

Gaming in the Round:  
The Overlooked Potential of Player-Controlled Perspective

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## Gaming in the Round: The Overlooked Potential of Player-Controlled Perspective

### **Chapter 1: Introduction**

Since the dawn of digital games, advancements in data processing have allowed for increasingly intricate interactions between game elements, broadening the range of actions available to players. *Pong* paddles moved up and down; Mario can run, jump and crouch; Lara Croft could roll and dive, shimmy, shoot, and push; Frank West can mix cocktails, kick-flip skateboards over magazine racks, or burn zombies' faces off with a pre-heated frying pan.

The growing number of available actions has led to a steady complication of control systems, in order that players may access their full range of abilities. Today, when a player picks up a control pad or comfortably repositions their mouse and keyboard in anticipation of a heavy gaming session, they usually lay their fingers within a complex nest of commands. But beside the ever-changing cluster of verbs, movements, and menu selections there is a particular control system found in almost all modern games that has emerged from a different branch of hardware development.

A sea-change in game design occurred during the mid-1990's. In the PC market, hardware companies such as Matrox and 3dfx began to produce affordable 3D graphics cards, while at the same time developers such as id software began to create fast-rendered, fully 3D games such as *Quake*. This combined development of 3D hardware and software could also be seen on home consoles, as with the PlayStation's geometry transformation engine powering a wide range of 3D games. These technologies improved over time, becoming cheaper to implement and more impressive in use.

As an increasing number of games were set in real-time 3D environments, the perspective from which these game worlds were viewed became a major issue for players and developers alike. While 2D games could be clearly arranged on a 2D screen, the first generation of 3D games<sup>1</sup> faced new challenges in displaying their virtual worlds.



*Sonic 3*



*Flashback*

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<sup>1</sup> Games such as *Elite* (1984) were rendering 3D environments long before this time, but it was only after 3D graphics cards became mainstream that a true 'generation' of 3D games emerged

Previously, 2D games were typically viewed from a side-on, third-person perspective. Visual information was built up in layers – such as the background, level environment, sprites, foreground, and non-diegetic artefacts like health bars and score tallies – but was viewed as a single, combined image. At any moment, players could look at the screen and draw information from all of these layers at once.



*Crash Bandicoot*



*Fade to Black*

When fast 3D rendering became available, developers wanted players to admire the rich, polygonal worlds they could now create, and so they turned their focus away from the characters and into the background. Players were asked to look through the screen, past their avatar, and admire the landscape that stretched away into the distance. Suddenly, having a character standing in the middle of the screen became an obstruction, obscuring views of the environment and creating a dangerous blind spot directly in front of the player.



*Jumping Flash!*



*Turok: Dinosaur Hunter*

Some games worked around this problem by adopting a first-person perspective. This gave players a much clearer view of the environment, but at the expense of seeing their immediate surroundings. In games like *Jumping Flash!* (1995) or *Turok: Dinosaur Hunter* (1997), this caused problems as the player was sometimes expected to look ahead and shoot enemies, while blindly jumping across a series of small platforms.

Generally speaking, these games faced two main problems. Designers were often trying to follow traditional, 2D gameplay conventions which had become inappropriate, due to the restrictions in conveying 3D spatial information on a 2D screen. Furthermore, hardware limitations meant that the incredible vistas that designers were so eager to dazzle their

audiences with were often cut off prematurely by a limited draw distance.



*Super Mario 64*



*Super Mario 64*

All of this changed with the release of *Super Mario 64*<sup>2</sup>. Having defined the archetypal 2D platform game with titles such as *Super Mario Bros* and *Super Mario World*, Nintendo radically redesigned their core franchise to suit modern, 3D environments. Gone were the stacked layers of breakable blocks that floated above Mario's head, replaced with a sparse arrangement of large, bright shapes to jump on and climb over; Coins were no longer found floating in neat airborne patterns, but placed along paths to be followed like Hansel and Gretel's trail of breadcrumbs. But the most striking innovation, that enabled the rest of the game to flow so smoothly, was its use of perspective – the virtual camera through which the player viewed the world.

There were two important features to Mario 64's use of perspective, which are closely tied to other elements of the game design. Firstly, the camera pointed further towards the ground than in many similar games which, when coupled with Mario's small size and the chunky enemies and objects around him, meant that players always had a clear view of their surroundings. This downward-facing emphasis permeated the entire game, with the majority of gameplay based on precise horizontal movement and a reduced emphasis on the vertical<sup>3</sup>.

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2 Of course, the time scales of game development mean that Mario 64's influence would not truly be felt until a year or two after release – particularly when rival console manufacturers had to redesign their control pads to adapt

3 There are moments where the player is expected to view Mario from a side-on perspective and traverse a more vertically-orientated space, but these occur in specially constructed areas where the horizontal plane has been collapsed to a single, shallow depth – in effect, 3D model of a traditionally 2D Mario scene



*Nintendo 64 Control Pad*

Secondly, players could move the camera towards, away from, and around Mario by simply tapping the N64's four C buttons. Being able to swing the camera around so freely meant that if players couldn't see what they were doing they could quickly rectify the situation by changing their perspective. This facilitated a greater opportunity for exploration; many levels resembled enclosed sandpits, with no particular beginning or end.

These quick and easy perspective controls proved so effective that have been reused and repeated countless times since, to the point where they have become a regular fixture in control pad layouts – almost all modern, 3D games allow players to adjust their perspective with the mouse (in the case of the PC), right analogue stick (in the case of the Xbox 360 and PS3) or d-pad (in the case of the Wii).



*Resident Evil*

The reason why this simple format of camera control has become so ubiquitous is because it greatly simplifies the 'reading' of 3D spatial information through a 2D screen. If the players view is obscured, or if they cannot judge appropriate distances from their current position, it can be said that the very representation of the game world has become a hindrance to the player. This effect has been used deliberately in games such as *Resident Evil* to create additional tension, but would be inappropriate in a game like *Half-Life 2* – the awkward sensation of having to battle against an unrealistic representation of space (where the player cannot see things their character should be able to see) creates an additional layer of cognitive challenge that distances players from their in-game actions.

Yet while these camera controls regularly share the same physical interface as the running, jumping, shooting and cocktail-mixing that players are required to perform within games, they play a generally far more passive role in the completion of game objectives. With few exceptions, perspective controls are used purely to counteract the otherwise restricted flow of spatial information, allowing players to perform relevant actions within this space – the control of perspective itself rarely has a direct effect on the game.

The aim of this dissertation is to explore the notion of player-controlled perspective, and ask if there is untapped potential in its use. Chapter two reviews existing theories of space and perspective in video games. Chapter three examines audience-controlled perspectives in other media, and attempts to draw insights from their basic principles. Chapter four critically assesses existing video games that use perspective control as an active gameplay element, to determine how and why they have been implemented in this way, and the effect on the play experience. Chapter five explains how this research contributes to the design of *Ice Station Lemur*, a game devised to accompany this dissertation and show its findings in a practical format. Chapter six draws final conclusions from all of this work. Accompanying this essay is a design document for *Ice Station Lemur*.

## **Chapter 2: Theorising Perspective Control**

Existing literature on game perspectives almost always focuses on the nature of perspective positions – such as how game perspectives often change during cinematic cut-scenes. Manually controlled perspective changes may be discussed in these broad terms – for instance, how disabling the user interface affects the *World of Warcraft* playing experience<sup>4</sup> – but the typical gameplay experience of perpetual perceptual micromanagement is rarely addressed. It is therefore important at this stage to define a clear theory of perspective control.

Perspective controls perform two roles, which relate to Caillois' concepts of ludus (objective-based play) and paideia (free-form play). In a ludic mode, they support primary activities such as moving, shooting and pulling switches by ensuring that players have enough visual information to perform these actions appropriately. In a paideian mode, they allow players to engage in a manner of virtual sightseeing. Typical play of almost any game involves using both these modes simultaneously, with emphasis shifting between them depending on the desires of the player and the requirements of the game.

The environmental structure of games is inexorably linked to the interplay between these two modes of viewing. When creating a virtual space, designers will balance its aesthetic beauty against the length of time players are expected to spend there, its position within a narrative web of other locations, and the visibility of ludic objectives within it. But there are other influences affecting spatial composition. Taylor (2002) writes:

Currently, video games have chiefly co-opted theories of space and immersivity from other, generally unlike media, like print and film, or their more popular understanding has entirely lacked theory; or has been based on limited notions of direct manipulation. (Taylor, page 31)

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4 See Dormans (2006)

The development of virtual sets and virtual cameras has led, perhaps inevitably, towards the development of virtual film-making. This can be perhaps most clearly seen in the proliferation of non-interactive cut-scenes which – as many authors have pointed out – represent a break in the interactive gameplay experience, but there are also subtler implications.

Interactive gameplay scenes are increasingly being designed and directed with cinematic conventions in mind. When constructing environments, designers carefully develop mise-en-scènes that provide the player with certain information – such as their location, their objective, and the immediate threats they are facing – or else deliberately withhold such information to create mystery or suspense. Framing gameplay situations within the screen can help overcome some of the problems of 3D representation described in chapter one – environments are still three-dimensional, but arranged in such a way that important spatial information can be read immediately.

Creating these frames is made far easier by curtailing the players' perspective freedom. The result is that many games become linear trails, shepherding players between explorable areas through bottlenecking paths. By forcing the player to enter an area from a fixed position, designers can more easily control elements of spatial presentation and gameplay flow; but if this guiding process becomes too repetitive it will remind players of the artificiality of their surroundings and damage their sense of immersion.

This high-level view of game structure does not strictly represent the experience of playing a game, however. *Halo 3* may follow a closely directed, linear path, but the majority of play time is spent battling waves of enemies in non-linear combat areas – the carefully arranged mise-en-scène that greets players upon entry collapses once they move in and begin exploring.

In these periods of exploring and interacting with the environment that constitute the majority of gameplay, player perspective is unpredictable. Rather than funnel players' perspectives back to a particular focal point, game designers have developed what Jones (2005) calls "macro mise-en-scène" – a philosophy by which the borders of the screen do not represent the boundaries of the scene. As an example, he cites scenes from *Half-Life 2* in which non-player characters (NPCs) address the player directly with important information. The player is free to walk away and engage in other activities, but – in contrast to traditional cinematic grammar – the NPCs voices remain as the main audio focus.

The principles of macro mise-en-scène inspire game designs based not on viewing scenes, but inhabiting them. For example, the design commentaries for *Team Fortress 2* describe how player classes developed unique silhouettes and audio signatures, and teams were given different style of architecture. The result is that information flows very quickly, giving players more time to (mentally and visually) focus on their objectives – even in the rush of battle, players can quickly orientate themselves within the map and interpret precise audio-visual information about nearby players.

Murray (1998) develops the idea of 'unseen narrative' in theatrical, not cinematic terms. Games are viewed as a form of 'cyberdrama' in which players interact with a cast of virtual

actors, and the central foci of games are the underlying narratives that are discovered through play. Players function as combined actor-audiences, sharing the stage with non-player elements that have a comparable role in determining events.

Murray believes that games provide an opportunity to connect many different stages together, with action taking place simultaneously across multiple scenes. Players do not just control their visual perspective, but their narrative perspective as well. This differs from the principles of macro *mise-en-scène* in that the players must seek out narrative information, rather than the other way around. Instead of finding ways to transmit all narrative information without impeding players' perspective freedom, Murray proposes that information be partially restricted, so that players may make meaningful decisions about what information to pursue.

The different approaches of Jones and Murray reflect the media with which they compare games. Cinema offers a tightly focused perspective that jumps around in space and time; Jones observes that the macro *mise-en-scène* is a much less focused, and therefore does not need such direct control. Theatre presents audiences with a series of long scenes in which all visible action must occur; Murray proposes that 'multistage narratives' would allow multiple concurrent scenes of potentially visible action, that players can move between at will. Elements of each theory could be incorporated into game design but neither is derived solely from games. Taylor's warning on co-opted theories of space therefore suggests that these theories may prove relevant to games, but do not fully reflect the potential of the medium.

### **Chapter 3: Audience-Led Perspective in Other Media**

In order to assess the potential of player-controlled perspective in games, it is useful to explore the ways perspective has been used in other art forms. Many of these forms are firmly rooted in physical spatiality, but relevant comparisons to games may be made if we assume that players are sufficiently immersed in virtual space. For example, viewers inspecting a statue from multiple angles must adjust their perspective on the media; players inspecting an in-game statue from multiple angles are not changing their perspective on the actual game media, but are similarly interrogating it for information.

Cinema has used perspective as a central narrative device for many years. Akira Kurosawa's *Rashomon* (1950) explores relativist notions of 'fact' by describing four different perspectives on a violent assault, while Alfred Hitchcock's *Rear Window* (1954) uses the restricted view of an invalid's telescope to highlight the uncertainty of the unseen. But these examples use particular, diagetically restricted perspectives as part of a single, authored track; the experiential flow of the audience is linear and fixed. *Rashomon* always concludes with an insightful conversation that helps the audience make sense of its disparate tales, just as each viewing of *Rear Window* will eventually resolve the true events that lay beyond the protagonist's view.

Of course, these films do not allow viewers to control their visual perspective but play on the audience's interpretation of events. Narrative ambiguities mean that viewers have a choice in how they fill the gaps of withheld information. Video games have not added a new dimension to the viewing experience by granting players direct control over their

perspective; rather, they have reintegrated into screen media something that has been present in art for thousands of years.

The ancient Egyptians contrived some of their hieroglyph-covered religious chambers in such a way as to unite the physical topography of the rooms with the narrative structures signified by their hieroglyphs (see Aarseth, 1997). This meant that the audience could physically move through a narrative in whatever way they pleased; the key implication of this being that they were required to move. Pillars and walls were physically structured in such a way that there was no single position from which to view the complete narrative, requiring the audience to manually adjust their perspective if they wanted to follow a narrative thread.

In some ways this could be compared to a game like *Mass Effect*, in which narrative content is tied to particular locations in a non-linear game space. Unlike hieroglyph-filled chambers however, *Mass Effect* changes and mutates as the player moves through it – players cannot return to a completed planet and enjoy its content for a second time. As in most games, the act of experiencing the narrative content destroys it until the player restarts the game.



*Les Bourgeois de Calais*

A more passive example of audience-controlled perspective is Rodin's *Les Bourgeois de Calais* (1888), with particular reference to Stanford University's installation. Rodin intended the work – life-size sculptures of six men walking to their voluntary execution, in an effort to spare the city from destruction – to be displayed at street level, so that the citizens of Calais could walk among their forebears and appreciate the humanity of their sacrifice<sup>5</sup>.

Regarding sculptures such as this, audiences are not required to view the work from multiple perspectives but are instead invited to explore the depths of each figure at their own leisure. To some extent, this behaviour is found in most games – each player typically has their own copy of the game and their own instance of the game world to explore at will; this is in stark contrast to *Les Bourgeois de Calais*, only 17 installations of which exist in the world. But while the extent to which players wish to explore game worlds is, as with

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<sup>5</sup> "Rodin wanted the sculpture to be at street level and for the citizens of Calais to be able to mingle with their ancestors" - Thomas Seligman, taken from Stanford (1998)

sculpture, a matter for the player to decide, it is rare for games developers to create much more artistic depth than a typical player would want to take in.

The environmental architecture of games engage with players in a similar way. The key difference is that, instead of circling around a focal object, players must turn their focus outward to their surroundings. Cultures from around the world have created countless examples of building architecture and environmental landscaping being used to engender particular moods and experiences in the audiences within them. While much less explicit in nature than the Egyptian hieroglyph chambers described earlier, these environments are still potent mediums for storytelling. All constructed spaces have their own particular objectives, but rely on the audience's interpretation for their message to succeed. Different cultures have refined this information flow through different principles and practices – from Japanese tea gardens to Italian Renaissance architecture – and it makes perfect sense for game designers to consider these when constructing virtual space.

Theatre, as noted by Janet Murray, can also serve as a useful comparison to certain elements of gameplay. But while modern games have moved away from the 2D stage-setting of earlier titles and adopted the 3D *mise-en-scène*, it is important to note that there are still theatrical forms that spread into the third dimension. The title of this dissertation is inspired by 'Theatre in the Round', a popular staging format in ancient Greece and Rome in which the audience surround a central stage. Because actors are not orientated towards a single direction their actions and positions appear much less rigid and more natural, but the audience must still peer into the stage from outside. This does not relate very closely to the experience of playing a 3D game, in which players inhabit the world as central characters and walk among the supporting cast.

A rare theatrical example of this positioning exists in the play *Tamara* (Krizanc, 1981). Set and performed in a large country house, the play unfolds across multiple rooms simultaneously. Audience members are free to roam the house and observe the scripted actions taking place around them; characters may even address audience members directly and give them instructions on what to do next, although there is no obligation to obey. This is much more akin to the experience of playing a video game, except that audience members resemble a quiet chorus of background characters. In a typical game, players are the most important character in the narrative and are afforded much more freedom to act; for many players, if *Tamara* was approached with the same mindset as *Half-Life 2*, the actors and actresses would all eventually be taken to hospital with head injuries arising from thrown books and candlesticks.

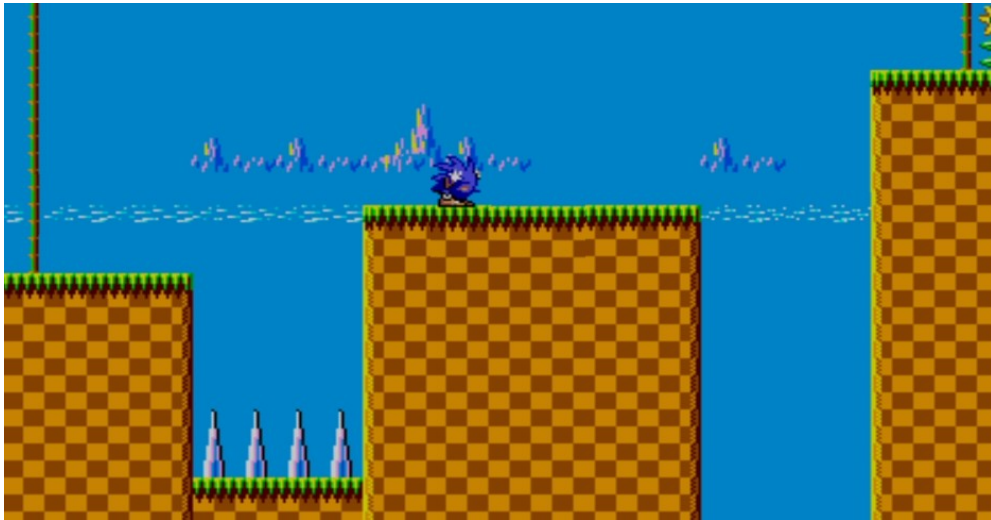
All of these examples take advantage of audience-controlled perspective to achieve effects that would otherwise be impossible. The unified text-spaces of hieroglyph-covered chambers give physical form to non-linear narratives; the explorable details of statues and spectacular panoramas of constructed environments allow personal interrogations in a way that framed representations cannot; 'inhabitable theatre' such as *Tamara* explores a game-like staging format in a physical space.

Games can take such a wide variety of forms that no single method of representation will ever be suitable for all – understanding how to stage realistic dialogue between characters would be of little help when developing a management game such as *Sim City* – but there

are always precedents from other art forms that can provide additional insight.

#### Chapter 4: A Review of Existing Games

How then have existing video games made use of player-controlled perspective? The following chapter examines particular titles that incorporate perspective control in interesting or unusual ways.



*Sonic the Hedgehog*  
(This image has been composited from multiple screenshots)

Prior to their rapid proliferation of 3D games described in chapter one, it was common for 2D platform games to allow players to see what was above and below the current limits of the screen by holding 'up' and 'down' on the d-pad for a few seconds. Few games were designed to make particular use of these controls, although there are exceptions.

The above image is taken from the Master System version of *Sonic the Hedgehog* (Sega, 1991). Players approach this position from the left, and can see the lethal spikes at the bottom of the first pit as they jump over it. As the screen scrolls up, adjusting to the height of the middle platform, players can no longer see the contents of the pit, and may assume that the second pit is similarly filled with spikes. But if a player looks 'down' from the central platform, they see that the second pit stretches beyond their field of vision – players who recognise this clue and jump down the second pit are rewarded with an 'extra life'.

Because there is no particular reason for a player to look down these pits, this is a situation in which the paideian activity of exploring the environment (such as is possible) reveals a hidden ludic reward. This is a common principle in game design, although it is rare for perspective control alone to provide such clues as in this example. It is much more common to 'physically' examine the surroundings – by pushing characters against walls, for example.



*I, Robot*

*I, Robot* (Atari, 1983) was the first game to be rendered by filled, 3D polygons. Powered by this technology, it was also the first game with dedicated camera controls – two buttons were available to 'zoom in' and 'zoom out' on the player-character. It is particularly relevant to this dissertation because of the way these camera controls were directly connected to gameplay.

Zooming in and out would adjust the score multiplier – shown in the above screenshot as green text reading "x 0.5" in the top-left of the screen. A fully zoomed-in view would double the value of points earned by the player, while a fully zoomed-out view (as shown) would half their value. More dramatically, enemies known as 'viewer killers' would fly directly towards the screen, forcing players to 'dodge' (by changing their perspective) or else lose a life.

Considered literally, the fact that an enemy can inflict damage upon the player in this way could suggest that players of *I, Robot* are embodying a corporation of the robot seen running around in mazes and a very real, very corporeal camera that hovers some distance above and behind him. Following this argument, it could be argued that the player is not just adjusting their perspective on the game world, but physically moving a part of their character to dodge attacks. In practical terms, this argument changes very little – the only function of the floating camera is to display events within the maze, and it's only significance to the player lies in its ability to change the player's perspective.



Preparing to throw a flash-bang grenade in Counter-Strike

Witnessing a flash-bang grenade explode in Counter-Strike

Another example of this phenomenon occurs in *Counter-Strike*, during the brief instances in which 'flash-bang' grenades explode. Players who witness a flash-bang explosion at close range are blinded for a brief period of time, severely hindering their attempts to hunt and shoot enemies. When players see a flash-bang grenade being thrown, they must avert their eyes or else temporarily burn their virtual retinas. In this case, the action of 'looking away' is definitely not just a representational change – moving a virtual camera within an environment – but also a 'physical' movement of the player-character.

In all such 'first-person shooter' games, where players embody a character and 'see' through their eyes, the boundaries between ludic and paideian modes of perspective control are very noticeable. Players' guns are aimed fixedly at the centre of the screen, with the effect that players must look directly at their targets when attacking. If players want to watch an event taking place outside of the combat area, or simply want to see which of their team-mates are standing beside them, they cannot simply look away but must turn their entire body aside, sacrificing their offensive abilities in the process.

Third-person games such as *World of Warcraft* are generally much more forgiving, allowing players to move and attack without demanding their complete focus. With more freedom to view the game from their own chosen perspective, the ludic and paideian functions of perspective begin to overlap.



*Night Trap*



*Night Trap*

In *Night Trap*, players assume the role of an intelligence agent, who must use a number of hidden cameras to monitor the events taking place in a mysterious house. The game is viewed as if the player is the actual agent – the screen is dominated by a 'direct feed' from the currently-selected camera, with an information panel underneath. The aim of the game is to protect a group of teenage girls from the clan of predatory vampires who sneak around the house when the girls are not looking. This is achieved with the use of manually-activated traps that have been built into every room; when players see a vampire get close to a trap, they must press the 'trap' button to trigger a brief video clip of the vampire being caught.

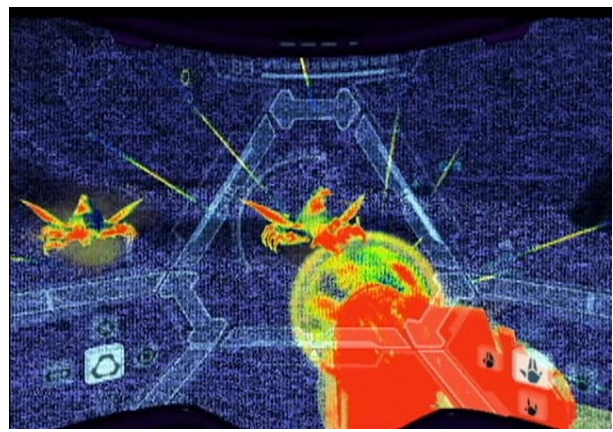
*Night Trap* presents players with a web of interconnected narrative threads. By intelligently selecting which room to view, players can follow individual plot lines around the house and get the impression that they are observing a realistic situation – one with causes and effects that lie beyond their personal experience. This is a very unusual situation for games, in which players are normally intended to experience the complete narrative course.

But because players must find and capture vampires to complete the game, and the vampires are almost exclusively present in locations when the main characters are absent, *Night Trap* actively discourages players from watching the narrative content – if a player was to watch the lengthy 'party scene' in the living room, they would miss a great number of vampires sneaking around upstairs. Vampires appear frequently, with no forewarning, so the only reliable way to complete the game is through trial and error – observing each room and compiling a schedule of vampire appearances in preparation for a final, successful play-through – and even then, players will be too busy capturing vampires in the back rooms to watch any of the story scenes.

The ludic requirements placed on the player's perspective are so great that the player simply has no time for paideia. This is particularly notable in the case of *Night Trap* because of the unique opportunities presented by the narrative structure. Ignoring the vampires and exploring the story is more entertaining than 25 minutes spent playing what is essentially an arrhythmic rhythm game from memory, but doing so prematurely ends the game in failure after only 10 minutes.



*Metroid Prime's Combat Visor*



*Metroid's Prime's Thermal Visor*

*Metroid Prime* is one of a number of games to feature multiple vision modes. Players can use the four directions on the d-pad to activate one of four different 'visors': the Combat visor offers standard vision overlaid by an area map and the player's current health and ammo supply, the Scan visor displays additional textual information about objects and creatures in the game, the Thermal visor provides infra-red vision and the X-ray visor allows the player to see through solid objects.

*Metroid Prime's* use of this feature is interesting because each visor changes the way the player views their surroundings. In a sense, the Combat visor displays the 'visual' information layer surrounding the player, with the other visors displaying 'contextual', 'thermal' and 'internal' information layers, respectively. The Scan visor permits players not only to explore their surroundings, but to literally read into them – the names and functions of objects and machines, the behaviour of wildlife, and so on. The Thermal and X-ray visors reveal previously unknown information about the surroundings, allowing players to solve previously unsolvable puzzles and access new areas.

Displaying environments in different ways like this adds a 'fourth dimension' to perspective control – players can still adjust their position and orientation in 3D space, but may also view different layers of information about their surroundings. *Metroid Prime's* use of infra-red and x-ray spectral information is primarily ludic in nature – neither look as spectacular as the Combat visor's standard vision, nor as insightful as the Scan visor's textual overlays, but there is great potential in this concept. The idea of viewing hidden information layers has been explored in literature such as William Gibson's *Virtual Light*<sup>6</sup>, and is beginning to appear in everyday life. A combination of geo-tagging, streaming information networks and augmented reality lies behind Tonchidot's *Sekai Camera*, a mobile phone application that overlays a live camera feed with user-created, mixed-media contextual information.

With the right implementation, it would be quite feasible for a system like this to allow players to explore the same area multiple times, and make very different readings. By interrogating different information layers, players could explore the physical layout of an area, its history, its usage, and so on.

<sup>6</sup> *Virtual Light's* MacGuffin is a pair of jet-black glasses containing a full-scale virtual blueprint of city redevelopment plans. By wearing the glasses within the city, a person could explore virtual streets that have not yet been built



*Halo 3*

Regarding perspective control, *Halo 3* operates much like any other FPS game – players divide their attention between looking at targets and exploring the environment. But the *Halo 3* experience goes beyond this with its 'Theatre mode', in which players can watch replays of recent games and record screenshots and video clips, all of which can then be uploaded to the internet and shared with other players. In Theatre mode, players can view the game from any of the recorded players' perspectives, or fly freely around the map and through doors like a ghost.

Theatre mode can be modelled as a form of meta-game, in which players attempt to create interesting or entertaining pictures and clips out of pre-recorded game footage. Because the game records all activity across the map, there are – similar to *Night Trap* – multiple narrative threads that interweave to create an unified story. The stories are generally restricted to topics such as "How Red team captured more flags than Blue team", but the principle is the same: players of the initial game function as actors within an improvised play, which is then recorded to provide a unique setting for Theatre mode's meta-game.

Because players are not restricted by the normal laws of (virtual) physics – manipulating the flow of time if necessary – they have much more freedom to determine their perspective, which promotes a more free-form play experience. Therefore, 'play' in Theatre mode often goes through two phases: a paideian phase of freely exploring the events in search of noteworthy incidents, followed a more ludic phase in which players assume the role of ethereal photographers and seek out the best position from which to record footage.

Different perspective styles have close connections with issues of embodiment and immersion, which provide insights into the nature of player-controlled perspective. In a first-person game like *Counter-Strike*, perspective can have a direct effect on the game because of the character's physical relationship to the virtual camera; in a third-person game like *I, Robot*, there is no diagetive reason for enemies to attack the screen directly. In

this sense, *I, Robot's* 'viewer killers' break the fourth wall regardless of whether or not they actually hit it.

But while third-person perspectives struggle to have an effect on the internal worlds of games, they may still affect the external worlds of players. Whether a *Halo 3* video clip produced as part of the Theatre mode meta-game succeeds in entertaining its audience depends entirely on the ethereal camera's perspective, in the same way that *Night Trap* provides different playing experiences depending on whether players prefer to search upstairs for vampires or watch the girls sing and dance in the lounge.

These internal and external effects of perspective control result from ludic and paideian modes of viewing respectively. Both provide distinct opportunities for pleasure, but must be carefully balanced. As with any interactive element of game design, the emphasis regarding user-controlled perspective lies on co-authored experiences. To paraphrase Aarseth (1997): players lie outside of game design but must remain central to its strategy.

## **Chapter 5: Ice Station Lemur**

Accompanying this dissertation is the design document for *Ice Station Lemur*, a conceptual game that explores many of the ideas described in the previous three chapters. The following chapter discusses the relationship between the game design and the theories behind it.

*Ice Station Lemur* is unlike many other games in that there is no direct interaction with the game world. Its purpose was to explore new potentials in using player-controlled perspective, and so all other controls were removed for the sake of clarity. This unusual premise risks damaging its relevance to other games, but the most important feature is simply that events are allowed to take place outside of the player's view. Because this could occur even if the player was controlling a character and interacting normally, it retains its relevance.

The game is primarily inspired by *Tamara* and the 'multi-stage narrative' model described by Murray (1998), and could be compared to *Night Trap* if the vampire-catching gameplay was overlooked. The script was constructed as an interweaving series of short scenes set in each room. At the detail level defined by the design document, the game could be made in a variety of styles – 3D, 2D, full-motion video, or even text – but it is important that players are able to observe an entire room at once. Additional details could be added depending on the format chosen, but these would still be based on the ideas currently presented. A fully-explorable 3D format could include more incidental information – perhaps Martin has a picture of Rhona as the background image on his lab workstation, for example – but such details would still be derived from existing principles.

The biggest design challenge lay in giving the player reasons to choose particular perspectives – not to direct them, but simply to provide information that could allow a meaningful decision. The characters are the main subjects of interest, so it was important to build on the players knowledge of them, and their relationships. Characters often talk aloud to themselves, with dialogue hinting at their motivations and feelings to try and capture the player's interest. The unique 'character themes' reinforce this, by expressing

the character's personality through the events they experience and creating distinct interactions between characters.

In this regard, inspiration has come from Jones (2005) and the concept of macro mise-en-scène. A great deal of information is presented through sounds and events rather than visible actions, and a lot of foreshadowing takes place – when Jackson warns Rhona not to let herself be put in the background he is unwittingly alluding to his own demise, which takes place once he leaves the explorable stage. These moments highlight some of the game's narrative paths, so that players can have some idea about how events relate to each other without having to directly observe everything; sometimes these clues are deliberately misleading, to surprise players who follow the link.

One of the fundamental philosophies of the game design is that any single course through the narrative web should be able to produce a satisfying experience for the player. This is broadly inspired by real life – people do not expect to understand the infinite range of causes and effects relating to their life. But because *Ice Station Lemur* is such a short sequence of events, and because the possibility exists to repeatedly restart the sequence and observe it from many perspectives, it is quite likely that players would replay the game until they comprehend the complete web of events. Replaying the game repeatedly to uncover the 'complete' story seems to erode the value of individual play experiences – instead of forming complete stories, they become subjective strands to be woven together into an objective whole.

There is a certain gaming precedent to this in the form of *The Legend of Zelda: Majora's Mask*, in which players relived the same three days repeatedly. In this case, exploring the same time period from multiple perspectives created a profound sense of position within time and space, but this information was only meaningful to the player because they could interact with the game world and alter the course of events. Players were required to explore parallel time lines in order to understand the effects of their actions, so that they could solve puzzles by performing particular actions at particular moments. But this repeated playing occurred part of a single, overarching play experience – in *Ice Station Lemur*, it does not.

The multiplayer mode goes some way to addressing this issue, by encouraging players to discuss their different perspectives (both literal and figurative) on the story. A lone player who follows Rhona throughout the game could find her final scene to be positive and uplifting, but if another player informs them of Jackson's death then it takes on a much darker tone of bitter irony. A multiplayer mode seems like an extravagance for such a short drama, but the principle could certainly apply to more conventional games.

The most disappointing elements of *Ice Station Lemur* are the character of Templeton and the Quarters location. A big problem with using multiple perspectives like this – as can be seen in *Night Trap* – is when players choose boring perspectives. During the initial draft phase, *Ice Station Lemur* was intended to have around twelve different rooms, and eight members of staff, but it quickly became clear that most of the rooms would be lifeless at any given point in time. The base was made smaller and smaller until reaching the current five rooms, when action is taking place wherever the player chooses to look. During the story planning phase it became clear that, even with more characters than rooms, there

was still a lot of empty space where nothing was happening. Without any stimulus , players could become indifferent to the perspective-controlling process, and cease to make meaningful decisions.

Largely for this reason, Templeton became a lonesome character who walks between empty rooms just to provide stimulus. It was difficult to determine what he could be doing in these rooms, but the fact that he is not directly interacting with any other character led to the idea that he would interact indirectly. He has become a kind of invisible force, impacting on a lot of other stories in ways that are not obvious – Cordelia's search for a spare valve ends with one dropping on Robert's head, but this is such an archetypal joke that few players would realise another character may have put the valves there for a reason.

But Templeton's main problem comes from poor dramatic use of the quarters. The initial scene of Rhona and Jackson getting out of bed is quite touching, and is probably the strongest starting position of the game, but the quarters have much less narrative value once it is over. With the quarters empty, and characters regularly buzzing between the other four rooms, Templeton became sucked in to fill the narrative gap and spends around half the game there; the only comparison to this being Martin's long periods of self-imposed isolation in the lab, which is much more befitting of his personality. Templeton's personality is far less clear. He has evolved into a kind of deus ex machina, walking unseen through the empty spaces of the narrative and arranging coincidences for other characters to stumble upon, with no particular motivation other than to put things where they will need to be. This may not have happened were the Quarters not so empty.

Overall, *Ice Station Lemur* provides a reasonable argument in favour of non-interactive cyberdrama, but how relevant this is to games depends on the kind of game. Many online multiplayer games, such as *StarCraft* or *Counter-Strike*, allow spectators to view games in progress using their game client, moving freely and invisible around the map and often seeing individual players' private information (such as how much health and ammo they have remaining). Because the outcome of large games is usually the result of many small incidents taking place all around the map, they have a lot in common with *Ice Station Lemur*'s narrative model. Where they differ is that these incidents are usually just variations on the theme of who killed who and when.

There is a great deal of potential for singleplayer games to develop ideas from *Ice Station Lemur*. Allowing players to freely move anywhere within the base at any time contributed greatly to the problem of having to create action in every room at all times, but it would be possible to limit players freedom without removing it entirely. In *Resident Evil 2* for example, players experienced the story from one of two perspectives depending on which game disc they played first, and then played through from the other perspective once they had finished the game. Their actions in the first game could influence the events of the second, creating a strange sensation when players realised that their first character had unknowingly plunged their second character into further danger. The problem with *Resident Evil 2* is that players are committed to these major perspective decisions from the moment they start their game; ideally, a finer balance should be struck between maintaining player freedom and keeping the script manageable.

## Chapter 6: Conclusion

It is difficult to fault the perspective control mechanisms employed by most modern games – through countless million man-hours of use, mice and analogue sticks have proven their worth as intuitive interface devices. But while these mechanisms are technically very well implemented, they are rarely utilised so well within game designs.

The most significant issue hindering perspective freedom in games is that players are unpredictable. This makes designers want to funnel them into particular paths, to make design more linear and comprehensible. This is a common problem across all areas of games; developers must work within finite budgets of time and money, and so cannot create enough content to give players complete freedom.

Problems such as these can be assuaged simply by adopting new design philosophies, such as the macro *mise-en-scène*. Instead of seizing control away from players and forcing them through key scenes, designers should make use of concepts such as mechanism design (Hurwicz et al, 2006) and draw from principles of real-life environmental design to manipulate players towards particular channels by their own free will. This would allow designers to focus on a finite number of paths while retaining players' sense of freedom.

It is important to distinguish between direct ludic effects of perspective within the game world and indirect paideian effects on the player. Direct effects can feel very rewarding when playing a game from a first-person perspective but are inevitably based on the positional state of players' characters rather than the perspective of players themselves, as is it the characters who provide a 'physical' link to the virtual space of the game world. Direct effects from a third-person perspective – as with *I, Robot's* viewer killers – rarely makes sense within the game world, and can damage players' sense of immersion by drawing attention to the artificiality of the situation.

There is much more untapped potential in the indirect effects of perspective control on players. A small number of games explore this concept by making players experience the same moment in time repeatedly from multiple perspectives. This can be very effective – in the case of *The Legend of Zelda: Majora's Mask* – or very irritating – in the case of *Night Trap* – but ultimately almost all games can be experienced in this way by restarting the game; many even more regularly, as players repeatedly die and reload from a nearby save point. Fundamentally, games represent systems of interactions. Exploring these systems of interactions through multiple approaches and from multiple perspectives is an especial pleasure of the player experience, that cannot be so easily reproduced in other forms of media. But aside from games like *Majora's Mask* that are based around experiencing events from different perspectives, very few games accommodate repeated play in this way.

This is the major area in which player-controlled perspective is not reaching its full potential – the control that is available generally has only superficial effects on the playing experience. To take further advantage of this, games must become broader instead of longer – giving players more meaningful choices in how they wish to approach scenes –

and allow important events to take place out outside of the player's view. In the same way that Jones' model of macro mise-en-scène expresses staging information independent of the player's vision, a broad model of 'macro storytelling' should be utilised, in which events can be experienced from any of Murray's multiple stages while still advancing the narrative.

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