Towards Identifying Medium-Specific Narrative Qualities in Videogames

---

By Magnus Johansen (201606517)
Bachelor thesis in Digital Design
44734 characters
February 4th, 2019

Abstract

This thesis is a theoretical exploration of narrative and storytelling in videogames. It takes a starting point in the dual perspective that has pervaded game studies for years, namely the narratology v. ludology divide. The thesis does not tackle this issue directly, but instead accounts for theoretical frameworks that provide an understanding and a vocabulary of narrative and rhetorical power in videogames. These frameworks are put to use in an analysis of Hotline Miami, to demonstrate the interaction between the game as a formal system of rules, and as a text relaying a narrative. The analytical findings are applied in a conceptualization of a narrative videogame that leverages them. The game is designed to be more immersive and nuanced in the experience of its narrative, which is accomplished by projecting player experience unto protagonist experience. The thesis ends with a brief account of notes on design choices made in the process, and a discussion of potential issues and salient points in the thesis.

Table of Contents

Introduction

For the past two decades, a debate has pervaded the sphere of game studies. A polarization occured on the topic of narrative and its place in videogames. Two dominant perspectives emerged - narratology and ludology. The former represented attempts to understand narrative in videogames by way of established media theories (and the belief that videogames are a viable narrative media in the first place). The latter represented a perspective that gave primacy to "games and play" as a frame for understanding videogames. Ludologists argued that the principles behind good game design, and those of good narrative design, were incompatible. Greg Costikyan, an American game designer, noted that:

> "There is a direct, immediate conflict between the demands of a story and the demands of a game. Divergence from a story's path is likely to make for a less appealing story; restricting a player's freedom of action is likely to make for a less satisfying game."[1]

Admittedly, Costikyan's point is not that games cannot tell stories. Some games do, and Costikyan acknowledges that. Rather, his point is that there is a natural friction between the principles of compelling storytelling and compelling game design.

Why then, should we study narrative in videogames? One answer is that, as a medium capable of storytelling, videogames might have unique affordances in this respect. Just as the characteristic cinematographic qualities of a Hitchcock film cannot be replicated in writing, videogames may also have medium-specific narrative qualities that cannot be replicated in other formats. To find out what these are, we must look at how narrative works in videogames - and what qualities videogames possess that might affect storytelling. I have summarized these issues in the following problem statement:

> How do the ludic[2] and narrative aspects of videogames interact to shape the experience of playing, and what kind of unique narrative possibilities does this afford the medium - if any?

In this thesis, I will give an account of two different theoretical perspectives on videogames: One pertains to the procedural nature of videogames and its effect beyond gameplay, and the other describes different modalities of narrative in videogames, with an emphasis on spatiality. I then aim to illustrate principles from both perspectives in an analysis of the indie[3] videogame *Hotline Miami* (2013). More importantly, I aim to show how these principles interact, and what this means for the experience of narrative in the game. I then introduce a conceptual game design dubbed *Compulsion*, which is drafted on the basis of my analytical findings. The game serves as an example of how game design can more elaborately use game mechanics to narrative effect. This approach is heavily inspired by the commissioned game chapters that figure in Katie Salen & Eric Zimmerman's *Rules of Play*[4], which also fulfill an illustrative purpose. Finally, I will discuss the conceptual design I have drafted, including some of the tension points between narrative and compelling gameplay that arose in the process.

---

[1] Costikyan (2000), p. 44.
[2] Here, ludic is taken to mean 'of or pertaining to games; play'.
[3] Made by an independent developer.
[4] Salen & Zimmerman (2004)

What is a (video)game?

To discuss the ludic aspects of videogames might seem tautological, but I consider it necessary if one is to identify ludic and textual aspects separately, and account for their interactions.

The academic study of play and games has a surprisingly short history. Its most often recognized "genesis" is in the work of Dutch historian Johan Huizinga's book *Homo Ludens* (roughly translating to "Man the player"). Huizinga asserts that play must precede culture, on the grounds that play can be readily observed amongst animals, and that their play is very close to our own.[5] He notes:

> "Animals play just like men. We have only to watch young dogs to see that all the essentials of human play are present in their merry gambols. They invite one another to play by a certain ceremoniousness of attitude and gesture. They keep to the rule that you shall not bite, or not bite hard, your brother's ear. They pretend to get terribly angry. And–what is most important–in all these doings they plainly experience tremendous fun and enjoyment."[6]

Though Huizinga is primarily concerned with the concept of play, of which games are just a subset, this definition very much applies to games as well, and holds interesting implications for them. First of all, it implies that play takes place outside the behavioural and social norm. Animals and humans alike invite each other to play, and the invitation, once accepted, marks the participants' immersion into a new "space", where the rules of normal life are replaced by the special rules that govern play. Second, it implies that such rules shape play, and are among its most essential parts. Finally, the definition implies that the primary product of play is fun; plain and simple. All of these are as true for games as they are for play, especially with regards to the importance of rules. If we accept the notion that games are a more structured form of play, then it also stands to reason that we must examine the nature of their rules closely to understand them, and I elaborate briefly on this later in this section.

Procedural Rhetoric

As software, videogames possess an interesting materiality that other games, such as Chess or Football, do not. One of these is the procedurality that is inherent to them, because they are software. Software is written in programming languages: systems of writing that protray inherently logical and iterative systems on the hardware level. Games researcher Ian Bogost argues that the procedurality of software - and especially of games - gives it unique rhetorical qualities, and this may well affect the experience of playing them.

When we think of rhetoric, we often picture a person giving a highly animated speech to a crowd, or a group of people immersed in a fierce debate. That is to say; we tend to consider the term in its original meaning: persuasive oratory. While that is the origin of the practice, one would be hard pressed to consider that definition exhaustive today. Everyone practices rhetoric in one form or another, wether in a professional capacity or in everyday life. A politician might rely on careful wording and eloquence to sway the minds of voters. An academic might rely on empirical and

[5] ibidem, p. 47.
[6] Huizinga (1955), p. 1.

scientifically rigorous data to support a claim. A painter might rely on elaborate composition to create a profound picture. All of them employ rhetoric in a different way, and to a different end. However, we might say of the painter that they employ visual rhetoric, not "traditional" rhetoric, or oratory. The point is that the traditional understanding of rhetoric as persuasive oratory is insufficient in describing the workings of visual rhetoric. Hence, a sub-field is spawned. Procedural rhetoric, a term coined originally by Ian Bogost, is akin to visual rhetoric. It is a sub-field spawned from the observation that procedurality (particularly in videogames) have rhetorical power, and that traditional and visual rhetorics cannot sufficiently describe this power.

In this context, procedurality refers almost exclusively to procedures in videogames, but procedurality itself is pervasive in a much larger scope. Procedures are essentially rules that guide the nature and sequence of action taken in a particular scenario. It might be unsurprising that procedurality is a key quality of both games and software at large, as both are heavily governed by rules and sequencing. The thing about software (and by extension, videogames) is that it tends to model systems, real or imagined, and their behaviour over time. This is achieved through continuous, iterative application of a set of rules to a system of interrelated elements.

Rhetoric enters the scene when we consider what kinds of systems are represented, and how they are represented. Traditional rhetoric makes claims about things by describing them in a certain way, visual rhetorics do it by depicting them in a certain way, and procedural rhetorics do it by modelling their behaviour in a certain way. As an example, consider the classic turn-based strategy game *Civilization*. The premise of Civilization is to build an empire "that will stand the test of time". In practice, this usually means expanding ones territory, consuming natural resources, politicking with other empires, or going to war with them. While the player can play as a myriad of real-world empires, both current and past, the course of history in a game of Civilization is entirely emergent and fictitious. Nonetheless, the constitutive rules of the game model a very real system, namely geopolitics, in a very simplified manner. Thus, wether it is the intention of the developers or not, the game makes claims about how empires work, what their goals are, and how they interact, by modelling those qualities in a certain way. As a player, these claims are then understood - sometimes overtly, sometimes tacitly - through experience with playing the game. For example, a player who controls a small but successful empire with few political ties, might find that the happiness in their empire is dwindling. In the game, happiness is parameterized; a number that represents the net happiness in your empire. The higher the number, the happier the people, and "surplus" happiness increases the frequency of golden ages, which in turn boost other parameters. A Dwindling happiness score is most often attributed to increasing population, but can be mitigated by the acquisition of luxury resources, such as spices and gems. A typical solution then, is to expand one's territory to include sources of these commodities, which usually means founding new cities - or if free space is unavailable, annexing foreign cities through politics or warfare. The game not only offers an understanding of complex dyamics, such as the correlation between overpopulation and discontent, but also makes claims about how these problems can and should be solved. The player operates in a model system of geopolitics where sustaining growth through territory expansion and exploitation of natural resources is a necessary and obvious way to progress. Civilization is full of claims like this, and other notable examples include:

- Primitive tribes cannot be reasoned with, and are always hostile.
- To "win" in geopolitics is to exert influence (diplomatic, cultural, military or otherwise) on other nations to the point of world domination (in a very literal sense).
- Financial support is key to diplomatic influence.

Bogost argues that claims about the world conveyed through procedural rhetoric can be powerful tools in politics, education and marketing alike. However, the subject of this paper is narrative, and it should be duly noted that procedural rhetoric figures only for its potential use in this respect. Bogost's theory is useful and appropriate because it applies to models of systems, real and *imagined*, and it is precisely its application to imagined systems that relates to narrative.

Rules

One thing that clearly distinguishes videogames from other games, is that the task of interpreting and enacting their rules is distributed differently. If an "analog" game has material components, these are designed to have affordances that support play according to the appropriate ruleset. The responsibility of knowing and following this ruleset, however, is entirely the players' (with some exceptions, such as games that have a referee).

In a videogame, the constitutive rules[7] (those that dictate the properties of the game as a system) are written in computer code, where they are practically inaccessible to the player's eyes and interference. This has several implications: The first is that the mind of the player is now free to engage fully in play; the constitutive rules become laws of physics, in a sense. They need not be understood to be obeyed, unlike the rules of Chess, for example. The second is that these rules can be made much more complex, at no cost to gameplay. Complex board- and cardgames are often reserved for niche audience of people who do not mind learning a complex ruleset if they like the gameplay enough, but in videogames, this cost/benefit dilemma can be mitigated. This is instrumental in understanding the materiality of videogames, because this is also what enables them to feature high-fidelity virtual spaces. The visual, auditory, and "simulational" fidelity of videogames is a crucial part of the ways in which videogames tell stories.

In a sense, the increasing fidelity of visual and auditory representation in videogames seems to distance them from the realm of iconography[8], and liken them to "simulation" of the physical world, or at least worlds that comply with similar logics and physical laws. This is no doubt part of why the videogames have occasionally been called "interactive movies", as the combination of narrative and photo-realistic approach to computer graphics are two important qualities that modern videogames and animated film share.

Narrative in Videogames

Videogames use narrative to very different degrees, but also to different ends. Narrative can manifest itself in easily recognizable form, as an overarching storyline that shapes the player's journey. It can also manifest in much more subtle ways, as episodic narratives that contextualize actions, goals and events in a game. A common denominator for both approaches, is that the

[7] Salen & Zimmerman (2004), p. 138
[8] Reference through resemblance.

narrative is uniquely dependent on the spatiality of virtual game spaces. Where literature tries to spark in the reader an inner, mental depiction of the events it recounts, videogames rely on spatio-temporal representation to set the scene of their stories. The American game designer Henry Jenkins identifies four different modalities of narrative in videogames, in a framework dubbed *narrative architecture*. As with Salen & Zimmerman's rules on three levels, Jenkins has developed a simple but powerful typology, rooted in a central premise: The spatiality of narrative in videogames. This typology is comprised of four different types of spatial narrative: Evoked, enacted, embedded and emergent, which I will cover in turn.

Evoked narrative relies on players' familiarity with a story or fictional universe established beforehand.. When we play a game set in the *Star Wars* universe, for example, it is not likely to spend too much screentime on exposition. It expects us to recognize the characters, the environment, or even the music. Evoked narrative doesn't necessarily come from a franchise with a clearly defined mythos - it can also draw on generic genres. Evoked narrative can be used to contextualize a game's characters, events, and relationships. The appeal of evoked narrative can also be the opportunity to play as a character the player knows, to wield a powerful weapon shrouded in infamy, or to explore environments thus far only seen from fixed camera-angles. Evoked narrative is the foundation around which many game franchises are built, including long-running series and adaptations of films or books.

Enacted narrative is that which concretely *plays out* in the virtual space of the game, much as a play does on a stage. In videogames, enacted narrative emphasizes the spatiality of narrative architecture - progression in the plot relies on player moving through and interacting with the virtual space, and its features may both slow and hasten the narrative progression. Games like *Half-Life* are classic examples of this. Here, the player traverses a highly animate, but ultimately linear environment, where their progress is hindered by frustrating puzzles woven into the environment, but where they are also rewarded with powerful weapons and vehicles to aid them on their way.

Embedded narrative imbues the environment itself with narrative content. Many games are ripe with embedded narrative, ranging from mysterious letters containing clues about clandestine crimes, to towering ruins mark the presence of ancient civilizations. One of the interesting qualities of embedded narrative is the curious mapping it creates between space and narrative - even more so than in enacted narratives, the player explores the story by exploring the space. Studying embedded narratives in videogames also highlights a key difference between these and other stories - namely the effect of agency and personal involvement on player attitudes towards the uncovered clues. To watch a detective poring over incriminating evidence is one thing; but to be the detective might be quite another.

Lastly, emergent narrative represents the stories that are created in playing, rather than those crafted beforehand to be told or acted out in playing. Games in which emergent narrative features heavily are often very open-ended in their rulesets. Rules on all three levels must support the open-endedness (and provide the tools) necessary for players to create their own stories. Embedded narratives are interesting because they are overtly reliant on a combination of qualities that may well be specific to videogames, like agency, player decision-making, and the rich capabilities for representation.

As a theoretical framework, narrative architecture does not represent an exhaustive understanding of storytelling in videogames. However, it is very useful as an analytical tool, as it diferentiates between different types of storytelling that are all anchored in the observation that narrative in games tends to be spatial in a sense that other mediums, like written literature, are not.

Just as Salen & Zimmerman's theoretical framework of rules on three levels lets us better understand what games are and how they work, Jenkins' framework of narrative architecture helps us identify and classify narratives and storytelling in some of the different forms they take in videogames. With my accounts of these in mind, I now turn to a concrete example: Hotline Miami. Specifically, I intend to analyze it to show concrete examples of narrative and gameplay interacting.

Analysing Hotline Miami

Hotline Miami is a critically lauded videogame created in 2012 by the Swedish independent game developers Jonatan Söderström and Dennis Wedin. The game quickly caught the eye of the gaming community, due to its very characteristic blend of neon-tinged retro aesthetics and profuse violence. The game has been subject to much criticism, rooted in the claim that it glorifies violence and desensitize its players to it. Fans of the game maintain that there is a more profound moral to the game's story, citing its meta-commentary, and the way it holds a figurative mirror up to the player and prompts them to reflect on their actions in a brutal and unnerving way. In this analysis, I will examine how Hotline Miami does exactly that. In no small part, it is accomplished by creative game design that leverages the reciprocity between gameplay and narrative.

The game is set in Miami, Florida, in the year 1989. Gang-related crime and murder is part and parcel of life in Miami, which is communicated to the player through fragments of contextual information - newspaper headlines, conversations with strangers, and the like. The player controls the character 'Jacket' (dubbed so by fans of the game) - a silent protagonist with an unusually bloody lifestyle. Jacket lives alone in a modestly furnished apartment, and one day receives a package with a rooster mask, along with strange instructions.

Jacket receives a rooster mask from the clandestine organization '50 Blessings'.

Throughout the game, Jacket receives cryptic voicemails on his answering machine. The messages are seemingly innocuous, but always provide Jacket with an address he must go to. Upon receiving these messages, Jacket (controlled by the player) goes to his car and drives to the scene. Upon arrival, the player is met by a group of generic mobsters which they must kill to advance. Fast-paced and intense synthesizer music pounds away in the background, and Jacket slaughters dozens.

Looking beyond the graphic violence, Hotline Miami manages to create highly compelling gameplay in a number of ways. A large part of it is player agency, and the test of skill. The possible space of action is fairly strictly laid out by Hotline Miami, but the player still has crucial freedom within that space.[9] In addition, Hotline Miami is difficult enough that progression requires a knack for improvised strategy, precise input control, and quick reflexes. The result is meaningful a game that satisfies ludic principles for compelling play, and in this respect, the aesthetics of the game are less relevant. In terms of rules, the constitutive ruleset of the game could be preserved entirely while changing the "face" of the game to something more family-friendly, like a fast-paced snowball fight. Though it seems a great deal more complex, this would be no different than changing the colours and names of the suits on a deck of cards. The representations change, as do the operational rules, but the game *system* remains unchanged.

Hotline Miami creates challenge in an interesting way that exemplifies the properties of its medium; the computer. The computer-controlled mobsters outnumber the player dozens-to-one, but they also react with unwaivering speed and precision once the player is detected. This makes them very challenging opponents, but the difficulty is mitigated a great deal by the predictability of their behaviour. They are not coded to try different approaches, make tactical decisions, or learn how to counter player behaviour over time (as some games do[10]). These qualities - speed of execution, precision in action, and the strict adherence to logic, are emblematic of computer programs. Though matching the quick reflex and precise control of the software is challenging for a human player, the playing field is leveled considerably by the player's ability to strategize dynamically, and the overview provided by the top-down perspective; neither of which are available to the computer opponents. All of this contributes to a game that plays to the characteristics of its competitors, and creates an asymmetrical yet balanced conflict.

Thus, at face value, the premise of Hotline Miami seems exceedingly simple - and not necessarily narratively compelling. It is a game about killing gangsters as fast, creatively and effectively as possible, and the game as a system is designed in a way that makes this task both challenging and highly stimulating, as it rewards complex and flawless sequences with arbitrary points. It is easy to dismiss the contextual information as "fluff" that merely serves to give the game meaning (in a semiotic sense), but not to make the game *meaningful*. If this was the case, it would be akin to the way pieces on a Chess board resemble different parts of a medieval empire. The representation would be generic at best, and hardly qualify as having narrative value.

[9] This goes back to the importance of "player freedom" outlined in the quote by Greg Costikyan that I featured earlier.
[10] For examples of this, see *Hello Neighbor* (2017) and *Alien: Isolation* (2014)

An example of the gory visuals for which Hotline Miami is renowned.

The first indication that this interpretation does not tell the whole story, is the myriad of levels that do not provide challengeat at all. In fact, if we divide the spaces in Hotline Miami into discrete scenes (i.e. the continuous, seamless spaces that are separated by loading screens or cut-scenes), a considerable number of them exist solely to convey narrative. In Jenkins' terms, these levels convey a great deal of enacted narrative. In them, the player guides Jacket through various mundane activities. Waking up, listening to his voicemail, stopping to get pizza, renting a movie, etc. These levels also contain quite a bit of embedded narrative; fragments of information gathered from newspaper headlines and conversations with strangers, that encourage the player to piece together a cohesive story. In addition, these levels provide a stark and intentional contrast to the chaotic massacres that are the focus of the game. There is also a clear pattern in the sequence of the levels. They portray the highly structured routine that governs Jacket's life. Parted into discrete levels, the sequence roughly follows this structure:

1. Jacket wakes up in his apartment, listens to his voicemail, then goes to his car.
2. Jacket arrives at the provided address. This is where the "game" in a ludic sense, takes place. Jacket uses whatever means available to him to kill the group of mobsters that inhabit the building.
3. Jacket makes a stop to order take-out, rent a movie, or buy a drink.

With only a handful of deviations throughout the game, this cycle repeats itself. Most importantly, the cycle is an integral part of the constitutive rules of the game, i.e. the game as a system. The game only allows the player to progress along a narrowly defined path. Tightly structured progression has been prevalent in game design since time immemorial, but the critical difference is that Hotline Miami uses it to convey information about the behaviour of a fictional character.

Generally, Hotline Miami conveys its story through a combination of enacted and embedded narrative. Being an original narrative universe, one would be hard pressed to argue for its use of evoked narrative - though the game certainly has thematic and aesthetic likenessess with other media, particularly the movie *Drive* (2011), which shares Hotline Miami's retro-aesthetic and profuse violence. Likewise, the fairly strict routine of gameplay and the linearity of the narrative, make emergent narrative all but impossible. One could argue that the game's use of unreliable and

ambiguous storytelling afford emergent narrative through interpretation, but in its most basic sense (*creating* narrative through player decisionmaking), emergent narrative does not figure in this game.

Embedded narrative, on the other hand, is a cornerstone in Hotline Miami's story. The game features an even spread of subtle clues and fragments of explanation throughout its environment. The player will come across newspaper articles detailing their own massacres, as well as deceased persons who don the same obscure animal masks as the player, all of which contribute to a gradually emerging pattern of the larger conspiracy at play, while none require the sort of tightly orchestrated narrative exposition that ludologists claim necessary for successful storytelling.

Hotline Miami also relies a great deal on enacted narrative for story advancement. As in other enacted narratives in videogames, it is the actions of the player, and their advancement through the game's spatial structures, that propel the story forwards. It is also in the enacted narrative of Hotline Miami that its rules become narratively salient. This goes back to procedual rhetoric, which I described earlier in the paper. By way of the rules of the game, and the rules innate to the code in which the software is written, the game models a system of actors and environments that interact in certain ways. The player is then given the opportunity to 'enact' the narrative - and the rules - of the game by manipulating the system through play.

Crucially, the player acts freely under fairly tight constraints. They cannot interact with hostile non-player characters in other ways than combat, and they cannot progress in the game by other means than violence. In fact, for the duration of the storyline played from Jacket' perspective, the player is required by the rules of the game to leave no stone unturned in their massacres. This condition is arbitrary, but it is nevertheless accepted as a rule of the game, and complied with without further ado. It is not until the player assumes the role of another protagonist; Biker, that the rules of the game change, and the player realizes that the compulsion to "take no prisoners" only applies to Jacket. In this way, the game as a system models its actors in a way that suggests that this is not an essential rule of the game, but a compulsion that Jacket is conquered by, and that by proxy has conquered the player. The only possible way to subvert the compulsion, short of modifying the game, is simply not to play.

This interpretation is supported by differences in Jacket and Biker's characters, that are corroborated by other narrative elements, particularly Biker's dialogue with other non-player characters. Interestingly, Jacket is never given any lines in dialogue - he embodies the 'silent protagonist' trope, and settles for hearing what others have to say. Next to Jacket, Biker is comparatively disillusioned. Dialogue confirms that Biker too has been receiving the cryptic voicemails that Jacket has, but contrary to him, Biker is on a personal mission to unravel the conspiracy. It is unclear why he does this, but dialogue seems to suggest that it is out of restlessness and his reluctance to carry out murders for others without knowing why.

Going back to compulsory violence, the primary moral of the story is revealed in a cryptic, fourth-wall-breaking[11] dialogue between Biker and the revealed masterminds of the conspiracy - two janitors in a makeshift phone center underground, that bear a conspicuous resemblance to the two developers of the game, Dennis Wedin and Jonatan Söderström. The janitors go on to explain

[11] "Breaking the fourth wall" is a metaphor from theater, and refers to when fiction breaks the viewer's immersion in the narrative by addressing them directly,

that they are not responsible for the many killings. They merely told their agents (people such as Biker and Jacket) what to do, and that the responsibility for carrying out those actions without explanation or motive lies with them. The dialogue is between characters in the game, but it applies just as well to the relationship between the developers and the player. Many players found the unusually violent aesthetic of Hotline Miami to be extreme or in poor taste, and yet, those that have persisted long enough to make it to the end of the story are faced with the exact same argument that the character, Biker is. The player too, has been told to commit - symbolically, at least - heinous crimes, and has done so for no other reason than because it was made to be stimulating gameplay.

In summary, Hotline Miami is a game that uses procedural rhetoric and enacted narrative to craft a story about arbitrary violence, where the narrative of the story guides player action, but player action (or rather, experience) in turn imbues the narrative with nuance and immersion, precisely because the two - the story and the experience of play - are designed to be closely analogical. This is only made possible by the strategic composition of rules (the constituative rules of the game as well as of the software) and of narrative in relation to one another. Rather than making claims about the real world, the procedural rhetoric of the game makes claims about characters in the story, causing the player to have an embodied and immersive experience of that character's traits.

Interestingly, the game only leverages this narrative technique to a moderate extent. In spite of that, I argue that this complex narrative technique supports wider application in videogames as a narrative medium, and I aim to explore that very possibility by outlining a conceptual game design in the following segment. This segment will be heavily inspired by the commissioned games that figure in Salen & Zimmerman's *Rules of Play*, and like them it will attempt to put into practical terms the insights I have gained from analyzing Hotline Miami through the combined perspectives of narrative architecture and procedural rhetoric.

Applying insights: Compulsion

The goal of this section is to give an example of novel game design that utilizes the interplay between the formal elements of games (their rules) and their storytelling as well as representational content. Though the game I describe here is only conceptualized, and does not comprise a functional prototype, it figures as a practical consideration of my analytical findings. Rather than a practice informed by reflection, it is a reflection on practice.

Compulsion is the provisional title of the videogame design outlined below. It builds on some of the same principles I have highlighted in my analysis of Hotline Miami, but more specifically, it aims to bring game mechanics that stride the border between the ludic and textual sides of the game to the forefront.

Compulsion is a videogame about living with Obsessive Compulsive Disorder (OCD). The player assumes the role of an anonymous protagonist, and must progress through everyday situations while dealing with the constraints and challenges posed by OCD. At its heart, Compulsion is a puzzle-game. The player manipulates a system of objects in the attempt to bring the system into a desired state. Semantically, the game visualizes the puzzles as physical spaces that the player must move through, creating an abstraction of a number of challenges a person with OCD might face. Like any game or puzzle, the levels in Compulsion are interacted within accordance to a set of rules.

What sets aside Compulsion, is that the levels can only be solved by warping or circumventing the "natural" rules of the puzzles. In this sense, Compulsion is reminiscient of a number of critically acclaimed puzzle games, such as *Portal* (2007) and *Antichamber* (2013), that challenge the player's perception of their rules (more specifically, their modelling of physical laws).

Gameplay

Compulsion is played from an isometric top-down perspective. The player controls the protagonist Ann, who must traverse abstract puzzle-like spaces that represent her everyday life. The levels are warped and distorted versions of mundane environments - the office, the kitchen, the supermarket - with strange physical laws that mirror their dream-like appearance.

In one level, the player moves along a considerably upscaled kitchen counter. The player's path is obstructed by running water from a huge faucet, which Ann must turn off to progress. The player can follow an alternate path up to the faucet to turn it off; however, every time the faucet goes off-screen, it turns back on. The puzzle appears to be unsolvable, as the path the player must follow to go from the faucet to the point where the water blocks the path necessarily brings the faucet off-screen, turning it on again.

The constitutive rules of the game seem to bar the player from solving the puzzle. In order to solve it, the player actually has to explore the level, and find a friend or relative (unspecified) to talk to. As the engages in dialogue with the NPC, who gives the protagonist reassurance and calms them, the player's point of view recedes, broadening their view of the level. This change in perspective allows the player to turn off the faucet, and follow the path back to where it was previously blocked, this time without the faucet leaving the screen and turning back on.

The perspective from which a game is played is often taken for granted, and making it a crucial game mechanic creates a challenging puzzle in a novel way. In this respect, Compulsion is reminiscient of games like Antichamber, in that it doesn't just change its model of the laws of physics as we know them (but in a way we readily understand), it subverts our deeply ingrained understanding of the abstract concept of perspective, by making it interact with the game world directly.

In addition to this, the key to the puzzle conveys metaphorical meaning about the protagonist: Ann is helped to overcome a challenge in her daily life by getting emotional support from a peer, which broadens her perspective in a figurative or methaphorical sense, which is analogical to the literal expansion of perspective experienced by the player.

In solving the puzzle, the player has to realize that they can warp an aspect or quality of the game that they perceive to be fixed, i.e. the perspective from which the game is played. In this sense, the constitutive rules of the game appear to bend to reflect a quality of character, mirroring the way Jacket and Biker are portrayed by the rules of Hotline Miami.

As in Hotline Miami, the analogy between the fictional experience of the game's protagonist, and the real experience of the player, is also a central concept in Compulsion.

Not all the puzzles in Compulsion are built around perspective. In another level, Ann is traversing an abstract cubicle landscape based on her office. This level is based on another common challenge for people with OCD, namely the obsessive need for symmetry and exactness. Some items in the environment are already "properly" aligned, while others require the player to re-arrange them. Distorted shapes in the maze-like level block certain paths, but recede when certain patterns are completed, clearing the way. There are several, interwoven patterns of items that the player can complete to open up new paths in the environment, but some of these are mutually exclusive. Thus, the entirety of the path cannot be cleared at any one time, as completion of one pattern necessitates the violation of another. Again, the player is confronted with an impasse that seems impossible to solve within the rules of the puzzle.

In addition, increased symmetry in the environment correlates with calm ambient sound, whereas increased disorder causes visual and auditory distortions in addition to more blocked paths. The assumption is that the puzzle cannot be solved without symmetry, but actually solving it relies on the player to realize that the symmetry game is a red herring. Deliberately arranging items assymetrically amplifies the distortion of structures, but as they accumulate, these distortions begin to recede. Thus, the only way to solve the puzzle is actually by slowly increasing asymmetry, in a sense "lowering the threshold" for distortions.

Design Notes & Discussion

From the very beginning of conceptualizing Compulsion, the process was guided by a set of design constraints that I identified as an ideation exercise. Some of these constraints pertained to game design, but most were a direct result of the purpose of the design, which was to showcase the possibilities of medium-specific narrative mechanics in videogames.

First and foremost, Compulsion had to be a game with a narrative dimension. The constraint is obvious, but not necessarily easy to accomodate. Other constraints on the development excluded the most generic stories from the feasible options. (Which went hand in hand with the next constraint)

Second, the narrative and the concrete rule system had to be designed in tandem, to ensure some level of cohesion between them. If the ludic challenges presented in-game become too abstracted and distanced from the fictional challenges they portray, the procedural rhetoric doesn't work, and the point is moot. If the ludic aspect of the design is neglected, the game becomes a tedious OCD "simulator", and likewise fails to prove my point. Therefore, both perspectives had to be continuously informed by each other, and this dialectic was critical to the conceptualization of the game.

Rule-Narrative Interaction

Many games represent conflict in ways that do not mirror the conflict in question on a systematic level - and they don't have to. Chess contains representations of a number of different kinds of actors, but their differences in the game system to do not bear systematic likeness to the actors they represent. When I drafted Compulsion, I had to design a system that resembled the conflict it portrayed in a meaningful sense, because the primary point of designing the game was to create narrative value through the player's direct experience with the game system. The subject of the game (and of the story) was an intuitive choice, because it is deeply interwoven with human

experience and rules. In a sense, this made the procedural rhetoric of the game feel a lot less "forced", even though its primary purpose is demonstration. The subject was also heavily inspired by the movie *Memento* (2000). The narrative in Memento revolves around the protagonist's complete loss of short-term memory, and the movie portrays the effects of this condition in a novel and immersive way, by arranging scenes in a complex anachronistic pattern that obscures the fabula [12] of the movie. Memento creates immersion and gives the viewer an experientially based understanding of the protagonist's condition. Compulsion is conceptualized with the same qualities in mind, except rather than relying on the composition of syuzhet, it relies on the procedural rhetoric of its rules, to give the player an interactive and immersive experience of living with OCD.

The Illusion of Subverting the Rules

Compulsion creates immersion and narrative substance through the experience of interacting with its system, but it also does it by creating an illusion that these rules are subject to change. This was not a necessary constraint as such, but one that I applied as an additional, creative constraint. In part, it exists to bring the attention of the player to the rules, and to prompt the player to reflect on them. This is done by forcing the player to reconsider what they believe are inherent or granted constraints in the game, and using them to their advantage. In this case, the notion of subverting the rules of a videogame through play alone is paradoxical, because the constituative rules, naturally, have to accomodate the "shift" in their own application. For the player, this note does not matter; the illusion that they can warp the "fabric" of the game is enough to convey the emphasis.

Compelling Gameplay v. Authentic Representation

One dilemma that was central to the entire process of drafting Compulsion, was the constant negotiation between compelling gameplay and authentic representation. On one hand, game design is about setting the stage for meaningful, compelling, and stimulating gameplay to take place[13]. On the other, the narrative of the game portrays a delicate subject. Obsessive Compulsive Disorder is a psychological condition that dramatically affects the lives of those diagnosed with it, and it is very rarely for the better.

When portraying the illness in a videogame, it is easy to create a game that gives the illness positive associations, because the gameplay is designed to be entertaining. This can lead to a skewered and problematic portrayal of life with OCD. which does not do justice to the seriousness of the subject. That is not to say that the game cannot satisfy the criteria of good game design and deal with the subject of its narrative in a respectful manner at the same time. I attempted to navigate the issue by designing a game that wasn't about turning the hardships of OCD into a fun challenge, but was about showcasing ways to deal with the condition through elegant metaphors. Less about instant gratification and competition, Compulsion is supposed to be a mindful and reflected exploration of the subject.

Moving away from the game design perspective, it is generally challenging to accurately represent mental afflictions like OCD, as these are often poorly understood from an outside perspective. In the event that a game like Compulsion was to be developed seriously, with publishing in mind, it would

[12] 'Fabula' is a narratological term that refers to the "raw material" of a story, as it actually plays out. In contrast to "Syuzhet", which is the way a story is organized and told.
[13] Salen & Zimmerman (2004), pp. 47-52

be critically important to more clearly define what the game is supposed to be, and take steps (user workshops come to mind) to ensure that the subject is not portrayed in a harmful way. If done right, however, a game like Compulsion could offer an immersive and sincere tool to aid understanding of a condition that affects a sizeable portion of the population, while simultaneously being a compelling and stimulating game to play.

Conclusion

Videogames still struggle with their dual lineage. On one hand, they occupy the realm of games and play, a pastime activity that stimulates, challenges, and entertains. On the other, they are also capable of high-fidelity representation, making them capable of telling rich stories. The most radical examples are so tightly structured in their gameplay and narrative progression, that they are likened more to 'interactive movies' than actual games. While the demands of compelling gameplay and of compelling narrative seem antagonistic at times, the two aspects can also interact to make possible new and immersive forms of storytelling. Their make them procedural, but coupled with their representational power, their procedurality is given rhetorical weight. This prcedural rhetoric cannot just make claims about the real world; but also imagined ones. In this way, it provides a way of enriching narratives in videogames in a way that I will (tentatively) classify as unique to the medium. The game draft outlined in this thesis is an attempt to explore this hypothesis, but while the design of rule-narrative interaction still seems fruitful, it has also highlighted potential pitfalls that can afflict game designers who seek to leverage it.

References

Costikyan, Greg (2000). "Where Stories End and Games Begin" in *Game Developer*, September 2000, pp. 44-53.

Huizinga, Johan (1955). "Homo Ludens".
Boston, MA: Beacon Press.

Salen, Katie & Zimmerman, Eric (2004). "Rules of Play".
London, England: MIT Press.

Jenkins, Henry (2004). "Game Design as Narrative Architecture" in *First Person: New Media as Story, Performance, and Game*.
London, England: MIT Press.

Bogost, Ian (2008). "The Rhetoric of Video Games" in *The Ecology of Games: Connecting Youth, Games, and Learning*, pp. 117-140.
Cambridge, MA: MIT Press.