bully* in the media discourse is indicative of an attitude that ensures three things: increased difficulty in the defense of titles that are singled out as violent or offensive, a one-sided debate which those in the gaming community have no opportunity to define, and creative and critical stagnation that will continue to perpetuate these behaviors. Hocking singles out these particular issues as the key points the gaming community needs to address and change, lest an attempt to censor or ban certain games finally comes to succeed and video games begin to falter as an industry and a form of expression ("I Stand Corrected—Partly").

While Hocking's and Bogost's concerns with a more media-specific public gaming discourse make sense, their voices have largely gone unheard. Several states in the U.S. have attempted to pass laws that act as comprehensive bans on violent or potentially pornographic gaming content, as Lawrence Walters of Game Censorship establishes. Walters offers a complete table of the various attempted and passed laws that pertain to video games in the United States, and there are some commonalities between them. Laws that only pertain to the display of the

Entertainment Software Rating Board (ESRB) ratings and distribution of materials explaining the rating system upon customer request, such as those in Washington, Georgia, and New York, tend to pass. Bills that target games for having violent content or imposing fines for the sale of games with violent content to minors tend to fail or be found unconstitutional. Interestingly, a large number of these latter bills are authored by a disbarred attorney named Jack Thompson, including failed bills for two for Massachusetts, three for Utah (Walters), and one for Louisiana. The criteria under which games could be banned under the Louisiana bill were as follows:

> The average person, applying contemporary community standards, would find that the video or computer game, taken as a whole, appeals to the minor's morbid interest in violence.
>
> The game depicts violence in a manner patently offensive to prevailing standards in the adult community with respect to what is suitable for minors.
>
> The game, taken as a whole, lacks serious literary, artistic, political, or scientific value for minors. (Clark)

What is immediately striking about this list of criteria is that they are designed to suggest that these are objective standards which would not be challenged, thus ensuring a clean ruling. The reality is that such criteria for the banning or restriction of games deny the subjectivity of the game and the potential players. In fact, some attempts at passing such laws reveal a complete lack of valid information or research with which to support the proposed law. Marjorie Heins points out the attempted passing of a federal violent games ban that used a study that was backed by four professional organizations, including the American Medical Association (AMA); the information in the study was littered with errors. Heins adds that the AMA's chair-elect in 2001 revealed that they supported the bill to convince a representative to back their proposal for

school health funding. Not only are some of these attempts at legislative censorship negligent of subjectivity, but they reveal the degree to which policy makers only take violent games—not the gaming community—seriously.

In order to shift these perceptions, it is necessary that the approaches taken to game criticism are extended further into the gaming community to establish a more actively critical community of players. Like *Bully*, *BioShock* caught some negative attention from the mainstream media over the Little Sisters; this comes as no surprise, as any game that featured an option to repeatedly murder young girls for the sake of gaining power would likely push some people's buttons. Steve Adam's of Boston's *Patriot Ledger* attempts to frame this game mechanic as something that could potentially stir violent behavior in children, citing a study claiming that "children 12 and under" who play games with violent content are less likely to feel empathy and more likely to feel comfortable with violence. Adams questioned Ken Levine on the subject, who offered more of an answer for this piece of violent content than Rockstar Games offered for *Bully*. Levine stated that such a dark, violent mechanic was born out of Irrational Games' desire for the players to "deal with challenging moral issues," reinforcing their assertion that *BioShock* and other video games are works of art (Adams, Steve). There is certainly no denying that *BioShock* is a violent game, but Levine's response to the concerns of violence shows a shift in approach from that of Rockstar Games; by acknowledging the purpose of the violence in the game, he has opened up potential with the mainstream media for a dialogue about the actual experience of such a mechanic in its proper context.

BioShock has managed to inspire a wealth of criticism and dialogue regarding such mechanics and their contexts, but not always in the places some may expect. Several articles have been included in several books and academic journals on video games and new media

which have been written by scholars. These pieces are easily found through a Google Scholar search and carry the prestige of the universities with which the scholars are associated. These works cover a range of topics, from the moral and ideological issues embedded in *BioShock* to the game's use of spatial organization and sound, and much more. However, the critical analysis of *BioShock* is hardly limited to these works. Michael Clarkson compiled a compilation of critical analysis on *BioShock*, the majority of which comes from individual blogs and websites, not from official game journalism websites like *Game Informer* or *IGN*. Clarkson's list includes several articles that cover the role of Objectivism in the game, including works that examine the issues of transhumanism and philosophical certainty; some address the Little Sister mechanic different perspectives, including the overall cost-benefit analysis of the choice and the plight of the Big Daddy who is ultimately attacked while in servitude; some cover the issues of the narrative and immersivity, challenging the logic of aspects of the plot and considering the perspective in relation to the medium; some tackle the troubled gender politics presented by the Little Sisters and Rapture; and a number of them criticize the experience of dying, or lack thereof, as affected by the Vitachambers in *Bioshock.* While some of these pieces are written by game journalists, game designers, and graduate students, and some are borrowed from digital journals, some of them are freelance writers and average players. Clarkson's compilation presents a unique mix of perspective on a single cultural product, all of which take it seriously.

Furthermore, *BioShock's* various references and moral dilemmas—from the choice of the Little Sisters to the role of Objectivism in the game, and beyond—have been thoughtfully examined by average players. There are multiple online forums through which players discuss the various aspects of the game. While some of these are framed more as casual discussion and hypothesizing, others are in-depth examinations of different aspects of the game. Some question

the organization of the game's central narrative, asking if the parts of the game that come before the killing of Andrew Ryan are particularly relevant (aristotledisco). Some request help with what could potentially be errors in the game, such as an audio diary with an important code not appearing where it should (juice99). Some question the function of some mechanics, like the role that accuracy plays in *BioShock's* gunplay (Sans Frontieres). While these may appear to be players casually seeking advice or help on particular parts of the game, these discussions tend to develop into conversations about various aspects of the game, from the significance of the narrative to the functions of the game mechanics. These forums represent the potential direct subjective experience of a game that could be reported and included in the critical analysis of a game.

The sheer number of perspectives and the diversity presented in this grouping recall the importance of accounting for actual experiences of a game in order to better contextualize the game mechanics or unit operations taking place therein. While some of the posts listed in Clarkson's compilation do focus on the writer's reaction to their *BioShock* experience, it could be useful to collect numerous of such reactions and critiques in order to help bolster an analysis. This approach differs from the sort of research done to complete the previous chapters of this project in that it involves establishing the context of each participant's gaming experience in order to better grasp their subjective position. This approach is typically used in studies focused on the educational potential of video games. For example, in *Gaming Lives in the Twenty-First Century*, Cynthia L. Selfie and Anne F. Mareck present the story of Josh Gardiner, who was a junior high school student when they interviewed him. They asked him about his family dynamics, his schooling, the beginning of his interest in computers, and his gaming habits. Josh reveals that he plays *Counter-Strike* online with a group of roughly fifteen people from the

United States, England, Spain, Italy, Ireland, the Netherlands, and other locations. He explains that through his gaming experiences he has been affording learning opportunities that he has not been able to find anywhere else, such as learning foreign languages and understanding different regional happenings and world news (23-25). By illustrating Josh's experience with his online *Counter-Strike* group, Selfies and Mareck create a clear picture of that experience that can be understood by readers who have never played the game once. However, part of the reason they are able to accomplish this is because they do not delve into the specific workings of the game.

Just as fun becomes a sort of centralizing concept for some game theorists or designers, educational value becomes the hallmark of the phenomenological approach to game studies; a critic could write ad infinitum about their own experiences with a video game and cite the experiences of other critics and designers and writers to elucidate their ideas, but the inclusion of the experience of average players could potentially strengthen analyses by providing specific instantiations of how narrative elements or unit operations are being received. Just as most game theorists agree that the key to ensuring that progress is made in game development and criticism is to continue making more games, we only stand to gain more insight by bringing in more perspectives. By bringing in this phenomenology, we can potentially eliminate the dichotomies that refuse to die off in game studies. We can gain a better understanding of how the ludic plays into the narrative, and vice versa—and how myriad other approaches play into both the ludic and narrative, whether they are psychological, economic, political, artistic, etc. Through this project, *BioShock* has served as an object to facilitate our understanding of various approaches, and has exemplified the ways that various approaches can be useful. However, this is but one title amongst the many that are released on the X-Box 360 platform, and only the first in a series of three games. It is possible that the findings of the previous chapters may not be as useful when

applied to another game—possibly not even when applied to *BioShock* 2 or *BioShock Infinite*. For this reason, it will be the non-deterministic approaches that guide criticism and game development toward new ground. The example of Barthes and Genette in breaking away from the overly deterministic sort of analysis of Propp and others set a precedent. Propp specifically addressed the importance of similarities across cultural productions presented by forms:

> If we are incapable of breaking the tale into its components, we will not be able to make a correct comparison. And if we do not know how to compare, then how can we throw light upon, for instance, Indo-Egyptian relationships, or upon the relationships of the Greek fable to the Indian, etc.? If we cannot compare one tale with another, then how can we compare the tale to religion or to myths? Finally, just as all rivers flow into the sea, all questions relating to the study of tales lead to the solution of the highly important and as yet unresolved problem of similarity of tales throughout the world. How is one to explain the similarity of the tale about the frog queen in Russia, Germany, France, India, in America among the Indians, and in New Zealand, when the contact of peoples cannot be proven historically? This resemblance cannot be explained if we have wrong conceptions of its character. (15-16)

While the groundwork established by critics like Aarseth, Murray, and Eskelinen are useful, it is approaches like Bogost's unit operations that allow for the sort of formal connections that Propp addresses without limiting analysis to Propp's style of categorical listing. Approaches like Bogost's open up possibilities for interpretation and analysis based on the specifics of a particular work as it relates to a variety of conventions, including those of gameplay, genre, and expressive or literary devices. It is tempting to suggest that game scholarship take on a "reader

response," or perhaps "player response," approach to better account for how players experience games, but this move alone could neglect important contexts involved with the deep analysis of a game itself. The phenomenological player experience of games must be tempered by and juxtaposed to critical impressions of games as digital productions, opening up the potential for game criticism that bridges the gap between the academic and the popular. The place of games in academia is not something that should be limited to a particular department or discipline; it is something that should be used as a platform to elevate the wider discourse surrounding games and gamers and enrich the production of games as an immersive and expressive medium.

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