The Puzzle of Perspective: Modular Cameras and Exploring Second-Person Play in Game Design

GDEV60001 GAMES DEVELOPMENT PROJECT

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Glossary

POV – Point of View

FPS – First Person Shooter

Abstract

Contemporary game design has largely grown around first and third-person perspectives with little innovation surrounding alternative viewpoints. While unconventional perspectives, such as second-person, have sporadically emerged, the concept remains undefined and seldom explored within both academia and practical game design. Given the lack of definition, the second-person perspective is capable of being interpreted in a multitude of ways, but conventional perspectives remain the primarily chosen viewpoints due to their familiarity with contemporary player bases, alongside the ability to increasingly support immersion, embodiment and avatar agency. However, this study aims to focus on investigating the practicality behind the second-person perspective and whether it can function as a viable option for perspective within modern-day game design, alongside its capability of retaining similar levels of engagement and immersion when effectively implemented.

This study employs a practice-based approach through the development of a playable artefact featuring a working definition of the second-person perspective. The prototype was developed within the Unity engine and paired with a puzzle-oriented context. Qualitative data was collected through participant playtesting sessions alongside a survey focused on asking participants about the usability, clarity and player experience.

The survey findings highlighted that the second-person perspective is capable of being brought to fruition in such a way that is both immersive and intuitive without imposing heightened cognitive load. When supported by familiar input systems, clear transitions between view states and paired with a coherent context, participants responded positively regarding ease of understanding of the perspective, familiar and simple control scheme and effective interactions. Lastly, participants also expressed interest in seeing the perspective and mechanics expanded into a fully realised version.

This study contributes to game design research by challenging academic assumptions surrounding embodiment and immersion, and the argument that for both to be achieved, a tightly coupled camera tied to the avatar is a requirement, not an option. This study's findings aid in the potential of second-person design as a feasible tool within game development and supports future exploration into emergent perspectives across a range of contexts and genres alike.

1. Introduction

Cameras and Perspectives in games aren't always just a visual preference; they can structure how much space a player can perceive, solve tasks and how much agency they feel in the character they control. Ideally, developers want to make the user actually forget that they are participating through a medium (Federoff, M. 2002). However, immersion doesn't always mean seamless alignment of perspective at the character's head level. Whilst 'first' and 'third' person camera conventions are commercially dominant, perspectives that decouple the players point of view from the character entirely may challenge this assumption yet remain largely unexplored. This dissertation identifies this central gap in research.

Although modern design has forgotten some legacy practices and instead opted for seamless, immersive control schemes, this shift has left little space for experimental approaches such as these second-person style mechanics, which purposely separate perception from control. Mercer (2025) mentions how these practices are often underutilised and underappreciated, highlighting how niche yet overlooked these approaches remain in contemporary game design, and why they are still a relevant topic of discussion today. This perspective separation not only affects how core mechanics function, but also how players "view the game world in both a literal and figurative sense." (Stefani, 2020). The tension created between body and viewpoint is central to this study, where the player's body and perspective are intentionally detached and misaligned.

In contemporary design, there is an increasing precedent for polish, a cinematic style spectacle, and consistent, conventional control schemes. This largely stems from a familiarised market we see today, and what some studios deem is just best practice when developing projects. This prototype is framed to be more of a proof of concept rather than a commercial, marketable product, with the intention of testing if unusual alignments and viewpoints of the body can allow for distinctive and memorable player experiences.

This dissertation centres on a prototype exploring a second-person, dichotomised perspective mechanic. Whilst this label is still something of a contentious subject in video games, for the purpose of this study, it is defined as the control of a body while perceiving through a separate, diegetically placeable viewpoint entity. Building on that definition, this prototype investigates whether alternating between an embodied first-person view and a detached, external viewpoint can create richer puzzle affordances or distinctive feelings of agency.

To truly get the most out of this prototype, this study adopts an iterative prototyping approach alongside playtesting sessions to evaluate clarity and perceived control, while attempting to keep the controls intuitive and the flow engaging. This will go hand in hand with findings discussed against literature on existing camera systems.

1.1 Aims and Objectives of this Project:

This study aims to investigate the design and player experience of a modular second-person viewpoint system, exploring how it differs from conventional and familiar perspectives in the modern era of gaming.

• To review existing literature on camera systems in games and establish contrasts between first and third person perspectives with experimental alternatives.

• To take a deeper look into existing niche case studies that may use non-standard perspectives

• To effectively design and implement a modular second-person style camera prototype that offers both intuitive playability and an unfamiliar experience.

• To evaluate the prototype through surveys and playtesting, focusing on intuitiveness, accessibility, and clarity.

By achieving these objectives, this study contributes to the underexplored field of alternative camera perspectives by offering insights into player engagement, puzzle design, and immersion that detaches the player from conventional viewpoints whilst providing a unique and grounded contribution to game design theory and practice.

1.2 Dissertation Structure:

The structure of this dissertation reflects both the practical and theoretical nature of the project and is organised into eight chapters as follows: *Chapter 1* introduces the study, outlining the research context, scope and aims. *Chapter 2* will review relevant literature on camera perspectives and design practices in existing games, placing the study within academic and industry discussions in modern gaming. *Chapter 3* highlights the gap in research on the subject of second-person perspectives. *Chapter 4* focuses on the methodology, implementation of the prototype, including diagrams, figures, and how the camera and control system were realised, alongside testing of the artefact. *Chapter 5* evaluates the prototype, examining player responses through playtesting and survey feedback. *Chapter 6* presents the critical discussion of the findings, lessons learned and broader realisations. *Chapter 7* concludes the study by reflecting on the outcomes of the prototype, limitations, and alterations of scope. Finally, *Chapter 8* discusses recommendations for future research and study.

2. Literature Review

2.1 Perspectives in Narration:

The term perspective originates from "*perspicere"* (Latin), meaning to look through. In general terms, a perspective is the showcase of objects as they appear to an observer from a particular vantage point (Sanders, J. 1996). Within the field of narration, three primary categories of person can be identified: First-Person, Second-Person and Third-Person. Ezie *et al.* (2019) provide definitions of the grammatical categories of person in the following terms:

- First-Person Perspective: The first-person refers to the speaker of the statement using pronouns such as "I" when referring to themselves and the plural "we" when referring to multiple.
- Second-Person Perspective: The second-person refers to the person or group being spoken to. Both singular and plural forms are referred to as "You" in this case.
- Third-Person Perspective: The third-person refers to the person or thing being discussed, disconnecting the narrator from the discussion as if they were not part of the story. For example, "She", "He" and "They" pronouns.

The second-person perspective within narration has a mostly universally agreed upon definition and is a much easier perspective to approach within written application. The same cannot quite be said regarding video games and their multi-dimensional spaces.

2.2 Perspectives in Games:

Whilst games draw on terminology similar to that which is used in other narrative media, Laramée (as cited in Denisova and Cairns, 2015) identifies that the more dominant perspectives in games are isometric cameras, first-person and third-person viewpoints. Denisova and Cairns (2015) further describe how these perspectives shape player experience.

- First-Person Perspective: "The first-person POV allows the player to perceive the game through the eyes of the character, observing the world around them up close" This perspective is widely considered to provide the most "immersive" experience for the player.
- Third-Person Perspective: The third-person POV "allows the player to observe the main character in action, without giving the player the sense that they actually are the character". Although not always the case, this perspective is often used in story-based games to convey the character's narrative while the player is controlling their actions and movement.

While first-person and third-person perspectives dominate the field of 3D game design, these categories do not translate as directly to 2D games. The reason for this is due to camera perspective being constrained by a flat plane of visual representation, meaning designers typically choose between top-down, side-view, or isometric style viewpoints (Adams, 2014). This limitation is caused as in a true first-person perspective, seeing through

the eyes of the avatar is visually impossible for a 2D environment when the avatar sits on this flat plane. As a result, discussions of immersion, agency and viewpoints become more complex within 3D worlds, which is where this dissertation situates itself.

2.3 The Second-Person Perspective in Games:

Modern games tend to be developed with a clear sense of the perspective they will utilise within the early stages of development. However, unlike in other media such as narrative, film and music, where second-person techniques have been thoroughly explored, the study and use of second-person perspectives within games remains comparatively unexplored.

While first and third-person perspectives are now well established within games and industry practice, the notion of a second-person perspective remains inconsistent. This unstable topic within game studies contributes directly to ongoing uncertainty about how the concept should be defined. For example, Robinson (2019), in a video essay discussing unconventional viewpoints in games, describes second-person perspectives as a mind-bending exercise in trying to explain something that is borderline unexplainable, highlighting the difficulty that comes with applying grammatical definitions of the person to interactive, three-dimensional worlds. This uncertainty is not a peculiar circumstance; definitions widely vary across academic discussions and design commentary.
As a result of these conflicting opinions, there is currently no single, widely accepted definition of second-person perspectives within games.

Because of this lack of consensus, this dissertation must adopt a working interpretation to support further discussion. The following definition outlines the perspective as it will be understood throughout this study:

- Second-person perspective: For the purpose of this dissertation, second-person in games refers to a viewpoint in which the camera is positioned within an external entity rather than the player-controlled avatar. This entity may be another character within the game world or a separate inanimate object. From this unconventional vantage point, the camera looks back towards the player's avatar, framing their actions through the eyes or perspective of something other than themselves. This consequently shapes how the player navigates and interacts with the world, as both are mediated through this external point of view.

This ambiguity, however, has not prevented developers from exploring the concept, nor has it discouraged players from engaging with it. Mercer (2025), for instance, notes that second-person design can produce some "incredibly singular experiences". Similarly, contemporary reviewers have likewise responded positively to titles that experiment with the unusual viewpoint; with one review of *Out of Sight* praising how the title "impresses mostly in its ingenious use of perspective" (Lyons, 2025). Together, these responses demonstrate that despite the lack of a stable definition, second-person perspectives are an untapped reservoir within game design capable of having a lasting impact on the player in ways that traditional viewpoints cannot.

Albeit a small number, the second-person perspective has emerged in a handful of games. An example of this perspective being utilised is *Screencheat* (Samurai Punk, 2014). This game incentivises the idea of peeking at opponents' screens as the players are all invisible to each other, meaning they must use this method to find out each other's location in the map to win (Figure 1).

Figure 1 Screenshot of *Screencheat*

A second, more recent example is *Out of Sight* (The Gang, 2025), a horror game in which you control a blind little girl who wakes up one day to find out she can see through the eyes of her teddy. You must then guide her to escape from her captivity. (Figure 2).

Figure 2 Screenshot of *Out of Sight*

These titles are briefly mentioned here only to highlight how second-person viewpoints already appear, though sparsely, within contemporary game design. A more detailed examination of their methods, mechanics and relevance to this project is provided in the following section.

2.4 Case Studies:

2.4.1 Screencheat

Although briefly introduced as an example of perspective separation, *Screencheat* warrants a closer examination due to its deliberate disruption of conventional first-person shooter design. Developed by Samurai Punk (2014), the game presents itself as a fun, colourful arena shooter, yet renders each player's position completely invisible. Instead, players are required to locate their opponents' positions by observing the viewpoints of the opponents themselves. A commonly frowned upon tactic of cheating in locally-hosted games becomes the core means of play.

This flip of expected first-person logic makes *Screencheat* a valuable point of comparison for this dissertation, as it inverts conventions on player perception through an external vantage point rather than through the player's own character. While the game doesn't employ a forced second-person camera, its heavy reliance on looking at another player's viewpoint brings forward a meaningful example of perspective displacement within an interactive context.

Screencheat cleverly uses exaggerated, colour-coded sections and distinctive landmarks to support navigation and serve as anchors for players to be able to easier identify each other's locations and infer spatial relationships without seeing opponents directly. These mitigation strategies allow for a form of spatial deduction that replaces the usual reliance on personal viewpoints.

Most importantly, while *Screencheat* doesn't enforce a formal second-person camera, the core loop and mechanics effectively require the players to adopt one, as winning is impossible without it. Critics highlight that this inversion is imperative to the game's appeal (Reparaz, 2014), in what used to be a cheat, now becomes a necessary survival tactic.

By separating the conventional alignment of camera, viewpoint and agency, *Screencheat* provides a second-person perspective in which players' awareness is mediated entirely through their opponents' views. This challenges traditional FPS assumptions that the camera represents player ownership, a principle frequently discussed in game studies that describes the first-person view to be understood as the player's embodied position within the world (Calleja, 2011).

2.4.2 Out of Sight

While *Screencheat* demonstrates how perspective displacement can be used to overturn first-person conventions, *Out of Sight* applies similar principles within a narrative-driven horror context. Developed by The Gang (2025), the game alternates between a traditional first-person view alongside a stationary, detached, externally located camera that watches over the child protagonist, Sophie. This dual-perspective design allows for moments of extremely heightened tension alongside environmental puzzle solving. This setup aligns more directly with the working definition of second-person perspective established earlier. At key points in the game, the player observes Sophie through the eyes of an external entity (Teddy) and must make decisions based on inferred and incomplete knowledge of her full surroundings. In doing so, *Out of Sight* provides an important counter to *Screencheat*, displaying how perspective displacement can be mobilised for not just party-game style design, but for emotional tension, vulnerability, and atmospheric manipulation.

Within horror, this second-person detachment technique becomes a purposeful tool for creating moments of heightened tension, deep-seated nerves and uncertainty (Lyons, 2022). By becoming an onlooker while simultaneously controlling the player from an external point of view, the game fabricates a subtle feeling of disconnect between control and embodiment. This detachment creates a strong feeling of vulnerability. The player acts with agency yet lacks the spatial awareness that is normally granted by a first-person viewpoint. Chen (2025) mentions horror heavily relies on making players feel vulnerable, which results in a pervasive sense of unease, alongside perspective techniques that increase a sense of detachment, becoming especially effective in producing this effect.

This second-person design within a horror context puts the player in an unusual in-between, making them feel neither a fully invulnerable onlooker nor an empowered player with heightened agency (in first-person) within these tense moments. The player can see threats approaching from the safety of this external vantage point, but Sophie, the protagonist, remains vulnerable and must be hidden from approaching danger. This hidden-in-plain-sight style design flips the traditional first-person horror dynamic, as conventionally, the viewport itself is the thing being threatened. On the other hand, in *Out of* Sight, the player can do nothing but be a spectator, seeing through the eyes of Teddy as danger encroaches on a character they can control but cannot embody, creating a unique sense of exposure and helplessness.

In conclusion, *Out of Sight* is a great demonstration of how a second-person detachment design can be integrated as a tool that can manipulate tension, vulnerability and emotional engagement. Its use of alternating perspectives displays how shifting the player's distance from the character themselves fundamentally alters how threat and agency alike are experienced. This contrasts with the prototype developed for this dissertation, where detachment is not used to induce fear, but instead provides increased spatial awareness and puzzle-solving ability. These differences also highlight the versatility of second-person design, underlining how perspective can alternately create a feeling of helplessness or provide a strategic advantage depending on its implementation.

Whilst the above case studies display how second-person perspectives can be conceived in different ways; further explanation is required as to why these shifts in perspective affect player experience. To further understand how this detachment, shift in agency, and change in perception interact with this design, it's necessary to position the second-person perspective within broader discussions of embodiment, agency, and spatial perception within games.

2.5 Theoretical Frameworks:

2.5.1 Embodiment and the Player-Avatar Relationship

Within game studies, player experience is often discussed alongside player embodiment and how to make players feel as if they actually embody the character they are controlling. Murray (1997) describes embodiment as the sensation of experiencing the world as a lived reality, a concept that pairs closely with how games position the player through the use of the camera. The camera functions as the primary 'eyes' through which players perceive their position, orientation and situation within the game environment.
In traditional perspectives, such as first-person and third-person, the camera either occupies the avatar's viewpoint in first-person or sits closely aligned to the avatar in third-person to reinforce this sense that the player occupies a consistent, embodied position within the world. This constant alignment allows players to interpret space, movement, and interactions as coherent extensions of their own actions, forming a stable sense of embodied control. Taylor *et al.* (2023) argue that such stability, when implemented effectively, can play a key role in maintaining the player's embodied relationship to the game space, in which perspective and agency can operate in near-effortless unison.

Embodiment is a strong reason as to why those two conventional viewports are the most commonly used in games today. First-person perspectives are widely regarded as producing the most immersive sense of embodiment, as the camera directly displays the avatar's point of view from their head position. This heightened, and more familiar sense of embodiment comes from the natural and unobstructed view of surroundings that people are used to in their everyday lives (Naftis et al., 2021). However, despite first-person being the more familiar perspective with regards to how people visualise the world around them in their everyday lives, Farrar et al. (2006) found through their testing and research that third-person perspectives actually had a higher impact on players' focus and involvement during gameplay tests. Third-Person, while introducing greater spatial awareness, still maintains a strong sense of embodiment by means of a camera that sits constantly tethered to the controlled player-character. In both cases, however, the camera infers ownership (Calleja, 2011) and positions the avatar as the centre of which action will take place within the game world, reinforcing the player's sense of embodied presence.

However, this feeling of embodiment created through the alignment of camera and avatar, alongside the agency that it manufactures, isn't a fixed requirement for an interactive experience. Calleja (2011) also argues that an effective sense of embodiment is not only achieved through the framing of perspective, but through a blend of both perceptual and spatial affordance in which the camera serves as the primary medium. However, when the camera is detached from the player's avatar, this sense of embodiment gets disrupted.

Rather than directly hosting the avatar, the player instead experiences the environment from an observational position, now displaying the avatar relative to the viewpoint, rather than within it. This disruption acts as a base in which these alternate perspectives can be brought to light.

2.5.2 Perspective Disruption and Mediated Agency

Disrupting immersion is not a means to break and disturb gameplay on purpose. Instead, it can be a deliberate, albeit uncommon, design strategy. While it deconstructs typical awareness and agency, it forces players to consistently adjust their position within the game world around them. In this detached, distant angle, the player no longer resides within the character; instead, they are shelved in a position relative to them, guided by an external viewing angle and less precise steering inputs. Changes like this effect both how information is received alongside how agency is reinterpreted and therefore alter the players decision making.
Within this working definition, viewing the avatar as a separate entity becomes an intentional method of driving gameplay. It untangles looking, moving, and doing into broken-down, separated layers (Farrow & Iacovides, 2013).

As discussed, once the perspective shifts, agency and control do not vanish, but are instead reconstructed through mediation (Bayliss, 2007). Inputs are still coming from the player to direct movement and interaction, yet perception and command drift apart, scattered across the environment and no longer originating from a singular, persistent entity within the game world, such as the character's eyes. This decoupled design challenges past beliefs that effective agency can only be achieved through placing the player directly within the body of the avatar. However, control through mediation can still introduce some friction between intent and response. Perspective and awareness of the environment must stretch beyond sight, and piecing together the environment must be done through inference, memory, logic and even some guesswork. Vision cannot be freely moved anymore, and therefore, the spatial understanding that comes with it is renegotiated at key points. The player is placed as an onlooker of the surroundings, rather than a consistently embodied participant within it.

Second-person viewpoints are not flaws, but deliberate shifts in how players engage. When bodily presence is unsettled just enough, without removing player influence, it allows for new forms of interaction. Suddenly, seeing from a different, disconnected view feels less like losing control and more like stepping into a purposefully reconstructed role. Then, perspectives such as second-person can become more of a viable design choice, rather than a perspective and mode of control that is intentionally veered away from. This section is used to demonstrate that such alignment and meaningful interaction can exist without being mutually exclusive.

2.5.3 Second-person Perspective as a Design Strategy

Furthering the idea that embodiment and agency can be purposefully deconstructed without forfeiting player agency, this subsection focuses on why the second-person perspective slots in as a neglected design choice rather than a novelty or shallow regression from established camera conventions. Through this lens, utilising the second-person view becomes a perception-shifting method that enables designers to mould the player experience around not just the world, but how the player can perceive each particular part of it (Murray, 1997; Juul, 2010), especially from fixed angles and clever positioning techniques. Fixed camera placements, tightly constrained fields of view, and specific spatial framing can all deliberately blend together to reshape control, view and engagement (Havranek et al., 2012; Naftis et al., 2021), without overtly announcing it.

Despite being intentional and a refined systemic viewpoint, second-person remains a seldom adopted choice due to the increased limitations and restricted use cases. For a successful implementation, it requires an unconventional design premise alongside a deliberate artistic direction that establishes distance as a purposeful constraint rather than a weakness. If implemented effectively, distance becomes a powerful tool allowing designers to have control over visibility, knowledge of the space, and points in which mediation is restricted. This control alters the conventional restriction in which the camera being tightly coupled to the player avatar is an essential requirement for progression (Naftis et al., 2021). Inversely, progression is rebuilt around the player's ability to think about how they must instead purposefully detach themselves from the avatar and make use of environmental inferences, among other spatial awareness techniques, to navigate through mediation and gain a wider perspective, after which progression can be made.

When the camera is disconnected from the avatar and no longer resides within it, rather than functioning simply as a different point of view and fading into a trivial position, the camera becomes an active system re-shaping movement and spatial understanding, but often to the benefit of the player. This shift creates an intentional co-dependant relationship between the avatar and camera, creating limitations that the player must negotiate with in order to succeed.

Within this configuration, designers become able to construct scenarios in which key interactions and spatial details remain hidden until the camera occupies a specific, displaced, purposeful viewpoint; a design capability that will be touched further upon in the upcoming 'Second-Person in Puzzle' section. Through this design, control can be distributed to the player exactly when it is deemed the right moment. At that point, the player begins to act less through the avatar as simply a means of mediated navigation, but instead acting upon the avatar, as a means of progression with intentionality, based on what is perceivable at key positions in the world.

2.5.4 The reluctance to experiment with Second-Person perspectives

Despite its potential, the question begs as to why it still remains a rarely glanced at and rarely implemented design choice. Although the underutilisation seems like an opportunity being missed, there are several factors within the industry that assist in pinpointing the reluctance.

Firstly, familiarity matters, and what feels already known helps to draw players in. Juul (2010) identifies that familiarity is one of the key factors in influencing player engagement, mentioning that complex and unfamiliar interactions can act against the game and function as a barrier to entry, particularly for casual players, the older generation, and players with accessibility requirements. Whilst players involved in their research expressed a preference for a slightly more challenging experience over overly simplified ones, Juul observed that frustration increases when difficulty is partnered alongside unfamiliar interaction mappings. That burden can turn newcomers away quickly, especially if learning curves demand a patience that they do not feel is worth their investment.

Control scheme standardisation has become a more modern practice to allow developers to port their games to a wider variety of platforms with ease. Bycer (2014) argues that because of this, a modern control scheme contract has been set. However, deliberate deviations from established control conventions, especially when lacking justification and logic, can produce dissonance and reduce the players' willingness to persist. By separating perception and action, the artefact and working definition created alongside this dissertation puts that agreement to the test, even when the inputs remain simple and largely unchanged.

Design risks such as the ones mentioned are only amplified within large-scale commercial development. AAA studios, often operating with tight financial and production constraints, must prioritise predictable mechanics, themes, loops and design models. As Kelly (2014) observes, commercial game development culture tends to opt for risk aversion. When a concept lacks past examples, clear guidelines and or blueprints to work from, it seldom gains space in the pipeline and therefore lacks the chance to be explored. However, smaller studios such as *The Gang* behind *Out of Sight (2025)* display what can be achieved when creative risks aren’t pinned down by large-scale commercial hindrances. This contrast displays how neglect of the second-person perspective is less about the limitations of its design and more about what is considered safe in contemporary game development.

2.5.5 Vulnerability and Contextual Player Experience

The contexts in which the second-person perspective can be utilised are essential to understand how it shapes and affects the player experience. Similar to other perspectives, the camera and viewport alone do not define what a player feels (Calleja, 2011; Denisova and Cairns, 2015). Emotion, driven by design choices and context, still holds most of the sway in which reactions differ. However, the distinct, detached camera that second-person brings can possess a unique capability to intensify these effects.
The separation created by this perspective and the amplified emotional and cognitive responses that can occur highlight the adaptability of perspective as a tool for design. Identical setups could lead to entirely distinct outcomes, depending only on the surrounding structure and context that the player finds themselves surrounded by.

2.5.6 Horror as a Context

Horror games often utilise perspective and spatial knowledge as a way of heightening player anxiety and tension. Studies have analysed that horror games such as *Little Nightmares* (Tarsier Studios, 2017) have shown that their use of visual design alongside a distant sitting camera, has the ability to mould player emotions and cause discomfort by a means of manipulating what players can see via this offset camera, which forces player's to witness what horrors they are up against (Zhang, 2022). This heavily suggests that camera framing and positioning can amplify feelings of vulnerability and unease within horror contexts. Additionally, research analysing perspective and agency in video games has indicated that simple alterations to the viewpoint directly influence players' sense of presence and engagement within the world, furthering the claim that perspective can be a direct effect of a player's emotional experience (Havranek, et al. 2012).

Returning to *Out of Sight*, the game takes advantage of how a detached second-person perspective can be mobilised within a horror context to increase vulnerability. Because vision and movement do not align in a way the player may be familiar with. The player feels removed, being withheld from true embodiment, aware yet unable to act fully. Seeing threats approach without physical, embodied presence invokes persistent helplessness that sticks with players throughout. Distance here shapes feeling and emotion. Whilst the camera may initially impress, it quickly turns unsettling.

2.5.7 Puzzlers as a Context

In contrast to the horror genre that employs perspective techniques to invoke vulnerability and pressure, puzzle games often alter perspective to instead engage players through testing cognition. Spence's, I et al. (2010) study reveals that video game design using spatial cognition techniques improved player's spatial reasoning, especially in situations where perspective is relocated or more complex navigation was needed.
Other experimental puzzle games, such as *Perspective* (DigiPen Tech, 2012), are a great demonstration of how puzzle games can utilise camera angles and positioning to encourage players to use strategic thinking and the 3D space around them to their advantage, rather than there being one linear solution to solving a puzzle.

The perspective shift in this dissertations prototype is, however, employed for the purpose of puzzle clarity and spatial reasoning. Rather than intending to produce a sense of vulnerability or helplessness, the detached viewport here allows players to observe from key points in the world and navigate the environment with a greater awareness of what their interactions actually have an effect on within the environment. This repositioning intends to support player planning, create a cognitive advantage and provide a wider view on the world so to increase the player's spatial understanding, providing clarity over fear.

Together, these contexts demonstrate that second-person as a perspective is not bound or restricted to one kind of feeling or emotional limit. Instead, it acts as an adaptable tool and design choice where its effects are a culmination of its surrounding mechanics, narrative contexts and storytelling conventions. While existing literature, as previously discussed, explores more prominent themes such as embodiment, agency and mediated actions, few studies discuss the second-person perspective as a deliberate, opportunistic design choice

within video games. The following section identifies this gap further, taking a deeper look into the underrepresentation of second-person as a design choice within contemporary game development and academic discourse.

3. Identifying the Research Gap:

Whilst many studies within game design examine agency, embodiment and camera perspectives, the majority of this work tends to remain focused on the conventional first-person and third-person points of view. Most often, these modes of perspective are seen as the only option for pulling players in for maximum immersion and anchoring engagement securely (Calleja, 2011). Whilst it is true that disruptions to the connection between perspective and control have been acknowledged, they are usually followed by a framing in which they receive close scrutiny, rather than being investigated as a design with potential within non-standard perspectives.

Despite more recent appearances, the second-person POV rarely stands on its own two feet in game research. Zhou (2022) notes how digital games in the modern day typically apply first-person and third-person perspectives, while second-person is rarely mentioned or used. The main reason for this is that there is a lack of a widely accepted definition. Because of this, it tends to slip through the cracks as it is open for interpretation, and without clear boundaries, analysis becomes difficult to zoom in on second-person alone, and tends to become more of a generalised discussion on unusual camera methods. When spoken about explicitly, however, it is more commonly labelled as disruptive or incompatible against already established design conventions.

Scholar-based analysis tends to have an overwhelming focus on first-person, third-person, and fixed camera positions, such as 2D follow cameras (Naftis et al., 2021; Calleja, 2007; Vincent, 2020). Though these frameworks provide valuable exploration into understanding embodiment and tightly coupled perspectives, the second-person is seldom mentioned as a named or distinct category. This absence reflects a trend within contemporary game studies: perspectives that are not considered optimal alignment between perception and control are ostracised or moulded into one of the conventional categories rather than being individually examined.

In response to the gaps mentioned, this dissertation turns its attention towards the second-person POV as a deliberate structural choice, opposed to a novelty or deviation from established camera conventions. By placing the perspective within varied scenarios such as horror and puzzle-based design, this research unpacks how the player experience is not shaped alone by perspective, but by how it interacts with wider creative aspects.
This investigation is backed by a practice-based prototype, built from the working definition outlined in earlier sections. This employs the second-person perspective to enhance spatial understanding and spatial awareness within a puzzle-centric context. Through this combination of theoretical and practical elements, this thesis aims to expand the horizons on existing discussions and contribute new knowledge surrounding perspectives beyond being labelled as an embodiment disruptor and position second-person as a valid and flexible perspective within contemporary design.

4. Research Methodologies

This chapter investigates the research methodologies used to examine the design implications and participant experiences with the developed prototype made within the Unity Engine, utilising a second-person perspective. The study employs a practice-based approach using qualitative feedback gathered through playtesting. By combining a playable artefact, feedback results and aligning both alongside existing literature, this methodology aims to conclude the second-person perspective as a viable design strategy.

4.1 Artefact Creation:

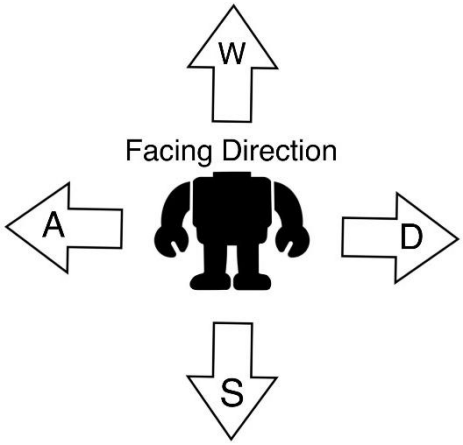
During the ideation phase, a logical reason as to why the avatar was able to detach its view and look back at itself was required. Though not requiring a deep narrative, a robot that had somehow had its head disconnected from its body was decided upon, which led to the more light-hearted context of the prototype, paired with the aptly given title, *HardWhere?*

It was then decided that Unity was going to be the engine in which to develop this prototype. Through research and a history with the engine, it was realised that the Cinemachine Package, a tool which focuses on enhanced camera modularity, was best suited for creating such a perspective that requires heavy camera functionality, and a more seamless transition between displacement and familiarity.

4.2 Control Scheme:

Early in the development process, experience alongside analysis of existing second-person titles (e.g. *Out of Sight)* revealed that the movement modes switch based on which perspective the player is actively inhabiting.
When operating in first-person, the player controls their movement direction simply via mouse input. Whichever direction the player is facing, W is always forward, S is back, A is strafe left, and D is strafe right (as can be seen in Figure 3). It made sense to retain this understanding of first-person within this artefact; also, this holds onto established control contracts, reducing cognitive overhead during perspective transitions (Bycer 2014).

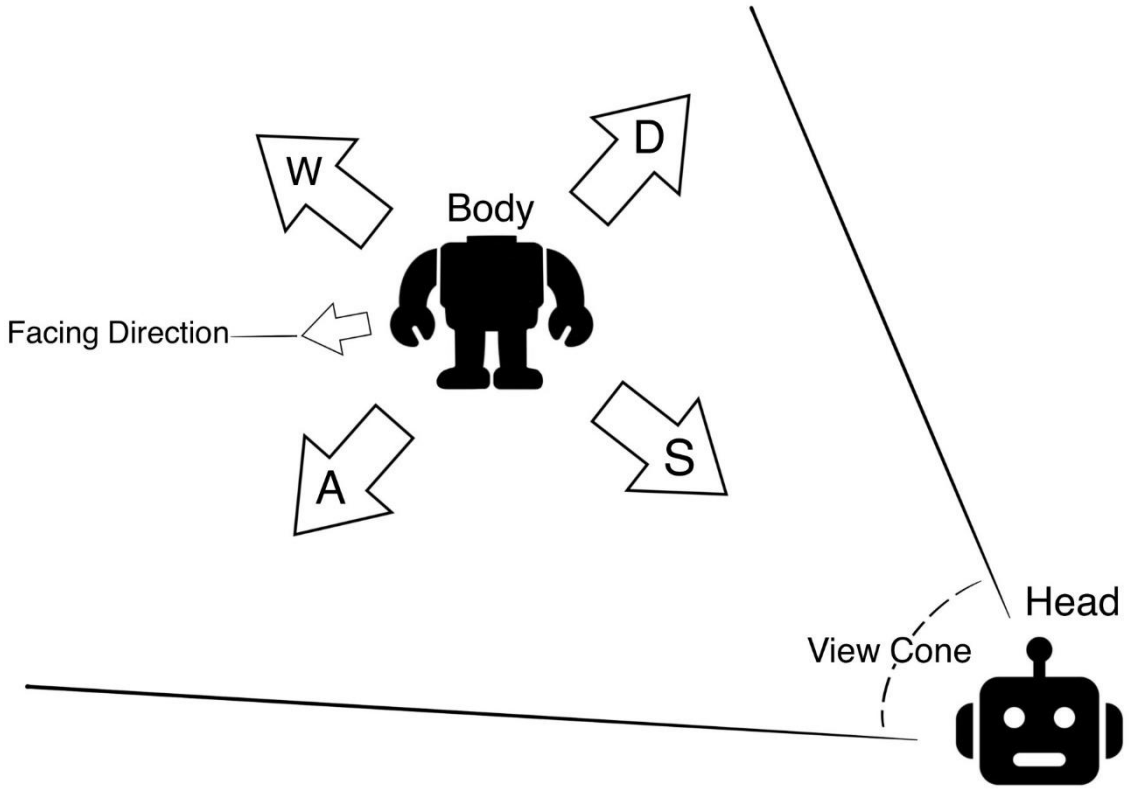
Figure 3:



In contrast, second-person was going to require a departure from the conventional input logic. Participants would have to place their head down at key points, navigate their body through mediation to the target position, then come and retrieve the head from its placed position. Making use of *Out of Sight*'s very intuitive and simple control scheme. This design studies the control scheme employed in *Out of Sight*, in which a polar-coordinate system is utilised (The Gang 2025).

The polar-coordinate system effectively plots a point or origin in the world, and the direction or Polar Axis is based on the forward-facing direction of that origin (Royster, 2022). In this instance, W is always away from the head, S is back towards it, and A and D are the respective left and right strafing movements (Figure 4), regardless of the facing direction. This is a hard-set directional movement system intended for simplicity when driving the avatar from this displaced perspective. This was the movement mode that was implemented and selected whenever the participants entered the Second-Person state, reinforcing the conceptual separation between embodied and displaced states.

Figure 4:



A flow-chart displaying how the movement mode aligns with the active perspective mode can be found within the appendices as a visual aid for how this operates logically when the player state is changed.

4.3 Testing the Artefact:

The artefact presented alongside this study will be evaluated based on a participant survey that asks users to answer questions relating to the second-person perspective and switching between POV's. These questions are displayed as follows:

1. Did you find the movement change when switching between perspectives to be disorienting or confusing? And if you wish, explain why?
2. Did you find the Second-Person control scheme easy to adapt to? And if you wish, explain why?
3. Do you think the Puzzle Game Genre works well with this perspective? And if you wish, explain why?
4. Do you think with extra polish, you would play this as a full-fledged game? And if you wish, explain why?
5. Please rate your experience with the perspective switching mechanic (1-10).

The artefact will not receive tweaks or rehauls during testing to ensure each user is giving feedback on the same experience.

4.4 Types of Conducted Research:

This study utilises both a primary and secondary research approach to provide a more comprehensive discussion and evaluation of the second-person perspective.

4.4.1 Primary Research

The primary research that will be conducted for this project's argument is that of the previously mentioned survey, which will be used to gather feedback from play testers to determine the result of this project's hypothesis regarding second-person perspectives. The survey used stored feedback based on how the player feels about the interchanging perspective, alongside the control scheme. All of which transfers to knowledge about how aspects of the artefact can be improved post-testing.

4.4.2 Secondary Research

The secondary research within this project consists of reviewing past papers and existing literature within academic discourse on perspectives within games, alongside contemporary game design practices. This foundational research is what allowed for a more grounded ideation of this concept, which led to assisting the development of the artefact itself.

4.5 The Practice-Based Data Approach:

The result of the second-person perspective not having a widely accepted definition within games means this study relies on a practice-based approach collecting qualitative data over quantitative data. The data is captured through responses submitted from the survey that is filled out after the testing has been completed. As seen by the survey questions that participants were asked, this feedback can assist in understanding whether the design is working as intended, or, if improvements need to be made. Unfortunately, these findings and results cannot be directly compared due to the lack of research on this topic, but they can be situated next to related work, such as Zhou (2022), who also uses a qualitative-based approach when examining the second-person perspective within Virtual Reality.

Qualitative data capture is a research method that asks more open-ended questions that aren't possible to convey through numbers and tallies. It then asks the user to elaborate into the whys and how's of their answer. Tenny, et al. (2022) mention that qualitative research is an optimal method for topics in which deeper discussions are generated from the subjectivity itself, arguing that topics such as the one presented in this dissertation cannot be simplified down into numbers and value-based data.

Testing was also localised for a majority of the participants. This not only meant that data was captured via the survey, but also meant that the topic was open for deeper discussion following the playtest, allowing for a more comprehensive discussion on the perspective and the possibilities that come with utilising it.

4.6 Justifying Research Method:

Given the lack of agreed definition for the second-person perspective and consequently a skewed interpretation as to how that might be interpreted by each individual, qualitative research is justified due to the subjectiveness surrounding the topic. Knowing that, qualitative research here allows the user to actively experience this POV, followed by a survey that is able to capture their fresh thoughts, opinions and critiques, while also allowing for further explanation on a topic that is more difficult to convey.

4.7 Research Caveats:

Extra considerations before delving into the results and findings may include, but are not limited to:

1. Tester biases: While some participants were not known prior to testing and may have unbiased opinions, other testers who were known personally, prior to testing, may have had knowledge of the project and or a preference in the project's design in defining the second-person perspective, which may unintentionally influence the data captured. To attempt in restricting biased evaluation, results will focus on considering the responses collectively in an attempt to represent unbiased findings.
2. Limited Participation: Low participation numbers means that whilst the data captured will be as accurate and unbiased as possible, future testing would benefit from a larger pool of play testers to provide increased, potentially more diverse feedback.

5. Evaluation and Results

This section displays the results of the surveys that were filled in by play testers, in which qualitative responses were collected about the usability, intuitiveness, effectiveness and potential future possibilities of the developed second-person perspective prototype. Each question and response will be touched upon below, but all precise answers to the survey can be found within the Appendices.

5.1 Survey Question 1:

The first question, intentionally placed at the top of the survey, asks participants if they found the movement mode changing between each perspective and movement mode to be confusing or disorienting. The majority of the responses highlighted that “No”, this switch in movement mode was not confusing, but instead made the “movement consistent” for the players to move around in the displaced camera mode.

One participant did, however, disagree and mention that there was a momentary “delay when transitioning” when it came to the inputs switching between modes. This response was, however, isolated, with no other participants reporting similar issues during online or localised testing.
A final minor issue was observed in which the rotation of the camera would slightly alter player movement direction. While this did not significantly disrupt play, in survey feedback, it is noted as a limitation of the current prototype implementation.

5.2 Survey Question 2:

Responses to the second question, asking if the participants found the second-person control scheme intuitive and easy to adapt to, were generally positive. The feedback stated things such as “the character would move as expected” and that “the controls are simple”, highlighting that the inputs worked well to move the avatar to the participant's desired position through the displaced perspective. Two participants, however, disagreed here, with one mentioning that “while the concept is easy to understand, it was hampered by the lack of visual depth at a distance” and continues to explain how some visual cues or effects would help with that in future developments.

5.3 Survey Question 3:

The next question in the survey was a unanimous agreement that the puzzle genre works well with this perspective. Participants expanded on this by highlighting how it adds “another element of depth to puzzles”, while another said that it “turns vision into a mechanic” and argued that it was a “fantastic” fit for a puzzler. One participant also noted that it would “make for some really fun puzzles” because of the fact that the “Second-Person perspective is not something you see often”.

5.4 Survey Question 4:

Next was the final main question for the participants that asked them whether they think, if polished up to a good standard and more mechanics were implemented, do they think it could make for a fun/interesting full game? The answer for this was almost a yes across the board. One participant mentioned that it would indeed need more mechanics as the ones

included in the artefact right now could become stale and “repetitive” if the levels continued with them alone. Another participant highlighted that it has “indie hit potential” and that some polish, such as visual cues, extra mechanics, and improved movement capabilities would heighten the game and its use of the second-person perspective to the next level. The one participant who said “No” was during an early localised test, so the reasoning was not captured by the survey. However, they explained in person that the reason for this is that whilst more mechanics and polish may change their mind, “in its current state, the perspective switching mechanic could become quite stale quite quickly”.

5.5 Survey Question 5:

Finally, while not intended as a quantitative measure of success with the second-person perspective, a rating style question was included to provide a general indication of participant reception towards the perspective-switching mechanic as a whole. Participants were prompted to rate the experience from 1 to 10. Across all respondents, the mechanic received an average rating of *8 / 10*, displaying a generally positive reception and highlighting the potential for furthering development.

5.6 Survey Conclusion:

Overall, the survey results indicate a broadly positive reception to the second-person perspective within a puzzle-centric prototype. Participants mostly reported minimal confusion when switching between perspective modes, found the control scheme generally intuitive after familiarising themselves with it, and unanimously identified the puzzle format as a fitting context for this perspective, whilst also mentioning that they would consider playing a more refined, finalised version of the artefact. The minor problems that were mentioned largely relate to implementation faults rather than issues regarding the perspective itself. Looking ahead, connections between the results and existing literature will come under review to deduce the use of second-person perspectives as a viable design strategy.

6. Critical Discussion

This study explored the viability of the second-person perspective as a contemporary game design strategy and fresh approach in design. Titled *“The Puzzle of Perspective”*, the research questioned how unconventional camera perspectives can alter player immersion, embodiment and agency. More specifically, the study asked whether a displaced POV could function as a viable choice within contemporary game design, and if connecting this perspective with a puzzle-based context could renegotiate spatial reasoning and cognitive engagement amongst players. Through the means of a custom-built prototype, real world testing of these ideas was conducted under controlled conditions to assess whether second-person perspectives offer designers a viable and proven alternative to conventional perspective paradigms.

Results gathered from the survey filled out by each participant highlighted that the detached perspective was generally well received. Participants tended to agree that the second-person perspective as a whole was simple to understand and intuitive to control, whilst still being a functional and enjoyable experience as a game.

6.1 Overview of Key Findings:

The evaluation of this study's results indicates that when effectively implemented, the second-person perspective can be a great choice of perspective that works closely with a multitude of contexts that challenge first-person and third-person games. By aiming the focus to creating an intuitive control scheme alongside a clear separation between states, participants cohesively agreed that the concept was easy to understand and simple to become familiar with, further highlighting the ability of implementing such a perspective does not necessarily impose excessive cognitive load on the player, and can be constructed for quick onboarding without extensive requirement of tutorialisation.

This outcome aligns with the findings of Zhou (2022), who, although examining second-person within a Virtual Reality context, similarly observed that the second-person perspective had a higher performance in making players feel the game was a meaningful and immersive experience when appropriately implemented. Although the technological context may differ, both studies suggest that the effectiveness of the displaced viewpoint is tied closer to the clarity of control rather than the novel aspects of the viewpoint itself.

As discussed in section 2.5.4, Bycer (2014), argues that modern games have made players subconsciously subscribe to a control scheme that they now expect within most modern games. The gathered results align with this theory in that the control scheme in first-person remains what is expected of most modern first-person games, and, whilst second-person is a seldom explored perspective, the implemented control scheme for this displaced POV was met with positive feedback about how it was easy to understand and comfortably adapted to after the initial switch. This suggests that unconventional perspectives can be successfully introduced without increased cognitive strain, provided that the input logic remains coherent and predictable.

Furthermore, as outlined in 4.4.1, the participants heavily agreed that switching movement modes based on which perspective was currently active was not a disorienting or confusing change. The transition from first-person embodiment to second-person displacement was a smooth blend from the avatar to the placement anchor. This ensured players would not be thrown off or confused by a snappy change, but rather it would be clear to them that the viewport is being placed down, and when complete, they would be able to move again, albeit with a new control scheme. This implementation and subsequent feedback align with the findings of Taylor, *et al.* (2023), who highlight that effective design and implementation of such perspectives can result in assisting the player to maintain their embodied presence within the world.

Additionally, the context of the prototype played an important role in shaping the participants' emotions. The puzzle-centric approach was utilised to create a friendlier and more approachable context for participants who may have never seen the ability to disconnect and perceive the environment through a mediated viewpoint.

The results supported that the context and light narrative alongside the puzzle genre pairs compellingly with the detachment ability of the camera from the avatar. This pairs up with Havranek's (2012) claim that perspective can be a direct tool for shaping emotion depending on the present context. Furthermore, the positive feedback results also align with Spence's (2010) claim that perspective styles can invoke different levels of required cognition, which is supported well alongside the puzzle-based design.

6.2 Comparing with existing Theory and Research

Within the Literature Review of this study, it is noted that Calleja's (2011) take on player engagement puts emphasis on in the importance of camera placement to reinforce ownership and an embodied presence within the world to the player, highlighting that a consistently aligned camera avatar relationship, whether first-person or third-person, is quintessential in supporting a stable sense of continuity during gameplay. From this point of view, displacement of the camera in any form risks tearing the sense of embodiment and immersion straight from the player. However, the findings gathered by this study complicate that idea. Responses collected display that embodiment did not feel as if it was diminished by the sheer detachment or displaced nature of the camera, provided that the transitional blend between perspectives was clearly communicated. Rather than breaking ownership, the second-person perspective appeared to have been successful in establishing a renegotiated form of embodiment in which players felt a continuity in presence throughout the placement anchor as well as within the avatar's hands themselves. Overall, this leads to suggest that embodiment may be less reliant on static camera attachment, but instead on the player's ability to cognitively position themselves within the world, even through the eyes of an external POV.

Close connections between the camera, avatar and interactions are all cohesively essential to how players progress and are vital for real player involvement, argues Naftis (2016). Therefore, the artefact produced for this project risked creating such abstraction that may disrupt player understanding and flow.
However, the results of this study point toward a less concrete conclusion. While consistent camera tethering and attachment may prove beneficial in heavy action-driven and fast-paced, intense games, the findings that emerged from the slow, calm and puzzle-centred nature of this prototype proved that brief shifts in camera placement did not hinder progress; in fact, it does quite the opposite. The changes in perspective are actually essential in overcoming the puzzles, in which the player could not physically progress without placing the head down and repositioning themselves via mediation to key points within the level. This fundamentally pushed players to think about how they can utilise the space instead of relying on immediate character capability. This leads to suggestions that a consistent camera tethering design may be more beneficial in some genres than others, rather than being vital for all use cases, and that second-person perspectives can aid in

player progression when paired with mechanics that encourage the behaviour rather than discourage it.

6.3 Contributions to knowledge:

This dissertation contributes to knowledge of perspectives by demonstrating that second-person perspectives do not intrinsically break player embodiment when shifts in viewpoint come with clear cues and are naturally communicated while paired with consistent and familiar control schemes. When executed as such, the player more naturally renegotiates their position and embodied self within the world, but this does not necessarily cause a disconnect in immersion while the player familiarises themselves with the perspective.

Additionally, this research contributes to conventional game design discourse by reframing the second-person perspective as an intentional mechanic and perspective system rather than a purely visual and neglected camera choice. This study focuses on the positive feedback received by play testers, displaying the possibilities of this perspective, particularly within a puzzle-oriented context.

The findings of this project also suggest that the viability of second-person is both genre and similarly context dependant. Past research on *Out of Sight* was often brought up, and for the project prototype, the puzzle-oriented design was found to add another layer of depth and be a more suitable environment for the slow pacing of the game, alongside the capabilities of mediated viewpoints that would be less appropriate for action-focused gameplay.

While existing literature on perspectives within games is extensive, the second-person perspective is, however, seldom mentioned, and, for the purpose of this study, it is essential to be discussed and contributed to.

6.4 Present Limitations:

Despite the contributions made by this study and the knowledge gained through its findings, there were also a handful of restrictions that could have resulted in differing scope, diversity and interpretation of the results.

6.4.1

Firstly, the pool size of participants was the most limiting factor of increasingly diverse opinions and thoughts. While practice-based research was conducted via a qualitative survey that allowed participants to convey their subjective thoughts for each question in depth, the smaller number of participants drastically restricted the potential of a far wider scope of opinions. A larger pool of participants would have seen increasing unbiased opinions and heightened opportunities for players who may have never seen this perspective, which would have offered further insight into accessibility and first-time usability of the perspective as both a point of view and a mechanic.

6.4.2

Secondly, the genre specificity of the prototype. The artefact produced for this dissertation, due to time and development constraints, was exclusively situated within a puzzle-based context. Since this perspective was investigated to heighten tension and vulnerability among players of titles such as *Out of Sight,* it would have been interesting to be able to compare

such data with a prototype within the horror context. The puzzle genre being the only type of context that players were able to test meant that, in some cases, it may be a perspective that has not yet been discovered by some participants and, therefore be unaware of the potential that the perspective could have within other genres.

6.4.3

Similar to the second limitation, this limitation involves the singular prototype approach. In the developed prototype, participants experienced the game with the second-person mechanic from the beginning. Whereas, if participants were presented with two prototypes: one being a simple puzzle game where the viewport only resides within the player's avatar, and another in which the second-person perspective was gradually introduced. This approach could have resulted in a preference for one particular prototype, which could have allowed for a more comparative analysis of data that would have compared the perspective against a prototype without it. This could have potentially resulted in a strengthening claim regarding the mechanics' ability to impact player engagement.

6.4.4

The next limitation relates to the short-style play sessions. The prototype, on average, took players between four and five minutes to complete, meaning that whilst they understood the fundamentals of the perspective switching mechanic, they did not get to spend significant enough time to develop a deeper familiarity with the system. A lengthier prototype may have revealed changes in player opinion and perception, resulting in increased enjoyment, gradually emerging frustration, or other thoughts and opinions that could have resulted in more varied feedback.

6.4.5

Another layer of limitation came from the constraints imposed by the research methodology itself. The study heavily relied on subjective data via qualitative research practices. While this approach was objectively the best approach for gathering data for this project, it limited the collection of measurable raw data. Whilst averages were recorded for player completion time, further quantitative details such as time spent per puzzle room or frequency of interaction attempts, for example, could have provided beneficial insight into examining player learning curves as well as the effectiveness of the mechanics.

6.4.6

Finally, the scope of the mechanics within the prototype were limiting. Development efforts were primarily focused on establishing a functional and coherent second-person perspective system, alongside the creation of puzzles for participants to play through. As a result of this, there were limited implementation possibilities of fundamental testing mechanics to pair with the head displacement. In the detached perspective, player actions were restricted to fundamental mechanics such as jumping, crouching and interacting with the levers to perform environmental changes.

Whilst this was sufficient for demonstrating the core concept, the simplicity and limited scope of mechanics were a constraint on participants' ability to consider broader design possibilities and mechanics that could emerge from the use of this perspective.

In summary, the restrictions and limitations mentioned in this section in no way contradict the results of this study but, rather, display distinct areas in which future research can be better prepared. Despite that, taking note of the aforementioned limitations must be considered when interpreting the findings of this study.

7. Conclusion

7.1 Overview:

Overall, the objective of this study was to investigate the potential of the second-person perspective within contemporary game design. By means of examining how perspectives function within narrative discourse, this research contextualised how the second-person perspective slots in alongside the more dominant first and third person viewpoints that have come to be the definitive and conventional choices within modern game design. This study analysed existing examples to develop a working definition of the second-person perspective, alongside employment of a practice-based, qualitative research methodology to explore the viability of the perspective as an engaging approach within game design. The findings of the study contribute to actively ongoing discussions regarding perspective within games and suggest that when consideration is taken to carefully implement unconventional perspectives, such as second-person, potential for broader application within the games industry becomes clearer.

7.2 Reflection on Objectives and Goals:

The research, findings and results of this study demonstrate that the project successfully met its main goal and positively addressed its hypothesis: that the effective and careful implementation of the second-person perspective can be a viable design choice for developing a displaced POV while also being capable of retaining player immersion and embodiment without breaking pre-established game design conventions. Through the study's use of qualitative, practice-based investigation, it also challenges the assumption within academic discourse that detached perspectives inherently increase cognitive load on the player. Instead, the results suggest that when meticulously designed, perspectives such as second-person can enhance spatial reasoning and heighten clarity within the game world in a way that does not necessarily require increased cognitive capability.

The initial objective of this study was to examine and research existing literature surrounding the usage of perspective within both narrative discourse and video game studies. This began with an understanding of what each grammatical definition of the person means in storytelling, which then evolved into how that has been interpreted within the gaming industry and 3D space. That research was then used in understanding why the first and third-person perspectives have become more dominant within contemporary game design practices, and similarly, noticing a significant lack in mention of the second-person perspective within game design in comparison to perspectives within narration. This gap in research directly justified the necessity for a qualitative-based method of play testing and result gathering within the project.

The second point of study involved the analysis of existing case studies of games that have concepted and implemented their own interpretations of the second-person perspective, within this project *Screencheat* and *Out of Sight* were the main focuses of study. These case studies dared to reinterpret viewpoint conventions and provided a valuable insight into how they shape perceptual experience through differing mechanics and forms of camera behaviour. Their mechanics, alongside camera setup, provided useful insight into how mediated viewpoints can be utilised in a variety of scenarios. Examining these titles heavily informed the development of this study's working definition and prototype alike, inspiring similar uses of control and camera setup.

Beginning to build upwards from the established theoretical foundation, the study began exploring further into modern game design principles alongside perspectives and the contexts in which the most appropriate viewpoint is chosen. This allowed for a better understanding of why perspective design has seen less innovation comparatively to other areas within game design and why the conventional first and third-person perspectives are commonly chosen over experimentation with other forms of viewport.
While this is largely context-dependent, it highlighted the importance of keeping input familiar to the player, regardless of the opted perspective.

Following on, the development of the artefact began with the intention of being able to provide participants with hands-on access to test this perspective. Making use of the Unity Engine platform alongside the imported Cinemachine package, a functioning displaced perspective was developed that allowed for the player to disconnect the camera and blend between first and second-person states. This mechanic was paired up with a puzzle-based context, requiring players to engage with the environment through a mediated viewpoint to progress to the next zone. This secured the perspective as being integral to complete the prototype, rather than seeming like a novel and unnecessary addition.

Finally, after play testing had concluded, the study evaluated the results and opinions on usability, clarity and effectiveness of both implementation of the mechanic and the perspective itself via a qualitative participant playtest and feedback form. Results and findings gathered both through this form and localised discussion provided informative responses as to how the mechanic was perceived, which allowed the assessment of whether it aligned with, and similarly supported, the original hypothesis of the study. Post feedback analysis highlighted that the perspective was intuitive, quickly understood, didn't induce heightened cognitive overload and was generally well received. The findings here reinforced the viability of the second-person perspective within contemporary game design providing that they are supported with familiar controls and a clearly represented separation between states.

Overall, each phase of the research achieved its intention whilst progressively building upon the last. The combination of both theoretical and practical research contributed new knowledge to an underexplored, niche sector within game design. Though not without its limitations, results display that with care and thoughtful implementation, second-person perspectives can offer meaningful experiences and opportunities to rearrange agency and

immersion beyond traditional conventions and highlights that unconventional perspectives such as this one still have a place within contemporary game design.

7.4 Future Directions:

7.4.1 Expanding Contexts and Genres

While this study finds its footing within the puzzle genre as an effective context for second-person mechanics, the perspective also theoretically supports the pairing of the mechanic alongside the horror atmosphere, but both require careful implementation and a contextual anchor. While horror utilises vulnerability, and puzzles invoke spatial awareness, it leads to wonder if future research could take these findings and explore whether the use of such affordances could translate effectively into other genres, such as stealth experiences, narrative heavy titles, or racing and driving games. The capability of this perspective is still an untrodden path within game design, and investigating a range of genres would allow for a deeper understanding of this perspective.

7.4.2 Direct comparison against another perspective

One of the previously mentioned limitations of the study is also something to mention as a future study recommendation. Participants within this study were only able to engage with a single artefact that included both first-person and second-person blended into one. Because of this setup, the second-person perspective was unable to be isolated and face direct comparison to a similarly isolated first or third-person perspective.

Future studies hereafter could mitigate this by presenting participants with similar game versions side by side. One utilising a conventional perspective and the other employing the second-person perspective alone. This would be best paired with mechanics, level design and context as consistent as possible between versions so to allow for a fairer comparison. As a result, such an approach could easier separate the participants who favoured the mechanic, or vice versa, which could provide valuable feedback when comparing an unconventional viewpoint alongside a conventional one, improving iterative feedback for future developments.

7.4.3 Increased Testing Time

The artefact developed alongside this study was concise by design, including a limited set of puzzle rooms that introduced new mechanics to the player in each room; however, did not require intensive cognitive engagement. While the intention of this was to allow participants to quickly grasp the core idea of the perspective-switching mechanic, it hindered the possibility of observing longer-term emotional effects with a displaced perspective.

Future research would likely benefit from play sessions that run longer to examine further the prolonged use of the perspective alongside factors such as engagement, immersion and emotional state. These longer sessions would also potentially provide quantitative data that may differ between a five minute play session over a ten minute one, allowing for further insight into the usage of the second-person regarding a full game that would likely include hours of extended use of the second-person perspective.

7.4.4 Newfound Interpretations of Second-Person

While this study employed a working definition of the second-person perspective, the concept still remains without a formal definition within game studies and is open to designer interpretation. However, different implementation possibilities indicate that second-person perspectives can be designed and utilised in a variety of ways. For example, both *Out of Sight* and the artefact developed in this study (*HardWhere?)* rely on disconnection and placement of the viewpoint that observes the avatar from an anchor. Whereas *Screencheat* renegotiates second-person and instead requires the player to perceive the game through other player's screens. This lack of definition creates flexibility, and flexibility suggests that second-person perspectives have, in theory, unbound potential. Future studies could explore these possibilities and continue to challenge static opinions of perspective within gaming.

7.4.5 Broader Implications:

The findings of this study's feedback and research suggest that whilst first-person and third-person perspectives do remain dominant within standardised practices of game design, the result of this may be less to do with their inability to be effective, but more to do with the risk surrounding such unconventional perspectives. While it is fair to say that standardised perspectives offer embodiment and immersion at a very high level due to the repeated usage and refinement, this study records that players are capable of adapting to unfamiliar camera systems when they are clearly communicated. This implies that innovation surrounding perspectives may be less about player capability and more about the negative subjectivity that surrounds them.

This study highlights the importance of practice-based and qualitative research when investigating emerging perspectives within game design. Unlike contemporary practices that have extensive literature on their respective topics, it is required for emerging mechanics to explore other methodologies to collect findings. Quantitative research remains essential as such to measure important factors such as experience, usability, and general understanding from an early stage. Doing so can identify whether these unconventional approaches hold tangible potential before being further subjected to a large-scale audience for either release or further testing and iteration.

Lastly, while this work centres its focus specifically on the second-person perspective, the implications and findings hold potential for extending further beyond one singular camera convention. Overall, this study highlights that perspectives remain an underexplored sector of game design in and of itself, with potential to expand further beyond both conventional cameras and those still emerging, such as the one on which this work bases itself.

7.5 Conclusive Reflection:

This dissertation has demonstrated that unconventional perspectives, when treated and implemented with care and understanding, have the capability to retain strong senses of immersion, embodiment and player agency whilst still being able to provide an enjoyable gameplay experience. By means of distinct and clear player state changes and smooth displaced camera implementation, alongside intuitive controls and development practices that remain grounded amongst familiar game design conventions, second-person proves to be an accessible and viable product despite its departure from contemporary habits.

Overall, this study has been successful in achieving the objectives set out at the start. The results and findings challenge literature that argues embodiment and immersion are inherently tied to first or third-person perspectives, but rather that these feelings can be preserved and renegotiated through differing camera configurations, providing logical context and designed with practicality and usability in mind. With contributions of primary, practice-based results alongside qualitative feedback, this study expands on the current understanding of perspective design within games on both a conventional and unconventional level, providing a foundational insight for future possibilities.

8. Recommendations for Future Study

This final chapter outlines suggestions for future research and development surrounding unconventional camera perspectives. Building from the limitations section established earlier in this study, these recommendations act as a means to support future study into non-traditional perspectives, expand the scope of investigation and further assess the viability of second-person within games.

8.1 Expanded Interactions:

Future studies would increasingly benefit from further implementation of a wider scope of mechanics with further depth and clarity, especially as the game unfolds through player progression. Gradually broadening what interactions are available to the player over time could heighten mental involvement while potentially exposing new difficulties. Within the puzzle context, this may result in rich puzzle-solving problems that would appeal to the player's that wish to be tested, and simultaneously offer data to determine how participants perform when under increased cognitive load.

8.2 Increased participant research pool:

Acquiring a larger research pool allows for a much more diverse set of findings, which can similarly increase the validity of the artefact. A greater range of participants also means the ability to reduce biased responses that may influence findings. Furthermore, separation of participants into groups that have different levels of experience, for example, regular puzzle game players, players who do not play puzzle games, and people who do not play many games in general. These distinct categories could provide insight into how different groups perceive the mechanic, allowing researchers to better understand the usability and further improve accessibility.

8.3 Comparison of genres:

Although this study demonstrated the capability of the second-person perspective with a puzzle-centric prototype, future research and development could expand the horizons and explore its possible applications across a wider range of genres. As briefly mentioned within the future directions, this could apply to a variety of things, such as Stealth, Racing, and many other possibilities. Establishing effectiveness with unconventional perspectives would increasingly support the capabilities of second-person alongside other possible points of view, and further display that it is a viable tool to play with within game development.

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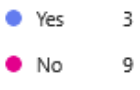
10. Appendices

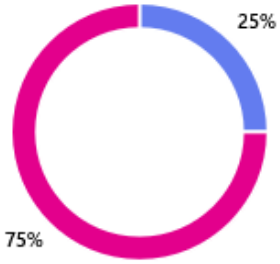
10.1 Participant Survey Results:

Question 1.1: "Did you find the movement change when switching between perspectives to be disorienting or confusing?"

Feedback:

ID ↑	Name	Responses
1	[redacted]	No
2		No
3		Yes
4		No
5		No
6		No
7		No
8	anonymous	Yes
9	anonymous	No
10	anonymous	No
11	anonymous	No
12	anonymous	Yes





Question 1.2: “Please explain your response further if you wish”

Feedback:

ID ↑	Name	Responses
1	[redacted]	keeping the camera still kept the movement consistent and it was easy to position the camera in such a way, however moving the camera while trying to move the player can be difficult as movement direction will change.
2		N/a
3	anonymous	There was a slight delay when transiting where inputs wouldn't registrer which felt weird, also being able to transition and not see your character was disorienting, so maybe have it so you can always see the player in seconds person.
4	anonymous	The transition is quite smooth. The gradual camera swivel that simulates the head being picked up or placed down acts as a great spatial or camera anchor. It prevents the off putting teleport feeling that usually comes with perspective shifts, giving the player just enough time to realise their point of view is moving from stationary to mobile. The initial tutorial is somewhat disorienting as you're unaware you're operating from second person. However this is quickly overcome thanks to the on screen instructions and ability to refer to the instructions in the ESC menu. One disorientating part of placing the head down is when you place it down from behind the barrel. The camera sets into the default perspective for Second Person but you're lost behind the camera and it's difficult to locate the robot.
5	anonymous	It's very clear where you're placing the head, since the environment isn't overly complicated you can instantly look around and know where you are.
6	anonymous	I thought it felt pretty smooth, though at some points i wasn't sure if i got close enough with the character to the head to pick it up, as because of the animation there is quite a bit of delay.
7	anonymous	Usually not, but if you place the head on a barrel when behind it, the body is out of view, if you could look around 360 degrees maybe that would help?

Question 2.1: “Did you find the Second-Person control scheme easy to adapt to?”

Feedback:

ID ↑	Name	Responses
1	[redacted]	Yes
2		Yes
3		Yes
4		Yes
5		Yes
6		Yes
7		No
8	anonymous	Yes
9	anonymous	No
10	anonymous	Yes
11	anonymous	Yes
12	anonymous	Yes

Question 2.2: “Please explain your response further if you wish”

Feedback:

ID ↑	Name	Responses
1	anonymous	Yeah the character would move as expected, if anything I wish you could have the jump in first person too but second person was good.
2	anonymous	While the concept is easy to understand, the execution is hampered by the lack of visual depth at a distance. Because the perspective is fixed and often distant, pixel hunting for interaction hitboxes becomes a challenge. Since the swinging hand animation only confirms success, we need something before the click. A contextual outline such as the lever glows when the body is in range or a proximity-based snap sound would help. If the body is standing right in front of a lever, the game should be very generous with the hitbox to compensate for the fixed camera angle. Some of the perspectives are quite awkward from a distance so adding these "assistances" would be helpful.
3	anonymous	Since the controls are simple the only thing you really need to get used to is your body moving separately from your “eyes”. But again since the maps are clear and there’s always good visibility I didn’t have a problem moving around in 2nd person.
4	anonymous	It was easy to control and the placement locations for the head were great and it made it easy to look in the right direction.
5	anonymous	E to interact is a very common binding, all the others are common too except for C to crouch, but even that was easy to adjust to.

Question 3.1: “Do you think the Puzzle Game Genre works well with this perspective?”

Feedback:

ID ↑	Name	Responses
1	[redacted]	Yes
2		Yes
3		Yes
4		Yes
5		Yes
6		Yes
7		Yes
8	anonymous	Yes
9	anonymous	Yes
10	anonymous	Yes
11	anonymous	Yes
12	anonymous	Yes

Question 3.2: “Please explain your response further if you wish”

Feedback:

ID ↑	Name	Responses
1	anonymous	Yeah it offers another element of depth to puzzles
2	anonymous	It's a fantastic fit for the puzzle genre. It turns vision into a mechanic, similar to Portal 2 or Superliminal. Using the barrels as strategic vantage points for a security camera style of gameplay feels fresh. It forces the player to plan their moves based on what they can see, which is a sure sign of a good environmental puzzle game.
3	anonymous	I think this would lend to some very creative puzzle experiences. If this were a full fledged game the robot and “factory” theme would make for some really fun and interesting puzzles. Second perspective isn’t something you see often so that alone already makes it more unique and sets it apart from other puzzle games.
4	anonymous	I think this could make for some really fun puzzles. The ones in the test I played were quite enjoyable to play through.

Question 4.1: “Do you think with extra polish, you would play this as a full-fledged game?”

Feedback:

ID ↑	Name	Responses
1	[redacted]	Yes
2		Yes
3		No
4		Yes
5		Yes
6		Yes
7		Yes
8	anonymous	Yes
9	anonymous	Yes
10	anonymous	Yes
11	anonymous	Yes
12	anonymous	Yes

Question 4.2: “Please explain your response further if you wish”

Feedback:

ID ↑	Name	Responses
1	[redacted]	N/a
2	anonymous	Yeah it certainly could, would definitely need more mechanics and depth tho as relying solely on the perspective would get repetitive quick in my opinion.
3	anonymous	This has indie hit potential, I think, if the friction between the player and the controls is refined and natural progressions in the game such as the levels having greater textures, props flow would achieve this indie hit. Small things you can interact with would be cool. A sprint feature for both perspectives would be a cool improvement. Adding distinct visual cues, like a faint glow on the robot's hands or a neck laser that points toward what you're looking at, would bridge the gap between the second-person camera and the body's actions. Customizable key binds are also an important feature for accessibility.
4	anonymous	Like I said, the perspective shift makes it very unique and interesting. It would be really fun to play around with how physics and such could help you solve puzzles in a full fledged game. Or maybe have certain puzzles where visibility is a little harder to achieve and have the player go off of sound based queues. This 2nd person perspective allows for a lot of cool experimentation I personally haven't seen before so I would definitely play a full game. (Also the aesthetic of it is very cute so a fully fledged map would look very nice)
5	anonymous	As stated previously, I think this would make some really fun and enjoyable puzzles. The character is also really cute and unique.
6	anonymous	This was really fun, the core mechanic is innovative and one I don't believe I've experienced in a game before

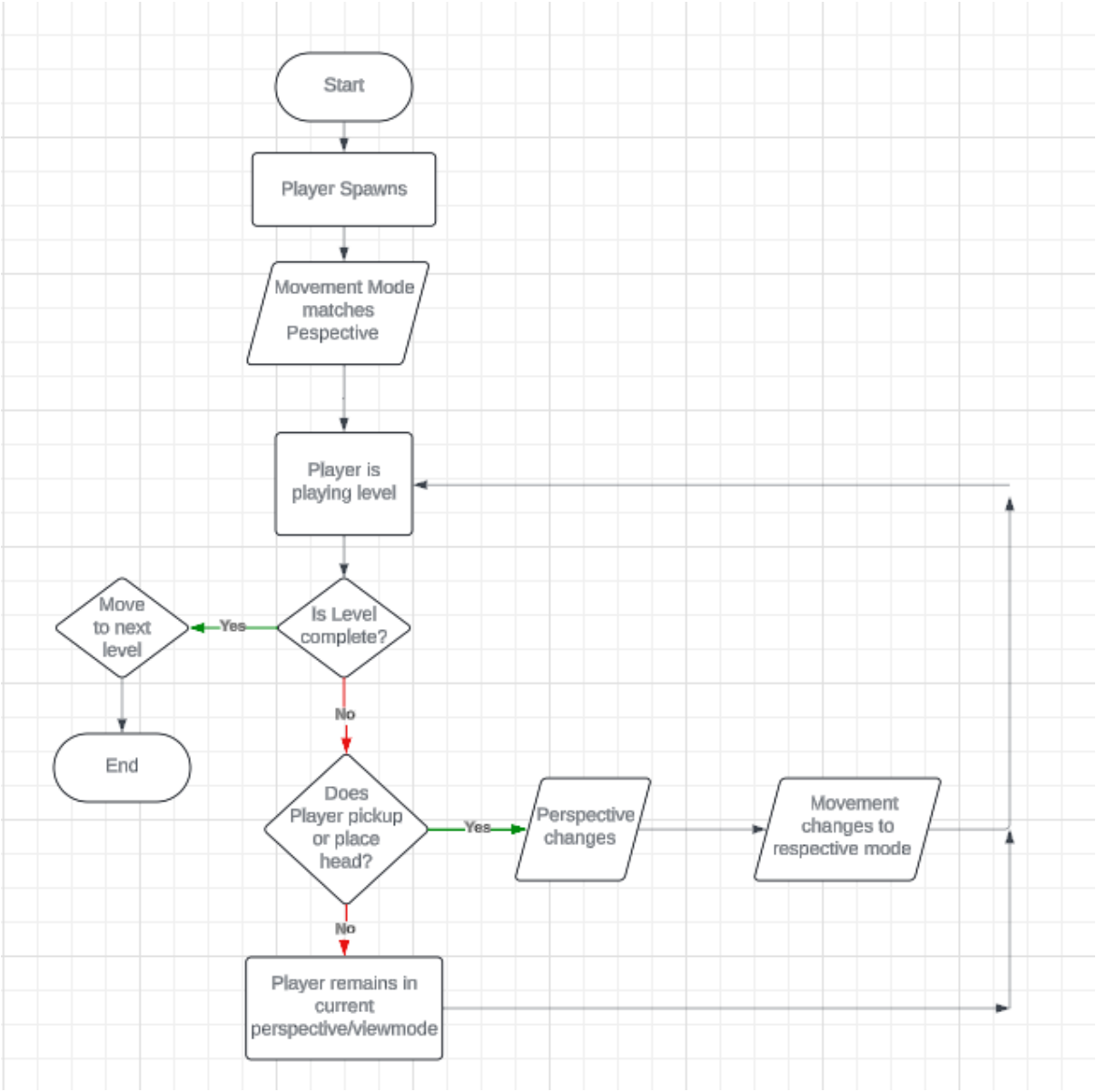
Question 5.1: “Please rate your experience with the perspective switching mechanic (1-10)”

Feedback:

ID ↑	Name	Responses
1	[redacted]	10
2		7
3		7
4		8
5		9
6		8
7		7
8	anonymous	7
9	anonymous	8
10	anonymous	9
11	anonymous	9
12	anonymous	9

10.2 Technical Diagrams:

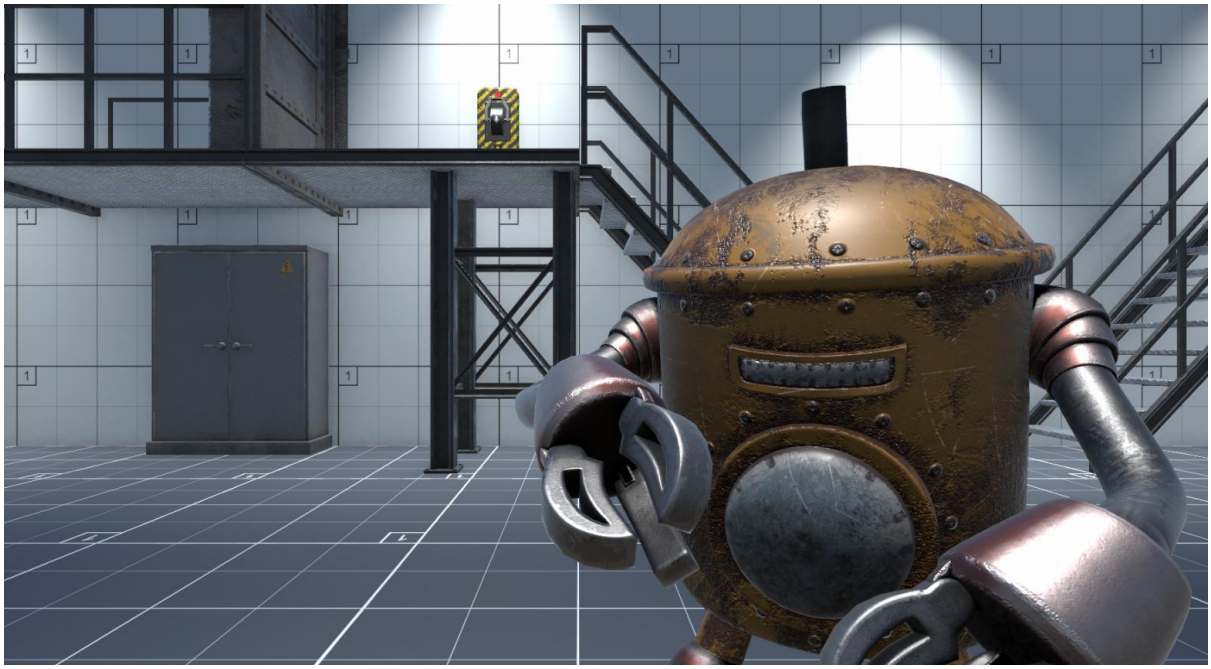
Flowchart of perspective-switching logic.



10.3 Artefact Screenshots:

First-Person Perspective / State:

State Transition: First-Person into Second-Person:



Second-Person Perspective / State:

Environment Interactions: Alternating staircase