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Architecture and the narrative experience in video games: How architecture and architectural principles inspire and enhance the narrative experience in video games: A case study of *Control* (2019)

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ABSTRACT

Video games offer an unparalleled level of fidelity and connectivity between environment, player and narrative and therefore inspired architectural design can create completely immersive worlds with captivating narratives. The subject of this article is to investigate how architecture can enhance player experience and immerse a player in a video game narrative, using the 2019 action-adventure game *Control* as a case study. Analysis of the game's art direction and world design introduces its architectural inspirations and offers us an understanding of the narrative themes and intended player experience. These inspirations are then used for comparative analysis along with selected environments from the game to analyse the architectural techniques that reinforce the game's story and inform us further on some of the characters and game lore. Insight into these aspects shows that the world design of *Control* was carefully considered with the themes and narratives at play in the story, not just to create a harmonious product, but also to create one that is a more provocative and enjoyable experience.

Introduction

Environmental design is a fundamental part of video game development, with it also being a strong source of inspiration for the narrative form. Research into the marriage of architectural principles, video game narrative design, and narrative architecture is sorely underdeveloped despite being fertile ground for its potential in offering greater understanding of both topics. From this comes the topic of research: how can architecture and architectural principles inspire and enhance the narrative experience in video games? The action-adventure video game *Control* (2019) will be used as a case study as its process of environmental design-led narrative creation and realisation is used to great effect.

Control is a third-person action-adventure video game developed by Finnish Studio Remedy Entertainment. The game takes place within the

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Oldest House, the headquarters of a fictional American government bureau that investigates 'paranatural' entities and events, known as the Federal Bureau of Control (FBC). The Oldest House is itself paranatural; the building is a conscious anomaly whose architecture shifts and bends, ignoring the bounds of physical space. The core inspirations for the Oldest House's style comes from brutalism, with specific reference to government buildings in the United States, as well as the works of Carlos Scarpa and religious architecture (Macdonald, 2021). The spatial and emotional effects of these architectures have a direct relationship with the themes of the game narrative, which is discussed later in the article.

Literature review

There has been and continues to be a debate in the game design world over the difficulty of creating video games which can offer player freedom and interactivity, while also creating a compelling and singular story, when both aims can tend to act against one another. Despite this, commentary on the intersection between effective video game narrative design and how environmental/architectural design can facilitate it appears limited. For those that do exist, for example *Architectonics of game spaces* (2019) by Andri Gerber and Ulrich Götz, which compiles various interviews and essays on the subject, the focus is more on selling the practicality and merit of video games as a tool architects can learn from, while the focus of this research is the reverse. Despite this, there are important insights in the interviews and essays. Marc Bonner's essay 'Piercing all layers of the anthroposphere on spatialization and architectural possibilism' (2019) displays the importance of architectural thinking in creating compelling video game environments, but notably also shows how this thinking has always been present in the game design world even if it wasn't directly derived from the same source. Bonner analyses the architectural concepts that inspired the level creation within the video game *Hitman* (2016). Given that the game setting is based on real spaces created in a virtual world (a Parisian palace hosting a fashion gala, an Italian coastal town or the streets of Marrakesh), it's logical that architectural principles and the theories would be present. The distinction, however, is that the inclusion is not incidental but a conscious application of these principles by the game designers and environmental artists to create not only logical architecture, but also an interactive and believable space that lends itself to the game mechanics and narratives present. Although the names for these spatial principles vary between architects and environmental designers ('hub and spoke' pattern vs 'Nucleated Village' pattern or 'Swiss Cheese' and 'snail house' vs 'promenades architecturales') (Bonner, in Gerber & Götz, 2019, p. 225), they refer to the same idea and have the same outcomes. Similarly, although the extent of the influence that the architecture in *Control* had on the design of the game's narrative form was unique for the medium, it was still an intuitive process given the symbiosis of architectural and environmental design principles.

Game design as a narrative architecture, Henry Jenkins (2002)

Henry Jenkins' essay is referenced in many of the articles, journals and essays that make up the research for this article as it is a foundational piece on the theory and methods of video game narrative design, focusing specifically on the 'spatiality' available in video game narrative design 'examining games less as stories than as spaces ripe with narrative possibility' (Jenkins, 2002, p. 2). The essay was influential in the field of study in coining the term 'narrative architecture', as well as defining the various forms in which narratives can be constructed and conveyed to the player and championing player interaction with the narrative through environmental storytelling (Reynolds, 2014, p. 1). While instrumental in narrative design thinking, this essay is also limited by it being released in 2002, and as such is outdated in some respects. Gaming has made enormous strides in the time since the essay's publication and although the theories and analysis of the different structures that video game narratives can take is still relevant today, when reading Jenkins theorise about the

potential of a detective story or a *Star Wars* video game, acknowledging that both of these already existed at the time of his writing, the analysis is ultimately vague. The reader may be inclined to think about the plethora of innovative and acclaimed video games that have been released since then that are likely to affect how Jenkins and the reader could understand the unique narrative opportunities video games offer as a medium. Having said this, the essay is still valuable as a base of vocabulary and categorisation to now build upon. Jenkins outlines four ways that environmental storytelling 'creates the preconditions for an immersive narrative experience'. The two ways that are relevant to this research in relation to the research question is its ability to 'evoke pre-existing narrative associations' and to 'provide a staging ground where narrative events are enacted' (Jenkins, 2002, p. 6) With regard to *Control*, the architectural inspirations of American brutalist municipal buildings and offices are used as an emotional reference point for the player that can then be built upon by the game's narrative. The architectural environment as a staging ground can be understood as the geography that defines the narrative pacing, 'setting and varying the rhythm of game play through features of the game space' (Jenkins, 2002, p. 9) (as is explained later in section 3.1), but also how a game's 'basic vocabulary of possible actions' (Jenkins, 2002, p. 9) can interact with the environment to create a connection between the feelings of the player, the character, and their place in the narrative (see section 4).

In contrast to the relative youth and brevity of research regarding architecture's interplay with video games, brutalism is a heavily documented and dissected topic. For the purposes of this research, the point of interest in brutalist architecture can be defined by its function as the uniform of powerful entities: municipal buildings, corporate offices churches; and what brutalist architecture can represent for the average person (the player) experiencing these spaces. In *Concrete concept: Brutalist buildings around the world (2016)* Christopher Beanland stresses the mythology of brutalism as a failed promise, the post-war optimistic ideal of certainty in architecture and institutions (state or otherwise), which, coming off the back of war and dramatic social change, would last forever. Brutalism's ambition and scale were 'signposts to a technological future that never quite came' (Beanland, 2016, p. 8), as can be compared with the exciting, supernatural world of the FBC, which, in the same way as has often been levied against real-world brutalist architecture, is turned cruel and oppressive when its ideals failed. 'Brutalism's patrons were: city councils, government departments, corporations, universities, even God' (Beanland, 2016, p. 8). And so, when the institution fades, so does the building, the positive attributes of the style lose their appeal and what remains is the severity and austereness of the structure. It is from this understanding that *Control*'s aesthetic style ties itself to the narrative.

Research methodology

To comprehensively analyse the game *Control* in relation to the research question, multiple elements of the video game environment, concept art and real-world architecture will be analysed with three ultimate goals in mind. Firstly, to display how the environmental design and process of designing the Oldest House was a foundation for the game's story and demonstrate that this process created opportunities in the narrative development. Secondly, to draw a connection between the architectural principles that created the game environment and the narrative themes of the game, bolstering the effect the game has upon the player. Thirdly, to note how the world design facilitates and enhances the gameplay experience, again with reference to how this intertwines with the game's core themes. The primary method of analysis will come from comparative explorations between game environments from *Control* and the real-world architecture that inspired them to discern the meanings and techniques used. Real-world architectural references will come directly from the references that *Control*'s Lead Environmental Artist Stuart MacDonald used during his time working on the game to ensure there is a credible comparison.

Definition of terms

World/Environmental design

World design is 'Creating the potential space that supports game design and narrative' (Macdonald, 2021).

It provides 'a foundation for the development of the game and provide hooks for game design and the story, it's a stage for the story to take place' (Macdonald, 2021).

Environmental storytelling

> Environmental storytelling creates the preconditions for an immersive narrative experience in at least one of four ways: spatial stories can evoke pre-existing narrative associations; they can provide a staging ground where narrative events are enacted; they may embed narrative information within their mise-en-scene; or they provide resources for emergent narratives (Jenkins, 2002, p. 6).

Narrative architecture

The structure that a game's design takes to effectively convey the narrative (Jenkins, 2002).

1: Overview

1.1 Plot introduction

Control follows Jesse Faden, a young woman whose brother was taken from her after they both experienced a bizarre, reality-changing event as children. Her search for her lost brother, Dylan, leads her to the FBC Headquarters in New York, the Oldest House. On arrival, she finds that the Oldest House is in a state of emergency, with a strange entity known as the Hiss infecting and attacking FBC personnel, with one of its first victims being previous FBC Director Zachariah Trench. With the Director dead and the building on lockdown, Jesse is appointed Director by the Board, itself a seemingly benevolent, paranatural entity that acts as a conduit between our reality and others. Jesse is bestowed telekinetic powers to defend herself against the Hiss in her mission to take back control of the Oldest House and discover the fate of her brother.

1.2 Setting

Control is set entirely within the Oldest House. The building is depicted as a featureless concrete skyscraper in New York City. Inspired by the AT&T Long Lines Building in New York City (Figure 1), its austere and windowless appearance make it unremarkable and unreadable, as a secretive building usually should be, but still with an imposing and mysterious quality about it; as architecture critic Paul Goldberger says of the building, 'this one has an allure of its own to it… There's something about that shape. You see it and you don't see it at the same time' (Goldberger in The Intercept, 2016). Notably the real-life building is also suspected to be the location of NSA surveillance hub TITANPOINTE (The Intercept). The Oldest House interior is made up of multiple different sectors for research, documentation and containment, each with their own unique aesthetics. In many ways the Oldest House is built to outwardly appear as any government agency from the 1960s; it is only when the player dives deeper into the building and the game narrative that the true, impossible and bizarre nature of the Oldest House, the FBC, and their purposes are revealed.

Figure 1: AT&T Long Lines Building (NYC Urbanism, 2016)

Figure 2: *Control*'s core themes graphic (Macdonald, 2019)

1.3 Themes and player experience

As the game's namesake, the core theme of the game is control: control over oneself and one's reality. Ever since experiencing the reality-bending event and losing Dylan, Jesse has felt part of her is missing and without an explanation she will never

be content with her life. Within the FBC, researchers interact with incomprehensibly powerful objects every day and yet must stay in control and unintimidated. To study the objects, to define them, to refer to them through acronyms and bureaucratic titles such as the Board is to rationalise them and in doing so to put yourself in a position of control over them, yet this proves to be a losing battle over time. Macdonald said that an expression he often heard from the design team was to 'make it weird', which he defined as coming from contrast in the scene; thus came the overarching themes of duality in the game (Figure 2) (Macdonald, 2021). That feeling of weirdness requires there to be a baseline mundanity which can be used as a reference from which unexpected moments disturb the player. The juxtaposition of banal office work and reality-bending entities creates uncanny environments that intends to force an uncertainty in the player about what they experience, keeping them on edge.

2: Building the Oldest House

2.1 Brutalist design principles

An art guide referred to as Be Brutal (Figure 3) was created with six principles to teach the game artists the fundamentals of brutalism. The six principles were: Mass, Structure, Depth, Surface, Repetition and Symmetry (Macdonald, 2021). To demonstrate how these principles were interpreted in the art direction of the game a comparative analysis will be performed between the Board Room location (Figure 4) in *Control* and a piece of iconic American brutalism, The Boston City Hall. The Board Room is one of the central locations in *Control*, both in the past and present narratives of the game. Currently, it is one of the few safe areas in the Oldest House, containing allied characters to communicate with and receive missions. Before the Hiss invasion, the Board Room would have been the place where crucial decisions over the future of the FBC, and thus the world, would have been made, therefore its design was considered to reflect the weight of this decision-making.

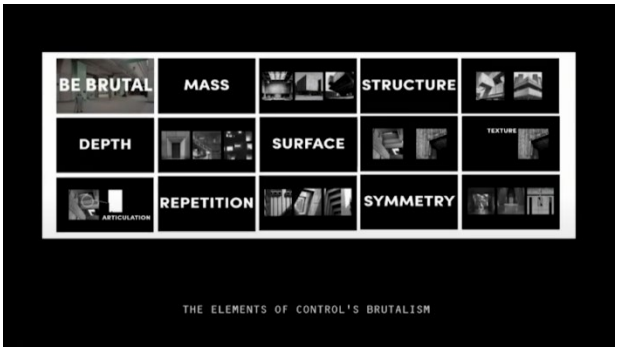


Figure 3: Be Brutal art guide (Macdonald, 2019)

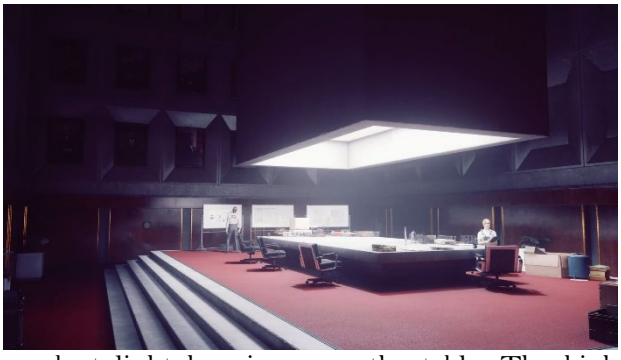
Figure 4: The Board Room (Fandom, n.d)

Figure 5: Boston City Hall (Berkshire Fine Arts, 2009)

Similarly, as the seat of city government in Boston, the design of the Boston City Hall (Figure 5) intends to project a similar importance. With the design proposal being won in 1961 after a point of middle-class flight and government corruption, the design was chosen for being, at the time, avant-garde, serving as 'a keystone between the historic past and the brilliant future which is to come' (Sirman, in O'Rourke 2018), with its brutalist aesthetic signifying the solidity and power of the city governance. The building's many critics, however, would suggest that the City Hall really gives the impression of being cold and unresponsive, the absolute power of the government in the face of the individual it looms over. As mentioned in the discussion of Jenkins and *Narrative architecture*, these feelings associated with brutalist municipal architecture like the Boston City Hall are introduced into the design of the Oldest House to evoke the same narratives and emotional reactions.

DEPTH – The table is in an elevated position in the room with stairs leading up to it (Figure 6), meaning that both metaphorically and physically members are ascending to their position, reminding users to act in accordance with the gravitas and status the position holds. The stairs also extend the approach to the table, building suspense. The Boston City Hall employs a similar feeling of ceremony with its interior recessed from the upper levels of the building, creating dark voids and drawing out the entrance process as the building consumes you, intensifying the feeling you are entering a space of significance and status.

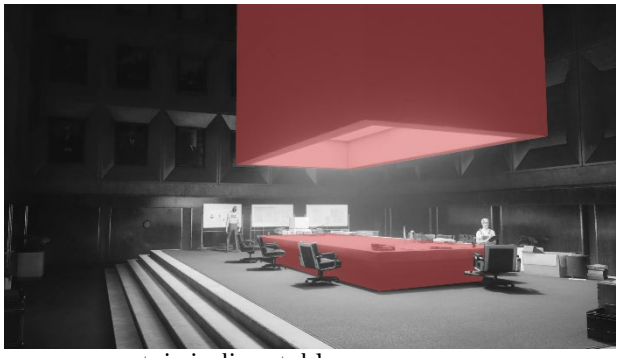
MASS – The concrete light-box (Figure 7) is a huge mass in the room, looming over the Board Room table, acting as a metaphor for the weight of the decisions that are made around the table. Furthering this point was the room's inspiration, which came from the War Room table in *Dr Strangelove* (Macdonald, 2021), which has a circular



pendant light hanging over the table. The high ceiling mixed with horizontal and vertical lines

creates vertical scale in the room, making you feel small in the scale of the world; while the position members of the Board hold has significant power and their actions come with considerable impact. The shrinking effect may be intended to reduce the ego of board members, reminding them that they are only one person in an expansive and uncontrollable world. With the Boston City Hall, the huge scale of the building and stacked concrete levels make the building seem top-heavy, with its enormous weight bearing down towards you. Dense concrete columns are employed to support the structure, their size stressing the weight of the building.

SYMMETRY – Symmetry (Figure 8) in the design highlights the central desk from the entrance and creates a consistency and repetition in the space that Macdonald (2021) relates to ritualistic practices. The Boston City Hall has repeating symmetrical elements; however, within the front façade they have a unique use of giving a regularity to the design which is then interrupted by the more sculptural extrusions at the entrance to direct entrants in. On the north elevation the building's symmetry creates certainty in the design that enforces the idea that the building, as so the city

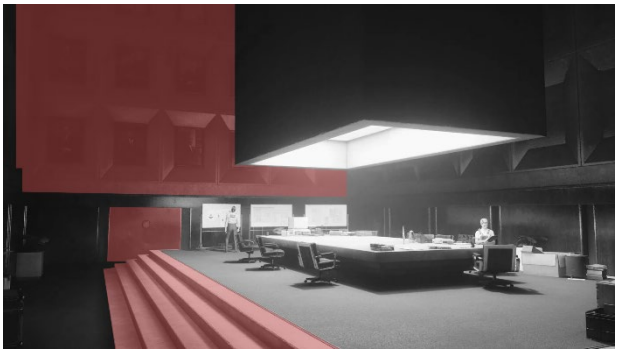


government, is indisputable.

REPETITION – The walls feature numerous portraits of previous generations of board members (Figure 9). Their elevated position creates the feeling that you are being watched over by them, embodying the legacy and status the position of a board member has and reminding them that their actions will be judged. Repeated concrete supports in both the Board Room and the Boston City Hall stress the weight of the building structure, reinforcing the sense of strength indefatigability.

SURFACE - Material choices in the Board Room (Figure 10) are inspired by that of similar US government buildings as well as the works of Carlos Scarpa (Figure 11), with concrete as the central material accented by dark wood and brass joints to add refinement to the otherwise heavy and oppressive aesthetic. Within both the Boston City Hall and Board Room concrete is used consistently to create a sense of solidity and stability that acts as a metaphor for the work carried out within them.

STRUCTURE – Structural strength in the Board Room is implied through the suspended weight of the central light-box and vast interior space (Figure



12). Similarly, the Boston City Hall has the strength of the building and material proudly on display with concrete pillars supporting the building; their thinness compared to the height and width of the building draws the eye up to the upper levels. As writer and historian Brian Sirman says, the exterior is a 'bold revelation of structure and construction in the exposed concrete' (Sirman in O'Rourke, 2018).

Figure 6: Depth diagram
Figure 7: Mass diagram
Figure 8: Symmetry diagram
Figure 9: Repetition diagram

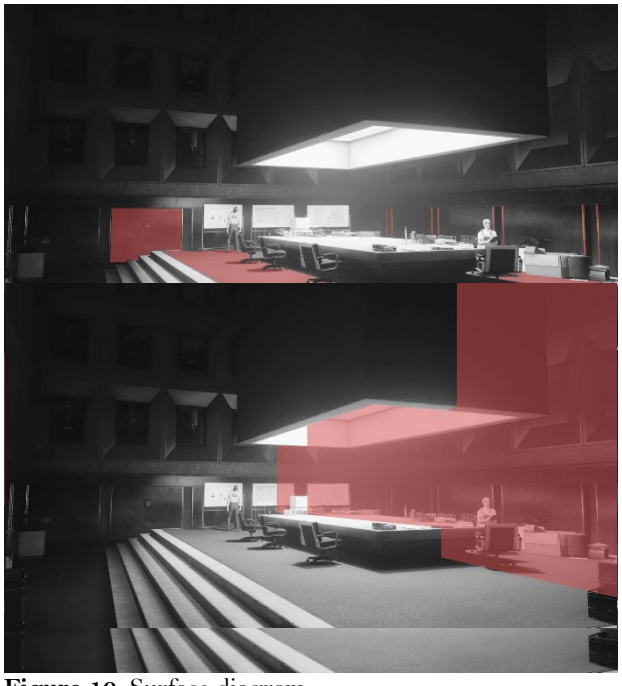


Figure 10: Surface diagram

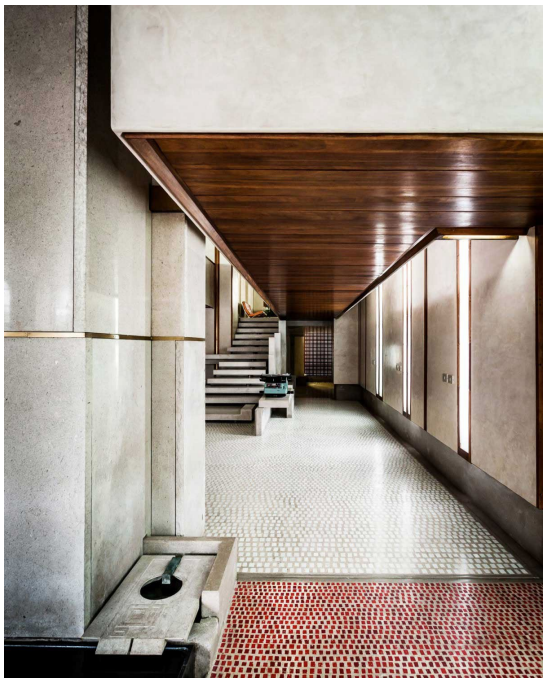


Figure 11: Interior of the Olivetti showroom (Lin, 2011)

Figure 12: Structure diagram

2.2 Environmental design and spatial theory

Given that the architecture and game environments create the potential space within which to act, they also have the responsibility of ordering the events that occur in the game. In the same way that room organisation of a building should follow an intuitive order, play space facilitates the order in which the player experiences gameplay and story moments.

Plotting of the game space begins with spatial mapping; typically, in open-world environments landmarks can be used to help players orientate themselves and display significance; however, since *Control* takes place entirely in an interior space, another approach to create memorable locations was required. The designers took inspiration from the 'nucleated village' pattern, an urban design concept otherwise known as 'hub and spoke' pattern within game design circles to create 'village squares that the player would remember and orientate themselves around' (Macdonald, 2021). Using this practice, central locations are created with other areas growing naturally from it, giving '…freedom to the level designers to lay the missions spaces out in a more organic fashion' (Macdonald, 2021). The practice can be seen clearly in the final maps of the game (Figure 13), which, although complex, have a clear hierarchy of space and a central hub to begin from. This spatial mapping thus gives a physical space to the narrative which can be played with. For instance, character introductions consistently take place in these hub spaces as they are memorable locations to the player and tie the character and sector together in an easy to remember way. For example, the character Langston is found in the Panopticon, which is in the Containment Sector. Alternatively, this pattern allows for small offshoots and secretive areas that reward the player for exploring with hidden narrative drops or loot.

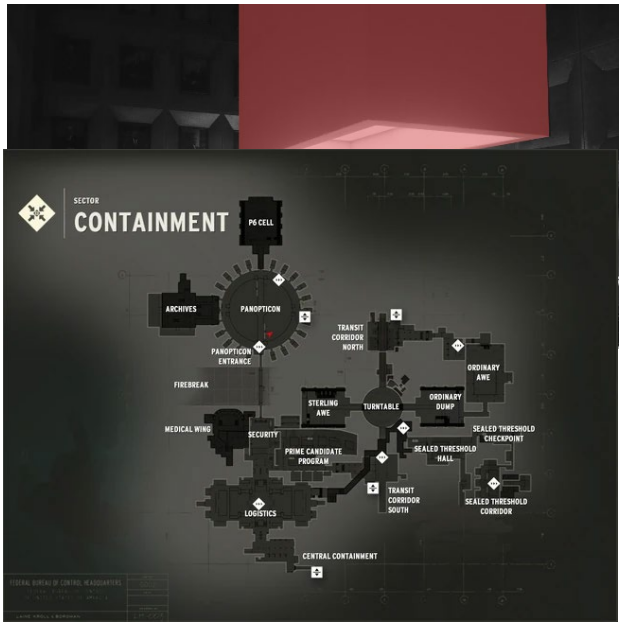


Figure 13: Containment Sector map (Fandom, n.d)

3: Environment and narrative synergy

3.1 Architecture and pacing

Following the discussion of spatial organisation,

specific attention can now be given to how it can be utilised effectively to pace the game narrative in a way which heightens the tension and impact of gameplay encounters and narrative reveals. An example of this in *Control* would be the Firebreaks (Figure 14). In game lore, Firebreaks act as their namesake implies, impossible channels in the Oldest House, like rivers cutting through a city, that act as a stopgap to prevent paranatural entities from entering other parts of the Oldest House in the event of an outbreak. In player experience terms, however, Firebreaks act as a pivotal build-up before an unknown area. Three huge concrete barriers lift at the entrance revealing the void in the world (Figure 15), a sense of impossible scale the player has not yet experienced in the game as they slowly cross the bridge to the other side, wondering what horror lies on the other side if this much protection is needed to contain it. This emotional purpose can be seen in their locations in the world and in the story. A Firebreak comes before the Panopticon, a prison to contain paranatural entities which includes a large combat encounter as well as a change in the environment's aesthetics, a more industrial look, perhaps inspired by shipping yards given it features enormous bridges connecting the cells reminiscent of a cargo crane. To this extent the Firebreak readies the player for a change in visual style and in difficulty by offering an intermediary space for them to prepare.

Figure 14: Firebreak doors (Remedy Entertainment, 2019)

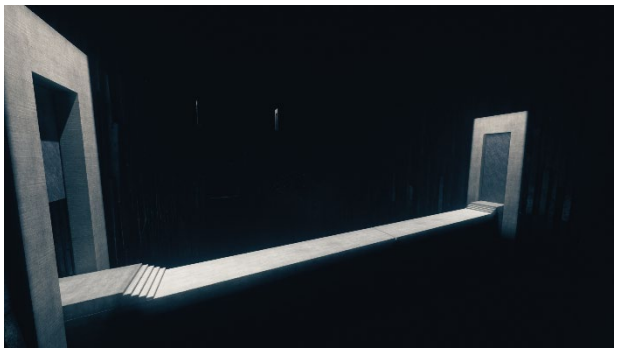


Figure 15: Firebreak doors (Remedy Entertainment, 2019)

3.2 Ritualised space

One of the dialectical themes the game proposes is the distinction between science and ritual. Historically there has been a chasm in the validity and merit of the two practices, with the understanding that rituals have ties to the occult making them untrustworthy and false, while science is based on empirical data gathering and rigorous testing and therefore is trustworthy. However, when the FBC interact with materials that defy our understanding of science and instead seem to act on their own logic unknown to us, the realms of science and ritual blend together. The points of inspiration for the architecture of the Oldest House reflect this perfectly. Carlos Scarpa's work was a major inspiration due to his mastery of concrete and detailing, along with principles from religious architecture to evoke the feeling of a building guided by a higher power and ritualised activity.

Influence from the works of Carlos Scarpa

Scapa's obsession with detail comes from a desire to present the artistry in creation and make users fully aware of how a design is realised, or as Kenneth Frampton et al. explain, 'construing a particular from and constructing its realization (and then, later in the cycle, the moment in which the user construes the significance of the construction)' (Frampton et al., 1995, p. 307). This same interest is presented in the identity of the Oldest House, with the concept of a non-human, non-corporeal entity creating a space that tries to imitate a human environment, with the added effect of human

inhabitants trying to manipulate the form of the building to be habitable for their purposes. Stepped detailing in Scarpa's work is not bound to a single plane; details appear on the ground before continuing up walls and travelling upside down on the ceilings. The detailing work has fluidity despite the rigidity of the material and clearly follows a logic, even if that logic appears bizarre when only looking at the final product. When this concept is applied to the conscious and shifting design and 'growth' of the Oldest House, these characteristics have the effect of the Oldest House expressing its own logic that defies human understanding and interaction with space. What is a floor detail continuing up the wall in a work like the Brion cemetery (Figure 16) is taken to its extreme in the Oldest House, with the entire form of the archive space spiralling (Figure 17). This location acts as a spatial representation of the FBC's struggle in trying to document and understand this magical world. Initial control and research slowly becomes untethered from reality as the anomalous takes over; this knowledge is revealed to be a spiralling rabbit hole that seems to have no end and cannot be comprehended or traversed by a regular human. Only Jesse, through her gifted powers, is able to pass through these two colliding worlds. Expanding upon this, architect François Charbonnet and Patrick Heiz spoke about the excitement that comes from questioning architectural norms and creating friction in space, with Charbonnet stating: 'Architecture is one of the very few fields, in which contradiction should be praised as something [necessary]', with Heiz elaborating, 'This is true not only in our practice, but also in the academic context: to orchestrate contradictions that would reveal what one could call les failles poétiques du lieu, the poetical "cracks" of a place, which contain the exhilarating moments of life.' (Charbonnet, in Götz & Gerber, 2019, p. 125). As mentioned earlier, the juxtaposition of the mundane and weird present in the Oldest House is what gives the game its character and makes those 'exhilarating moments' feel so memorable to players.

Figure 16: Brion Cemetery (Williamson, n.d)

Figure 17: Spiralling archive space (Remedy Entertainment, 2018)

Influence from Christian religious architecture

Within the FBC knowledge is power and therefore spaces of knowledge within the Oldest House take on a religious quality. Within the area Dead Letters (Figure 18), the FBC's archive of conspiratorial

Figure 18: Dead Letters (Fandom, n.d)

letters the Bureau uses as research leads, Marcel Breuer's Saint Francis de Sales Church (Figure 19) is referenced specifically. Breuer's belief was that 'any space which is larger than necessary and higher than necessary, and in which the structure and the whole building of the space is visible as it is in all churches and this type of architecture… is simply automatically religious' (Breuer, in Howarth, 1979, p. 260). This sparse, spiritual design logic is seen in the church in its deliberate sparseness of religious iconography: 'No statues, decorations or ornamentations were placed in the church. Instead, the design of the structure – spatial arrangements, lighting and use of materials – were to bring a worshipper closer to God' (Thuroczy, 2016). The design strips back any ornamentation which could be a distraction to visitors from the purpose of the building and the congregation; the medium is the message, and the message is concrete. The rigid material choices extend to the detailing too: 'In front of the altar the Stations of the Cross are embedded in the floor. The altar itself is made of a single piece of white granite weighing eight tons' (Thuroczy, 2016). The Oldest House follows the same principles in its concrete detailing and furnishing, such as the aforementioned Board Room table. Furniture objects being rooted in the material and form of the structure gives the effect that the building has always existed as a conscious mass and design; the immovable certainty of the material and the Bureau which reflects the certainty of belief in a religious building.

The heavy use of one-point perspective in the environments fulfils the gameplay's need to direct the player through the space, but on an experiential level it creates a central point that the player is always approaching, adding build-up and ceremony to the spaces as they grow in the player's vision, always giving them a goal to strive towards. Stanley Kubrick was once again used as inspiration, this time with reference to the camera movements in *The Shining* (1980). The slow, continuous approach is used to add tension, with the stillness in the environment building suspicion that something is going to suddenly jump out, never letting the viewer be fully certain of their safety (Macdonald, 2019). To connect this to ritualised spaces and brutalist principles, the technique is used along with repetition and symmetry to great effect in religious architecture, where it draws the audience's attention to a single point, like a religious mass wherein everyone is focused on a singular experience and higher calling. Dead Letters is entirely symmetrical, with ordered rows of filing cabinets and staircases that become pews and altars, guiding the eye forward and up to the monolithic wall feature and light that cascades down from it once the area has been cleansed of the Hiss infection.

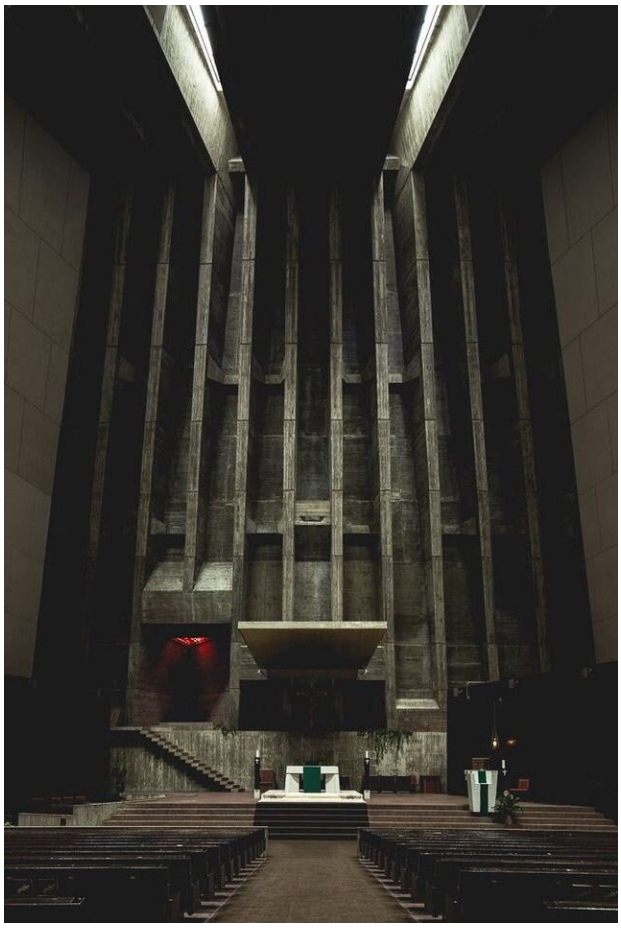


Figure 19: Saint Francis de Sales Church (Woods, n.d)

3.3 The Research Sector and lighting

The Research Sector offers a contrast in layout to the 'standardized rigidity of the Executive offices' (Game Developer, 2019) to represent the creative work of scientific research within the Bureau. Departing once again from the identity of the Executive Sector is the broader use of colour. Yellow is used as a motif in the laboratories of the Research Sector, reflecting the ever-jovial department Head, Dr Darling. However, when it's featured on every wall of the observation cells (Figure 20), the dominant colour choice takes a maddening turn, perhaps representative of the mental slip that Dr Darling goes through just before the Hiss outbreak when he becomes fully lost in the paranatural world. Continuing on, the entrance to Central Research (Figure 21) is tight, with opposing walls and a low ceiling used to frame the vast atrium space featuring a staircase that spirals around two giant sequoia trees bathed in an artificial, heavenly light. The effect is powerful: 'squeezing and letting go yanks you from intimacy to vulnerability, emphasising the grandness of a space and your exposure within it. It conveys narrative in the sense that there is progression from feeling safe and enclosed to feeling awestruck at something much bigger than your own body' (McMullan, 2016). The effect is most strongly conveyed again in religious architecture, 'where the aim was to make the viewer feel humbled by God and dwarfed by the institution of the church' (McMullan, 2016).

The lighting in *Control* is also a key point of the visual and narrative design. In *Control*, where all light installations are artificial, it has the effect of an uncanny replication of natural lighting. The result is an overbearing, sterile, white light that bears down on the space with none of the freshness or weightlessness attributed to natural lighting. It is a facsimile of a real space with a tinge of unnerving weirdness, another reminder of the building's autonomy over its inhabitants, 'ensuring nothing remains outside of the Bureau's gaze and highlighting the sheer intensity of the office space' (Game Developer, 2019).

Figure 21: Central Research Entrance (Fandom, 2019)

Figure 20: Parakinesiology Department (Fandom, n.d)

4: Game/Play

4.1 Movement

As referenced earlier, environmental design is 'all about anticipating actions and narratives within games' with every environment built for unique player interaction (Götz in Götz & Gerber, 2019 p. 112). A similar thought process can be found in real-world architecture. However, in virtual worlds, the ways that the player character can move and interact within a space can depart significantly from the traditional bounds. After being made Director, Jesse gains telekinetic powers that allow her to levitate; this new axis of movement unlocks countless new opportunities to move within the space. The grand scale and verticality found in the Oldest House would be obstructive to the average person. However, it is that same scale that facilitates the freedom of movement, floating from one floor to another and thriving in the spaces between. It is Jesse's connection with the paranatural and her mastery over it that allows her to detach from the rules of the space and move in new ways, signifying the freedom she finds living between the two worlds. In contrast, when Jesse moves through the tight hallways of the office space and maintenance corridors (Figure 22), she is anchored to the ground and much more open to attack. These arenas play more on the horror elements of the game with limited lighting, close-range enemies and the Kubrickian anticipation in the long hallway.

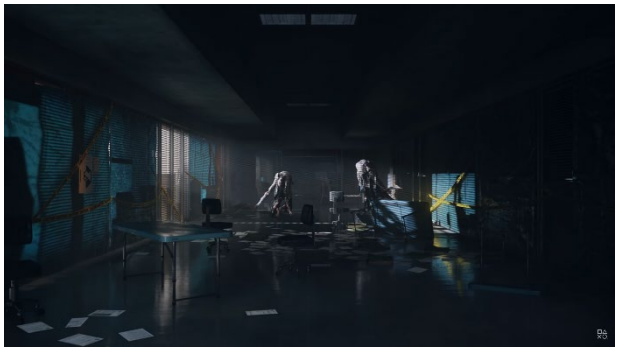


Figure 22: Office hallway (PS4, 2019)

4.2 Combat and destruction

The credibility and enjoyment of the combat system in a game is affected greatly by the spatial context within which it takes place; there is a significant difference between shooting at a blank target and at a 'living' enemy that reacts when hit. By letting players physically impact the game world through their actions, an additional level of connection is created; when these actions are also synergistic with the narrative themes, a great combat system is created. Jesse's telekinetic powers allow her to use the materiality of the area to her advantage, picking up objects in the environment or pulling chunks of concrete out of the walls to hurl at enemies in devastating fashion, literally using the building to fight back (Figure 23). The relatability of the material is used as a baseline to make real the strength of Jesse's unreal powers to us. Similarly, the certainty of the material and space also has an emotive and thematic response. As Macdonald states: 'Concrete is an uncomplicated material, and so the mundanity of the space is important, because 10 seconds later everything's going to be trashed, and there's going to be chaos…we play on that contrast' (Macdonald, in Wilson, 2019). To affect the environment in such a destructive way offers a cathartic release for the player. Tying into Jesse's emotional arc, it is freeing; her powers act as an expression of will and allow her to take out her anger on the Bureau that has been interfering in her life for so long. As Art Director Janne Pulkkinen puts it; 'Who doesn't want to trash a cubicle every now and then?' (Pulkkinen, in Eurogamer, 2019).

Figure 23: Example of environmental destruction

Conclusion

The aim of this research has been to understand the ways in which the architecture of a game environment can express and enhance narrative themes within video games, using various environments from the video game *Control* (2019)

and real-world architectural references as a case study. The analysis centred on three specific points of approach – to explore how the creation of the world design in the development stages acts as a foundation for the narrative structure, to draw a connection between the architectural principles present in the world and the narrative themes of the game, and to note how the world design assists the narrative themes that can be experienced through gameplay.

The first section introduced the setting and core themes of the game to understand the concept of the game and provide a basis for what the architectural narratives aim to convey. The art guide introduced the framework for the brutalist design principles that informed the world design of the Oldest House, with comparative analysis between the Board Room location and the Boston City Hall, along with explanations from the Lead Environmental Artist providing insights into the emotional experience and purpose behind the style in American federal and municipal buildings. The core findings are the ways that scale, mass and repetition were used as a testament to the solidity and power of office. Enquiry into the spatial design logic that goes into the mapping of game worlds found a connection between those principles and architectural planning theories, in addition defining how the process creates a physical form for the narrative to be moulded around.

Upon understanding the principles which defined the art direction of the spaces, comparative analysis of game areas and related real-world architecture developed by concrete architects such as Carlos Scarpa and Marcel Breuer showcased the connections between the game's themes of ritualistic behaviour, duality and contending with the unknown and the emotional messaging of the game space, with techniques used such as symmetry, one-point perspective, religious styling and lighting to create the effect.

Finally, the gameplay of *Control* was introduced and links between the world design and the narrative experience through gameplay were established. It was found that the destructive combat mechanics and fluid movement are bolstered by the reactive and believable environments that Remedy have created, with mundane and neat office spaces setting the stage for the cathartic releases of destructive emotion that players look for in action games as well as representing the revenge that Jesse wants against the FBC.

This topic can be further studied by applying a similar process to countless other video games to broaden the research and perhaps include specificity in the presentation of certain architectural styles for narrative effect or how game genre can inform the architectural presentation and therefore its involvement in the narrative.

References

Beanland, C. (2016) *Concrete concept: Brutalist buildings around the world.* Internet Archive. https://archive.org/details/concreteconceptb0000bean

Berkshire Fine Arts. (2009). *Front and north side view from City Hall Plaza* [Photograph]. https://www.berkshirefinearts.com/03-20-2009_boston-city-hall-brutalism-at-40-plus.htm

Bonner, M. (2019). Piercing all layers of the anthroposphere: On spatialization and architectural possibilism in *Hitman.* In A. Gerber, & U. Götz (Eds.). *Architectonics of game spaces. The spatial logic of the virtual and its meaning for the real* Transcript Verlag. https://doi.org/10.14361/9783839448021

Charbonnet, F. & Heiz, P. (2019). Towards an architecture of desire. In A. Gerber & U. Götz (Eds.), *Architectonics of game spaces. The spatial logic of the virtual and its meaning for the real* (p. 125). University of Massachusetts Press.

Control (PC version) [Video game]. (2019). Remedy Entertainment.

Control Wiki – Fandom (n.d). *Board Room* [Video Game]. https://control.fandom.com/wiki/Board_Room

Control Wiki – Fandom. (n.d). *Dead Letters* [Video Game]. https://control.fandom.com/wiki/Dead_Letters

Control Wiki – Fandom. (n.d). *Parakinesiology Department* [Video Game]. https://control.fandom.com/wiki/Research_Sector

Control Wiki – Fandom. (n.d). *Containment Sector* [Video Game]. https://control.fandom.com/wiki/Maintenance_Sector

Frampton, K., Cava, J., & Graham Foundation for Advanced Studies in the Fine Arts. (1995). *Studies in tectonic culture : The poetics of construction in nineteenth and twentieth century architecture.* MIT Press.

Game Developer. (2019). *The real buildings that inspired Control's Oldest House.* https://www.gamedeveloper.com/art/the-real-buildings-that-inspired-i-control-i-s-oldest-house

A. Gerber & U. Götz (Eds.), *Architectonics of game spaces. The spatial logic of the virtual and its meaning for the real* (p. 125). University of Massachusetts Press.

Getty Images (2024). *Interior of Notre Dame Cathedral* [Photograph] https://jasonrwoods.com/interiors/

Howarth, S. R. (1979). Marcel Breuer: On religious architecture. *Art Journal*, *38*(4), 257–60. https://www.jstor.org/stable/776375

Jenkins, H. (2002). Game design as a narrative architecture. In K. Salen, & E. Zimmerman (Eds.), *The game design reader: A rules of play anthology* (pp. 670–88). MIT Press.

Lin. G. (2011). *Olivetti Showroom by Carlos Scarpa* [Photograph]. Georgexlin https://www.georgexlin.com/olivetti/

Macodnald, S. (2019). *Control's core themes graphic* [Infographic] YouTube. https://www.youtube.com/watch?v=E06mA3oSV2Q&t=2641s

Macdonald, S. (2019). *Be Brutal Art Guide* [Video]. YouTube. https://www.youtube.com/watch?v=E06mA3oSV2Q&t=2641s

MacDonald, S. (2021, July 5). *Building the Oldest House in Control/Stuart Macdonald* (Remedy Entertainment) [Video]. DevGAMM. https://www.youtube.com/watch?v=E06mA3oSV2Q

McMullan, T. (2016). *From dark souls to Manifold Garden: How games tell stories through architecture.* Alphr. https://www.alphr.com/games/1002937/from-dark-souls-to-manifold-garden-how-games-tell-stories-through-architecture/

NYC Urbanism (2016) *AT&T Long Lines Building* [Photograph] https://www.nycurbanism.com/brutalnyc/att-long-lines-building

O'Rourke, J. (2018). *A Tribute to the building Bostonians love to hate.* Boston University. https://www.bu.edu/articles/2018/sirman-boston-city-hall/

PlayStation Europe. (2018). *Control | The Oldest House 4K trailer | PS4* [Video]. https://www.youtube.com/watch?v=yoeUMDWg74w

Reynolds, D. (2014). Letters and the unseen woman: Epistolary architecture in three recent video games. *Film Quarterly*, *68*(1), 48–60. https://doi.org/10.1525/fq.2014.68.1.48

The Intercept. (2016). TITANPOINTE: The NSA's Spy Hub in New York, Hidden in Plain Sight. https://theintercept.com/2016/11/16/the-nsas-spy-hub-in-new-york-hidden-in-plain-sight/

Thuroczy, M. (2016). *Saint Francis de Sales Church.* Architectuul. https://architectuul.com/architecture/saint-francis-de-sales-church

u/not_the_bees_again. (2019). *Control – Central Research Sector* [Photograph]. Reddit. https://www.reddit.com/r/GameScreens/comments/hamdw1/control_central_research_sector/?rdt=59685.

Williamson, L. (n.d). *Brion Cemetery* [Photograph]. Maharam. https://www.maharam.com/stories/nielson_carlo-scarpa-brion-cemetery

Wilson, E. (2019). *Remedy's Control is built on concrete foundations.* Eurogamer. https://www.eurogamer.net/remedys-control-is-built-on-concrete-foundations

Woods, J. R. (n.d). *Interior of Saint Francis de Sales Church* [Photograph]. https://jasonrwoods.com/interiors/