

## Article

# (Always) Playing the Camera: Cyborg Vision and Embodied Surveillance in Digital Games

Ragnhild Solberg

University of Bergen, Norway  
[ragnhild.solberg@uib.no](mailto:ragnhild.solberg@uib.no)

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### Abstract

As the increasingly ubiquitous field of surveillance has transformed how we interact with each other and the world around us, surveillance interactions with *virtual* others in *virtual* worlds have gone largely unnoticed. This article examines representations of digital games' diegetic surveillance cameras and their relation to the player character and player. Building on a dataset of forty-one titles and in-depth analyses of two 2020 digital games that present embodied surveillance camera perspectives, *Final Fantasy VII Remake* (Square Enix 2020) and *Watch Dogs: Legion* (Ubisoft Toronto 2020), I demonstrate that the camera is crucial in how we organize, understand, and maneuver the fictional environment and its inhabitants. These digital games reveal how both surveillance power fantasies and their critique can coexist within a space of play. Moreover, digital games often present a perspective that blurs the boundaries between the physical and the technically mediated through a flattening of the player's "camera" screen and in-game surveillance cameras. Embodied surveillance cameras in digital games make the camera metaphor explicit as an aesthetic, narrative, and mechanical preoccupation. We think and play with and through cameras, drawing attention to and problematizing the partial perspectives with which worlds are viewed. I propose the term cyborg vision to account for this simultaneously human and nonhuman vision that's both pluralistic and situated and argue that, through cyborg vision, digital games offer an embodied experience of surveillance that's going to be increasingly relevant in the future.

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### Introduction

Most of us don't walk around on the street destroying surveillance cameras, or hack into governments' private security video feeds. Only a few of us will have access to surveillance monitors, and even fewer will be able to interact with what's broadcasted on these screens. None of us have the power to fully embody a machine. Yet in several digital games (hereafter: games), these actions and perspectives aren't just within reach but part of the very premise of the virtual environment. If you've spent some time playing games, chances are that you've encountered a surveillance camera or five, often in complex surveillance assemblages. As Batman (Rocksteady Studios 2011), you destroy surveillance cameras. As Marcus (Ubisoft Montreal 2016), you hack into them. As Amanda (Rival Games 2019), you protect people through them. As SAM (No Code 2019), you *are* the camera. Whether it's using this camera access to fight an oppressive employer (Camouflaj 2013), risking your life to spy on your enemies (InnerSloth LLC 2018), or being forced to re-watch recordings of one's own murderous spree (Rockstar North 2003), surveillance cameras influence how we play.

Although increasingly ubiquitous surveillance has transformed how we interact with each other and the world, interactions related to surveillance with *virtual* others within *virtual* worlds have gone largely unnoticed. In other words, we might know a lot about how one imagines the oppressive surveillance surrounding Winston Smith in *Nineteen Eighty-Four* (Orwell 2013), yet scarcely anything is known about the multitude of game representations of surveillance. Lyon (2018: 148) remarks that, in literature, we can

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ask how a novel's characters are meant to "comply, cope or question" surveillance situations that arise. I propose to further this question into the realm of games and to player characters, which are the main agents in the virtual environment that the player "controls" and experiences the environment through. I would argue that games are especially salient for research on surveillance assemblages because they, like contemporary surveillance, can't be seen in a stereotypical top-down power relationship. Rather, the player of a game is always in a feedback loop where they simultaneously control and are controlled, act and are acted upon, and make choices enabled and constrained by hardcoded rules. Moreover, games can emphasize or comment on contemporary societal tendencies and politics, and they directly engage with questions of technology's role in everyday life. Games about surveillance, specifically, can function as Bogard's (1996) "imaginary machines" or speculative visions that allow us to play out different responses to surveillance pasts, presents, and futures. This article therefore begins by asking how player characters—and by extension, players—are meant to "comply, cope or question" the situations that arise through the presence of the surveillance camera.

In particular, this article looks at the common trope of experiencing the virtual environment through a surveillance camera. These surveillance cameras blur the boundaries between the physical and the technically mediated through a flattening of the player's "camera" screen and in-game cameras. It's a synchronized vision of technological imaging processing and human perception. Players must learn to see in a way that is simultaneously their embodied vision and the nonhuman vision of the camera (and its viewers), what Christiansen (2016) identifies as the tension between technological and human vision, or what I, inspired by Haraway (1991), will term cyborg vision. I define cyborg vision as a simultaneously human and nonhuman vision that is pluralistic yet situated. Although cyborg vision is a rare experience for most people, it's common in games. Following the medium's tradition of camera representation, players already inhabit a partial vision. Through the representation of surveillance cameras, cyborg vision is made explicit. Located in this in-between space, this article supports a line of conceptualizing human-technical assemblages that acknowledges nonhumans as agents and emphasizes partial embodiment (Haraway 1988, 1991; Hayles 2016, 2017). Assemblages are here understood as a type of scalable, interconnected, and dynamic network (Hayles 2016) comprised of agents such as "system, technologies, player, body, community, company, legal structures, etc." (Taylor 2009: 332). Such an understanding includes seeing screens and indeed cameras as agents in their own right (Haraway 1988: 592). Thus, the camera becomes an important agent between virtual environments and the physical world as well as within virtual environments.

Starting from the camera's presence in the virtual environment, I first present an overview of forty-one games featuring diegetic surveillance cameras. After a discussion of the medium's requirement to control and play within camera-like limits, I examine the connection between player character actions and representations of embodied surveillance cameras in two 2020 games: *Final Fantasy VII Remake* (Square Enix 2020) and *Watch Dogs: Legion* (Ubisoft Toronto 2020). *Final Fantasy VII Remake* typifies the aesthetic imaginaries tied to surveillance cameras. Moreover, the player character's response to oppressive surveillance is acquiescing to its existence, even if players are painfully aware of transgressions taking place. Contrary to this, *Watch Dogs: Legion* presents the surveillance power fantasy—controlling the environment and its inhabitants through surveillance cameras in the name of protection, investigation, and survival—while at the same time commenting on the power it holds through hacking, subverting, and even destroying surveillance technologies. Throughout the article, I argue that games offer an embodied experience of surveillance through cyborg vision, one that's going to be increasingly relevant in our near future. By examining aesthetic, narrative, and mechanical elements of games we see that camera surveillance is much more than watching, and that cyborg vision can be generative in understanding agencies and power in games and surveillance alike. As objects and interfaces, as representations of surveillance structures, as mediating lenses, and as characters of partial embodiment, surveillance cameras in games allow for experiencing cyborg visions where human and nonhuman agents are intertwined in playing the camera.

## Background and Method

Connections between surveillance studies and game studies have previously explored how game design elements are implemented into surveillance technologies and practices (Benjamin 2019; Koskela and Mäkinen 2015; Mäkinen 2017; Whitson 2015). Others have looked at playful representations of surveillance in popular culture in general (Marx 1996), game community related surveillance such as community management and paratext (Kerr, Paoli, and Keatinge 2014), surveillance of players and streamers (Taylor 2016), and how games and gaming platforms often are constructed as surveillance structures (e.g., Cybulski 2014; Wang, Haines, and Tucker 2011) or presented to the *player* as surveillance structures (Albrechtslund and Dubbeld 2005). Largely missing from these reports is that the games themselves are treasure troves of surveillance imaginations and practices. Games are an important source of analysis for how different agents, including nonhuman agents and their agency, influence assemblages of play (Giddings 2005). Acknowledging the complexity and significance of games as an influential cultural form can thus present new conceptualizations of surveillance cultures.

The scope of this article is the representation of diegetic surveillance camera technology in late twentieth-century and early twenty-first-century games. A diegetic representation presents the camera as part of what Juul (2005: 165) calls the “game space,” which is the virtual environment in which players navigate. Diegetic cameras are legitimized within the virtual environment in different ways. The most common representation is as an object/design feature or a series of camera interfaces in a grid (like a security monitor room). Moreover, games often present a world *through* the object, as an interface from the camera’s perspective. Focusing on diegetic legitimacy differentiates these cameras from interface studies where the interface can be presented extradiegetically (see, e.g., Jørgensen 2012), which means that its purpose is solely for the player’s navigation of a space rather than part of the fictional environment’s narrative. Diegetic legitimacy also avoids making *all* games into surveillance games when there’s nothing within the fiction that refers to a godlike entity spying on them (as is the case with *The Sims* in Albrechtslund and Dubbeld 2005: 218). Although power disparities in such cases are an interesting field of study, this article is limited to games where surveillance is part of the fiction, bringing new perspectives to the emerging scene of scholarly investigations in playful interactions with surveillance.

More specifically, this article examines games that represent closed circuit television (CCTV) and internet protocol (IP) cameras and to what extent these cameras are incorporated into narrative and game mechanics. CCTV/IP cameras are fixed in location and observe a designated area, e.g., home surveillance. These objects hang on a wall, over a door, or in a streetlamp where they, according to Finn (2012), function as rhetorical devices. They guarantee the truthfulness of the environment and become symbols of a known present or near future techno-dystopia. Their visibility varies; some are partially hidden to find the information they need, whilst big signs stating that you’re being monitored can accompany others. CCTV/IP cameras often rotate on their own axis, giving a large field of vision from a given position, and are frequently presented as networked security cameras broadcasting live to an external screen. Clearly, CCTV/IP camera presence immediately connects to ideas of protection, exclusion, and power.

For this article, I assembled a sample of games that feature surveillance cameras that the player character acknowledges or with which they interact (see Table 1).<sup>1</sup> This dataset is inspired by community driven wikis on the topic (Giant Bomb n.d.) and the systematic cataloguing of the “soda machine project” to catalog every soda vending machine in games (Morrissette 2020). My dataset isn’t an exhaustive list but a strategic

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<sup>1</sup> Note that games in the same series that feature surveillance cameras are registered with one representative title (the two Tom Clancy games belong to their own series). By selecting one title, this approach loses the distinction of influential works, such as the blockbuster WATCH DOGS series’ importance in surveillance camera representation. At the same time, it prevents an influx of similar data when it comes to very large bodies of games in the same series, such as the *Assassin’s Creed* series (currently standing at twelve main titles and even more spin-off titles). Additionally, the list doesn’t include games that are known to feature surveillance camera interactions but that weren’t accessible for play, e.g., *Surveillance Kanshisha* (Sony Computer Entertainment Inc 2002) and *Lifeline* (Sony Computer Entertainment Japan 2003).

sample of games that I played, analyzed, and entered into a database for representations of machinic vision in popular culture (Rettberg et al. 2019, 2021). The focus on the player character's relation to surveillance cameras emerged from playing the games and seeing differences in how they presented positioning and power relations between different agents of surveillance. Tracing links and tension points between games' aesthetics, narratives, and mechanics on the one hand and surveillance on the other shows that diegetic cameras influence perception and action. Particularly, the prevalence in which technical surveillance intermittently or constantly merges the gaze of the machine, the player character, and the player stood out. When the perspective is that of an embodied surveillance camera, these games prompt us to consider the complex surveillance assemblages therein as well as the way in which the interface insists on the camera's materiality while subtly transforming player vision.

Year	Title	Developer	Embodied camera
1987	Metal Gear	Konami	
1992	Night Trap	Digital Pictures	
1997	Goldeneye 007	Rare	
2001	Vigilance 1.0	Le Chevallier	
2003	Manhunt	Rockstar North	X
2004	Half-Life 2	Valve	
2007	Bioshock	Irrational Games	
	eXperience112	Lexis Numérique	X
	Portal	Valve	
2008	Mirror's Edge	EA DICE	
2011	Deus Ex: Human Revolution	Eidos-Montréal	
2012	Sleeping Dogs	United Front Games	
2013	Assassin's Creed: Black Flag	Ubisoft Montréal	X
	Grand Theft Auto V	Rockstar North	X
	Remember Me	Dontnod Entertainment	
	République	Camouflaj	X
2014	Five Nights at Freddy's	Cawthon	X
	Nothing to Hide	Case	
	The Castle Doctrine	Rohrer	
2015	Batman: Arkham Knight	Rocksteady Studios	X
	Clandestine	Logic Artists	X
	Mon strum	Team Junkfish	
	Satellite Reign	5 Lives Studios	
	Technobabylon	Technocrat Games	X
	Tom Clancy's Rainbow Six Siege	Ubisoft Montréal	X
2016	Beholder	Warm Lamp Entertainment	
	Orwell	Osmotic	X
2017	Tom Clancy's Ghost Recon Wildlands	Ubisoft Paris/Milan	
2018	Among Us	InnerSloth	
	Detroit: Become Human	Quantic Dream	X
	Do Not Feed the Monkeys	Fictiorama Studios	
	I'm on Observation Duty	Zaster	X
	State of Mind	Daedalic Entertainment	X
2019	Alien: Blackout	Rival Games	X
	Astral Chain	PlatinumGames	
	NITE Team 4	Alice & Smith	
	Observation	No Code	X
2020	Cyberpunk 2077	CD Projekt RED	X
	Final Fantasy VII Remake	Square Enix	X
	Ministry of Broadcast	Ministry of Broadcast Studio	
	Watch Dogs: Legion	Ubisoft Toronto	X

**Table 1:** Forty-one games with diegetic surveillance camera acknowledgment and/or interaction.



It's worth noting that games feature diegetic surveillance technologies and strategies beyond CCTV/IP cameras. Games like *Voyeur* (Philips POV Entertainment 1993) and *Unmanned* (Molleindustria 2012) show surveillance through a camcorder and a drone, respectively. *AI: The Somnium Files* (Chunsoft 2019) represents biometric surveillance through an artificial intelligence ocular implant and *Papers, Please* (3909 LLC 2013) shows nontechnical surveillance and power. Thus, the findings of this article shouldn't reduce the need for a broad concept of surveillance games nor future research on the topic.

### Thinking Like a Camera

Technologies not only increasingly mediate our relationship with the physical world, like surveillance cameras do, but also with virtual environments, as games do. Before looking at specific game representations of embodied surveillance cameras, it is necessary to understand that cameras have a longstanding history in games. Artistry and utility cooperate in games, which is especially evident in the metaphor of the player camera. Game cameras are engines for experiencing the virtual environment. As explained by Thon (2009), perspective in games is often spoken of in terms of camera position, partly because the terminology originates from film theory. Indeed, the concept of "camera" is a way for players to make sense of the play experience with clear links to a cinematic mindset (Krichane 2021). We therefore find terms such as "first person" and "third person" in games. A camera's position controls player perception and sometimes these spatial and perceptual perspectives (Thon 2009) can merge into the same visual effects for player characters and players. For instance, consuming alcohol within *World of Warcraft* (Blizzard Entertainment 2005) causes blurriness on the player's screen. In the same game, the player can choose whether to play in a first or third-person camera position. This camera (a "virtual camera" in Krichane 2021) isn't thematized like diegetic cameras are. Rather, it appears as a window into this world that the player now—through their player character—inhabits. I, as others before me (e.g., Thon 2009), would point out that this doesn't mean that players uncritically adopt a player character's attitude or position. However, it shows how impactful perspectives are in understanding a particular character, situation, and world.

In the early days of the medium, static views were necessitated in part by technological limitations, most notably seen in 2D platform games, point-and-click adventure games, and full motion video games (FMVs). The rigidity of cameras justifies the fixed perspectives through which we view these games. One such example is the FMV *Night Trap* (Digital Pictures 1992). In *Night Trap*, the player is a security guard tasked with monitoring a house to save innocent girls from vampires. The guard's actions are limited to switching between cameras installed throughout the house and triggering traps that, in turn, initiate already filmed sequences where the vampires are (hopefully) caught. Thus, the camera legitimizes which actions are available to the security guard player character. A *Night Trap* where the guard blasts into the house with a bazooka would be a very different *Night Trap* indeed. It would probably also require a lot more of the processing system than what was offered at the time, showing how technological limitations inform the construction of these environments.

The link between diegetic cameras and extradiegetic cameras is perhaps even more evident when giving perspectival freedom to the player. Perspectival freedom must account for several possible perspectives in each scene, which requires more processing power and storage capacity in the game system, while simultaneously convincing the player to accept this as a coherent part of the virtual environment on a design level. Framing perspectival freedom as a diegetic camera became a solution to help remedy these design and programming challenges. Consider the camera in *Super Mario 64* (Nintendo 1996), where the one-sided fixed viewpoint that was common at the time was replaced with players choosing their own perspective. The player controls the plumber Mario on his quest to save Princess Peach from the evil Bowser. To remedy the aforementioned perspectival problems, the designers created the Lakitu Bros; flying camera operators that the player can utilize to change their view. Thus, the metaphor for *why* the player can change the perspective on the same scene is introduced. As explained within the virtual environment, neither the player nor Mario change perspectives—a Lakitu does. A Lakitu is presented within the fictional world as a news reporter "reporting live" from where "Mario has just arrived on the scene" (Nintendo 1996). This links 3D exploration with "thinking like filmmakers" (Vishnevetsky et al. 2016) or even thinking like the camera:

What perspective will give the best overview in this particular scene? Which limitations and possibilities does this character introduce? As a result, in *Super Mario 64*, the player isn't just Mario. Players not only control Mario's movements but also a Lakitu and their camera. However, apart from the brief introduction and perhaps a glimpse in a mirror, the Lakitu is hidden. They're hidden to the extent that if/when Mario dies, the Lakitu only watches (Vishnevetsky et al. 2016). The camera doesn't intervene, similar to static CCTV/IP cameras.

Consequently, diegetic cameras in games are important on aesthetic, narrative, and mechanical levels. For both *Night Trap* and *Super Mario 64* alike, there is no game without the camera. Conversely, a player probably wouldn't notice being placed in a camera's perspective because perspectival changes are common aesthetic features in games. Players are used to navigating and accepting different perspectival positions in virtual environments. The cameras we encounter are thematically important as metaphors of capturing, creating, and looking into other worlds, but because this is often presented as a "regular" interface, the camera is only another entry point in its immediacy. Yet as shown, a fixed camera view is designed to provide or limit possibilities for action, because what and how you see influences what you can do in virtual environments (e.g., Juul 2003). When this viewpoint is presented as a surveillance camera, it's further embedded in the virtual environment.

### Location, Location, Location

Games change the embodied experience of surveillance. My use of the concept of embodiment is inspired by Haraway's (1988) feminist epistemology. In short, embodiment is about knowing *from somewhere*. Haraway (1988) uses the metaphor of vision to explain how knowledge is constructed and experienced from a position—which incidentally further imbricates Haraway with surveillance studies. One might fantasize about the possibility of an objective and godlike view from above, but Haraway (1988) reminds us that any observer is both enabled and limited by their context. These possibilities and restrictions dictate what and how they see. Technical and organic eyes alike build on "specific ways of seeing" (Haraway 1988: 583). The emphasis on the context in which knowledges are produced is theorized by Haraway (1988) as "situated knowledges." Situated knowledges aren't about "being" in a body but "splitting" and inhabiting multiple perspectives at once.

The concept of situated knowledges has previously proven fruitful to surveillance studies, noting that surveillance is always situated (Gad and Lauritsen 2009). This means that surveillance is part of a specific cultural and material context, and the interaction between surveillance technologies and humans is what creates a certain way to see the world. By using Haraway's (1988) concept, we can go from solely focusing on surveillance *of a body* to including multiple agents and considering surveillance *as a body*. The latter has received little attention because it involves hidden agents and uninhabitable perspectives. We have to negotiate nonhuman embodiment because, following Christiansen (2016), surveillance cameras are usually located in places humans can't occupy (e.g., in ceiling corners). In close to half of the games in the dataset (nineteen of forty-one), however, these camera perspectives are no longer uninhabitable but embodied.

To grasp how embodiment can be situated yet transgress boundaries, Haraway (1991) introduces the imaginative resource of the cyborg. The concept reads as a liberative force against patriarchy, but for this article, it specifically helps to nuance the experiences of individual agents in an assemblage and how one can be multiple at once. A cyborg is "a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (Haraway 1991: 149). Cyborgs construct bodies that are "permanently partial," are "disassembled and reassembled," and "suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves" (Haraway 1991: 154, 163, 181). In other words, a cyborg is both pluralistic and situated.

I would argue that players are already adept at cyborg partiality. Games have indeed been described as cyborgian in how they transgress the boundaries of human and technology (Boulter 2015; Giddings 2009; Keogh 2016). The cyborg vision that arises from this conceptual character is not to be confused with the

proliferation of cyborg characters in games but signals a partial embodied vision between character perspectives—for instance, between *Night Trap*'s security guard and security cameras. Stated differently, cyborg vision is a disconnection (Denson 2020) of vision from human subjectivity and perspective that I, using Haraway's (1988, 1991) concepts, place back into embodied forms. In games, cyborg vision can be considered on a diegetic level but will also include the experience of a player's own embodied vision merging with the vision of a player character and/or with the nonhuman vision of the surveillance camera. In this sense, players pioneer cyborg vision. Playing a game happens in the interrelation between the physical world and virtual environment, yet we rarely stop (or are stopped) to consider that we're simultaneously our physical body and a virtual body, mediated through a screen. Thus, cyborg vision isn't a novel experience for players, but it can hide surveillance cameras in plain sight behind the habitualized mechanics of games.

### **Final Fantasy VII Remake, Surveillance Aesthetics, and the Power to See**

In the action role-playing game *Final Fantasy VII Remake* (Square Enix 2020), surveillance cameras are ever present but only interactive on a narrative level. The citizens of the fictional metropolis Midgar and Cloud, the primary player character, are certainly acquainted with surveillance cameras. Cloud is a former elite soldier turned mercenary, fighting alongside the vigilante eco-terrorist group Avalanche to save the planet from the de facto government of the mighty Shinra Electric Power Company. Shinra uses the very essence of the planet as an energy source, slowly killing the planet in the process. Within Midgar, their massive corporate tower looms over the circular city as a panoptical center, ready to process intelligence from their extensive surveillance network. This network includes fighter drones, biometric scanner checkpoints, and surveillance cameras. At the helm of the system is Shinra's head of "Public Safety" (the military), a proponent of instrumentalization at all costs ironically named Heidegger.

The traditionally top-down panopticism associated with surveillance cameras is presented from a partial perspective in *Final Fantasy VII Remake*. To clarify, the player always sees Cloud in a third person perspective (hovering slightly behind the player character like the Lakitu Bros in *Super Mario 64* but without the thematized camera control). However, when surveillance cameras enter the mix, this perspective is both thematized and aestheticized. Several times, the player is "taken away" from Cloud's immediate presence and instead presented with Heidegger's view from Shinra's security monitor room.<sup>2</sup> Here, Heidegger watches intently as Avalanche tries to infiltrate Shinra headquarters. After presenting Heidegger's perspective, one of the camera feeds becomes superimposed on the player's screen. It shows the perspective not of Heidegger nor of Cloud but rather a third person view aestheticized as a camera. It's still similar to the player perspective of the rest of the game, but instead of "being Cloud," the player sees Cloud and two Avalanche members in the middle of the frame, their bodies targeted with a motion tracking crosshair symbol. Naturally, the visual presentation is based on cultural conceptions and aesthetic conventions of what a machine sees. This is a now common trope of surveillance camera aesthetics: a framed interface with continuous live technical data. The bird's-eye view combined with the technical interface signal that we're meant to see this image in a specific way, that is, "as the machine." The difference between the machinic perspective and Cloud's player perspective is only evident because of the interface's aesthetics.

The shift to the camera's perspective shows how technical surveillance vision shapes Cloud's body into a target, a perception beyond Cloud's—and the player's—control. We can only watch as Cloud is targeted by surveillance cameras, which emphasizes his status as an outsider to this space. It's not yet a hostile vision (after Shinra reveals the truth about their covert surveillance, military drone perspectives show Cloud targeted with *red* technical interfaces) but rather presents a seemingly neutral account of Cloud's character. The neutrality comes from technical vision's "honest" representation of events, which Finn (2012) notes is

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<sup>2</sup> In the beloved original game from 1997 that *Final Fantasy VII Remake* is a remake of, this happens once, but the guard who monitors the cameras is sleeping, allowing Cloud to pass unnoticed. In *Final Fantasy VII Remake*, the surveillance technology itself can track Cloud's movements and therefore doesn't rely on a human staying awake and alert.

becoming the new real; what was previously considered technical flaws are now conventions of tabloid style. Now, “real” is grainy, pixelated, underexposed, or containing the framed interface that we know from cameras. In other words, the image must visually explain its authenticity so that we know that we’re watching real footage. Whatever Cloud does on hidden camera is true. In this way, the technical interface—or rather, the camera’s perspective—becomes a constitutive part of Cloud’s character.

A closer examination shows just how much of Shinra’s power is linked to technological prowess and surveillance camera access. In using these cameras, Shinra’s Head of Security Heidegger thinks he can see everything. Technology plus planning equals Heidegger playing god. The omniscient antagonist is a known feature of games, often coinciding, as for Heidegger, with surveillance camera access. This is seen in, for instance, *Portal*’s (Valve 2007) GLaDOS and *Manhunt*’s (Rockstar North 2003) The Director, with the difference that, unlike Heidegger, these villains announce their surveillance of the player character from the very beginning. Cloud and Avalanche, however, have no awareness of camera surveillance at this point in the game. Surveillance cameras by design keep us unaware of who or what or why. An assumed watcher, lurking beyond one’s perception, evokes uncertainty. When surveillance cameras are essentially one-sided, the power to see resides with those who control the camera, and Heidegger is the one who controls the camera: its presence and its usage. Haraway (1988: 585; emphasis in the original) explains that vision “is always a question of the power to see,” and *Final Fantasy VII Remake* presents the conditions for power and empowerment in a Foucauldian sense of domination, discipline, and biopower. In this way, empowerment and resisting or replacing power are the same thing because only one can dominate.

Yet for all his money and power, Heidegger can’t see everything. The abovementioned scene certainly plays with the fantasy of a universal view, but Haraway (1988) reminds us that this is a “god trick.” The idea of an objective and omniscient view from nowhere—of being raised to a point where you can see everything and nothing can see you—denies contextual factors and distances the subject from a body. It goes against the notion of situated knowledges. Indeed, the cameras, Heidegger’s prosthetic eyes, are proven to have their limits. In one notable scene, Avalanche disrupts the technology that is watching them, effectively shutting down Heidegger’s augmented vision. The blackout is caused by an explosion after an arduous fight with a Shinra robot and is unintentional on Avalanche’s behalf. Still, it shields them temporarily from surveillance and offers a brief respite from the seemingly omniscient Heidegger.

Apart from this episode, surveillance is beyond Cloud’s control. Going back to Lyon’s (2018) question of how characters are invited to respond to surveillance situations, the actions that Cloud and Avalanche can take are either accidental or evasive. Both eventually play into Shinra’s orchestration. Later in *Final Fantasy VII Remake*, security footage that shows Avalanche breaking into the Shinra headquarters is broadcast in front of Avalanche and the entire city. It turns out that Shinra has deliberately allowed Avalanche access to their headquarters to fuel their narrative that Avalanche is a terrorist group. Moreover, Shinra uses this as an excuse to take even more control. The security footage they now have of Avalanche’s breaking and entering is unquestionable proof. As such, the carefully orchestrated scene depends on the legitimacy of video recordings. Heidegger himself acknowledges the theatricality of the situation with a nod to Roman satire when he declares to Avalanche that “to a people beset by chaos and uncertainty, we will offer the finest comfort: bread and circus.” The surveillance situation is a diversion for the citizens of Midgar, a diversion that gives more power to Shinra. It certainly links power with its dire but playful surroundings.

The positioning of surveillance technology throughout the game shows that control is reserved for Shinra, and that surveillance is equated to subjugation (see Chandler 2014). While Cloud and Avalanche are in the “sophisticated” parts of Midgar, they’re subjected to unannounced identity scans and video surveillance. One dominant strategy of coping with this ubiquitous surveillance is trying to hide. Such a strategy is only successful when the technology is disrupted as an effect of their destroying Shinra property. Paralleling this is the fact that the player character is never given the opportunity to interact with surveillance cameras. All visual presentations of camera feeds are presented in cutscenes, filmic sequences within the game. Thus, neither Cloud nor the player can change the course of events that Shinra’s use of surveillance cameras



dictate. They can only play into the scripted event and watch as it unfolds again, in the truth-telling visuals of surveillance camera footage.

Summarizing, surveillance cameras in *Final Fantasy VII Remake* are fully realized spatial perspectives that influence how we understand the virtual environment. We always know from somewhere (Haraway 1988), and over the course of the game, this knowledge is several times situated in the machinic eyes of surveillance cameras. The cameras construct Cloud's body as a target, further framed by Heidegger's narrative of terrorism. Being unaware of this surveillance, Cloud and Avalanche merely play into Heidegger's orchestration. Throughout the game, players are presented with Cloud's, Heidegger's, and the surveillance camera's perspectives, but this well of perspectives doesn't change available actions for the player. It results in an experience of knowing and *not* doing—perhaps a novel feeling for players because in a medium famed for its user influence, disempowerment is rare.

### Negotiating Visibility in *Watch Dogs: Legion*

As similar as the framing of *Final Fantasy VII Remake* (Square Enix 2020) and *Watch Dogs: Legion* (Ubisoft Toronto 2020) is, their representations of surveillance cameras are strikingly different. Incidentally, both games emphasize the consequences of corporate greed and injustice and the necessity to fight back, depict the surveilled lives of citizens in heavily surveilled urban environments, include player characters that want to operate away from the public eye, and frequently present embodied surveillance cameras. However, while *Final Fantasy VII Remake* never allows the player to control surveillance cameras, in *Watch Dogs: Legion*, surveillance cameras are very much part of the way the game plays. Player characters in *Watch Dogs: Legion* aren't pawns of surveillance in the same way that *Final Fantasy VII Remake*'s Cloud is; rather, they're means of exploring how power operates on both sides of the camera. Over the course of the game, player characters will hack into hundreds of surveillance cameras and use them for their own purposes. As such, *Watch Dogs: Legion* explicitly invites connecting the game experience to current surveillance politics through focusing on activism and hacking. The game is partaking in configuring a more bottom-up approach to surveillance because the player character utilizes the infrastructure already available to "watch the watchers." It's a kind of sousveillance: watching from below and as part of a group. As phrased in one of the diegetic podcasts that player characters can listen to while driving or walking: "They're watching us but we're watching them too."

In *Watch Dogs: Legion*, private corporations control a fictionalized modern-day London through its central Operating System (ctOS). The ctOS connects everything from traffic lights and security cameras to devices such as the Optik, an augmented reality optical device with a built-in artificial intelligence that functions as a web browser, a wallet, and personal identification. Thanks to the Optik and the ctOS, everyone in London is identified with name, profession, and salary, as well as their current whereabouts and actions. Further upgrades to this profiling system can also give information on a person's relationships and schedules, not unlike interconnected systems for profiling seen in place in the world today. It's mandatory for the people of London to wear an Optik. The player character is one of millions of citizens who are continuously under surveillance—although this surveillance is partly limited because the player character is also a member of the vigilante hacker group DedSec, who can to some extent bypass the implant's surveillance. Ultimately, DedSec's goal is to expose and overthrow the corrupt government. By hacking into the ctOS, DedSec shows both how powerful and how vulnerable the system is.

As members of DedSec, player characters in *Watch Dogs: Legion* often find themselves part of complex surveillance assemblages wherein they initiate and control most of the surveillance. Note that *Watch Dogs: Legion*'s player characters ("Operatives") differ from player to player because the game system randomly creates them based on a set of predefined profile traits. Later Operatives can be recruited freely from the citizens of London—essentially turning non-player characters into player characters based on demographic profiling. My first Operative was an elderly woman identified as Sally Fitzsimmons and profiled as a novelist and retired cryptographer. Sally and other Operatives use the city's surveillance cameras to gain control over other citizens by, e.g., finding criminal records or seeing what happens behind closed doors.

Sally can also use cameras as decoys by programming them to make noise to attract attention. Oftentimes, surveillance assemblages include both surveillance cameras and drones. One such example is hacking into a camera to find an aerial delivery drone, hijack it, make it fly to street level to pick the Operative up, fly the drone up to a roof, initiate a spider drone they carry with them, and control the spider drone into a very narrow entrance to gain access to classified information.

It's worth noting that *Watch Dogs: Legion* focuses more on portable cameras such as drones and less on stationary security cameras than its predecessors do (it's a stand-alone title in a franchise, much like the James Bond films, so there are several similarities to previous titles in the same series). This shifting focus could be seen as a contemporary trend that harkens back to the metaphor of perspectival change that *Super Mario 64*'s Lakitu Bros introduced: from the static to the portable. However, stationary cameras are still important parts of the surveillance assemblage in *Watch Dogs: Legion*. In fact, security guards will alert someone if they see a drone entering prohibited space but not if the Operative is hacking a surveillance camera, because there's no identifiable alien body present. The security guards in *Watch Dogs: Legion*, like many people in the physical world, are habitualized to surveillance cameras in urban areas. For a player character, repurposing technology that is already present doesn't draw Big Brother's attention.

Interacting with the surveillance camera is a kind of prosthetic embodiment that involves several interrelated agents. Consider the following scenario: Sally is standing inside Scotland Yard's reception area. She uses her cellphone to hack into a surveillance camera behind the reception counter. Turning the camera slightly, she locates the button that temporarily disables the body scan's alarm system next to the counter so she can pass unnoticed. The diegetic assemblage of Sally, the cellphone, and the camera show how the "whos" are blurred. Using Haraway's (1988) concept of situated knowledges, we can acknowledge the assemblage while focusing on the "from wheres": the perspectives of the older white woman rebel standing in a London office lobby and the wall-mounted security camera in a heavily surveilled space.

Becoming the camera isn't, however, becoming invisible for Sally. Visually, the player's perspective moves to the surveillance camera's location instead of presenting Sally's cellphone as she would see it. In this new perspective, the camera (and by extension the player) can still see Sally—albeit pixelated, because DedSec has a hacked version of the ctOS. Thus, when Sally "is the camera," she is also still in the lobby, staring at her cellphone. Because of her hacker abilities, Sally is free from *identification* by technical surveillance but she isn't completely free from being seen. Dubrofsky and Magnet (2015) identify that, in the face of surveillance, there's a continuous trade-off between seeing and not seeing, between invisible bodies and hypervisible bodies. The assemblage shows how Sally isn't allowed to become oblivious to her own body; she isn't allowed not to have a body (Haraway 1988). Moreover, this insistence on a body ironically shows that the jump from Sally to the camera isn't into "a conquering gaze from nowhere" (Haraway 1988: 581) because it's also her. In this instance, Sally can't escape representation nor avoid being seen. In other words, having the power to make others visible doesn't necessarily relieve you from being seen. The camera is present regardless.

Hiding from mechanical eyes is an important strategy for DedSec, as for *Final Fantasy VII Remake*'s Avalanche, with the difference being that DedSec can actually hide most of the time. Sally and other Operatives use both nontechnical and technical ways of escaping identification. Every mission involves simple yet effective cloaking devices like a mask or a uniform. More advanced strategies include an augmented reality cloak that temporarily renders the Operative invisible or using the ctOS hack to become "illegible" for surveillance camera profiling. These instances of tricking vision aren't reserved for cutscenes but happen in the virtual environment where the player can control it. Thus, attempting to hide becomes a primary mechanic in the game.

Cyborg vision in games such as *Watch Dogs: Legion* shows how the camera as an agent is intrinsically interrelated with other agents in the assemblage. It also shows how this vision is never unmediated. There's perhaps a sense of universality in the surveillance camera. After all, it's fixed in the same place outside of (human) bodies for every playthrough. But the generated player characters show that even just within the

diegetic space, it's never the same vision. In Scotland Yard, the gaze is simultaneously that of Sally, the security camera, and whoever else might be watching the camera feed. Each unique agent constitutes a part of the vision. Going beyond the diegetic world of *Watch Dogs: Legion*, this parallels the relationship between player and game. As Andrejevic (2015: xvi) remarks, surveillance technologies provide “a suggestive metaphor for the fact that our gaze is never unmediated, innocent, or free of preconceptions, background knowledge, and information.” Through the partial perspectives of cyborg vision, we see that this vision is not only changing and enhancing but also faulty, active, embodied, specific, limited, subjective; in other words, situated.

Hacking in *Watch Dogs: Legion* is a negotiation between different agents about who is allowed to watch. For the Operative, watching is power. As the Operative, I continuously look for and navigate around surveillance cameras; I think with cameras. Whitson and Simon (2014) explain that allowing players to act “as if” they're agents or subjects of surveillance gives the experience of watchfulness in addition to abstract meanings of watching. The player “literally,” not just metaphorically, engages in focused watching because the surveillance camera both enacts and thematizes the human-nonhuman relations here (Whitson and Simon 2014: 31). Thus, Sally staring at her phone and becoming the surveillance camera in Scotland Yard parallels how the player experiences embodiment being distributed between bodies and perspectives. This effect also blurs the borders between the diegetic world and our physical world because the cameras don't neatly separate between diegetic and nondiegetic worlds, which fails “to situate viewers in a consistently and coherently designed spectating-position” (Denson 2020: 26).

However, to embody the surveillance camera is not only about acting through it but also being acted upon. We're prompted to engage with these cameras, and in turn, they control which actions are allowed and how to approach the game; how to play. Focusing on the camera's perspective in such a way can help hold us accountable to “what we learn how to see” (Haraway 1988: 583) because the diegetic camera interface limits and expands vision, enables and constrains information. Here are found traces of the concept of “seeing surveillantly” (Finn 2012). The concept builds on Sontag's (2008: 1) claim that “(i)n teaching us a new visual code, photographs alter and enlarge our notions of what is worth looking at and what we have a right to observe. They're a grammar and, even more importantly, an ethics of seeing.” Phrased differently, the cameras influence us back. In *Watch Dogs: Legion*, using surveillance cameras is almost always beneficial to the player character's cause, but the surveillance camera design only highlights certain people, objects, paths—in short, not everything is important. You can only see and act on parts of information. As a result, what's worth looking at and what we have a right to observe are regulated by the presence of the surveillance camera.

The narrative and game mechanics of *Watch Dogs: Legion* allow players to reflect upon and experiment with surveillance in society, which has ramifications beyond the virtual environment. This invitation is especially evident in the diegetic podcasts. They raise current topics, such as historic and contemporary fascism, Nazism, harassment of immigrants, suspension of the checks and balances system, fake news, and several mentions of surveillance capitalism (Zuboff 2019). In fact, the in-game podcasts literally ask questions we see in our own news, such as “What is privacy in the digital world?” and “How can we tell when our national media has become state propaganda?” These questions are directed to the player as much as they're to the player character, emphasizing that we, like DedSec, should be skeptical about ubiquitous surveillance. In the words of *Watch Dogs: Legion*, the ubiquity of surveillance has a direct influence on the people living through it: “It's a much more peaceful society. It's just much less of a society.” The sheer number of surveillance cameras in fictional London and their cooperation with other technologies not only opens a new space for play but also for considering the increasingly intertwined relationship we have with surveillance technology around us.

In the end, however, the empowerment of hacking into surveillance cameras complicates the critique the game raises. Corrupt governments and corporations are doing evil through these cameras, but the system is good if *you* use it. As in *Final Fantasy VII Remake*, the player character's perspective largely dictates the representation of surveillance agents but rarely, if ever, turns the magnifier back on themselves. In its desire

to empower players, *Watch Dogs: Legion*, like its predecessors, doesn't clearly prompt the player to stop and think about whether they *should* hack (see Huls 2014). The idea of the "good guys" doing bad things is briefly mentioned on two occasions but not elaborated. In one podcast episode, the hosts speculate that DedSec's hacked version of the artificial intelligence inside Optiks might be dangerous if left unchecked. Additionally, the primary villain raises and then quickly glosses over the tensional question of how many people had to die for DedSec to be where they are now. Private corporations are sarcastically compared to malevolent deities, but the Operative that uses the same infrastructure escapes critique. DedSec's power eventually becomes more than that of the villains in the game, and it would be terrifying if it were in less benevolent hands. In DedSec's management, however, everyone is safe. In other words, *Watch Dogs: Legion* says that panoptic systems are here to stay; we just need to make sure the right people are in control. There's no escaping surveillance, only controlling. Consequently, the embodied experience of surveilling in *Watch Dogs: Legion* simultaneously contests and reinforces surveillance culture.

### Playing Surveillance, Playing Cameras

Traditionally, the vernacular use of play associated with games as something lighthearted seems to stand in juxtaposition with more dystopian aspects of surveillance society. Yet, as illustrated by surveillance scholars and game scholars alike, play repeatedly proves to be a serious business (Albrechtslund and Dubbeld 2005; Bogost 2007; Jørgensen 2014; Marx 1996). The forty-one games in this article are complex examples of surveillance as entertainment (Albrechtslund and Dubbeld 2005) that call into question the relationship between power and play, technological and human, and visibility and control. It's undoubtedly playful *and* serious to hide in the security room of the spaceship in *Among Us* (InnerSloth LLC 2018) and attempt to catch on camera which of your friends is the killer, or to carry portable surveillance cameras with you to always stay in their line of sight and avoid being tranquilized by the government in *Nothing to Hide* (Case 2014). These cameras are not only part of the aesthetics of the virtual environment: they are a condition by which the virtual environment exists.

Embodied surveillance cameras in digital games make the camera metaphor explicit as an aesthetic, narrative, and mechanical preoccupation. The narratives of *Final Fantasy VII Remake* and *Watch Dogs: Legion* emphasize the consequences of corporate greed and injustice and the necessity to fight back. In fact, both player characters are already rebelling from established groups against systemic control when the game begins. Avalanche and DedSec are seemingly at the margins because the ruling class targets and outlaws them. To not fight isn't an option. Our player character protagonists operate away from the public eye but are forced into the light by being framed for attacks and labeled as terrorists. Visual surveillance is proof. However, moving the focus from a narrative level to a mechanical one shows that the invitations to respond differ for Cloud and the Operator and that their responses are constructed around surveillance camera representations. Cloud can attempt to hide and disrupt; he doesn't have access to the technology itself, only taking evasive measures as its target. The Operator is given the opportunity to interact with and through the cameras, still subjected to the gaze they inflict on others. In both instances, to varying degrees, the player experiences thematized cyborg vision by embodying not only the player character but also the surveillance camera. This new space of play is within the carefully constructed interface of the surveillance camera.

Games can thematize cyborg vision, which shows not only how machinic transformation of vision allows for perceiving what normally would be beyond the capability of a human but also how it limits and controls action. Indeed, *Final Fantasy VII Remake*, *Watch Dogs: Legion*, and most of the other games discussed<sup>3</sup> show surveillance done by you as purely benevolent and even altruistic but surveillance done to you as oppressive—yet the technology stays the same. When an Operative has control of surveillance cameras, it's

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<sup>3</sup> Out of the forty-one games, there are five games that challenge this representation. *Beholder* (Warm Lamp Games 2016), *Do Not Feed the Monkeys* (Fictiorama Studios 2018), *Orwell* (Osmotic 2016), and *République* (Camouflaj 2013) show how economic disparity and labor aspects of surveillance assemblages force player characters to engage in oppressive and intrusive camera surveillance, while *Observation* (No Code 2019) presents the camera as a kind of unreliable first-person narrator where we're unsure of "our" intentions.



presented as a helpful tool, whereas the sentiment takes a negative turn when they or Cloud is subjected to the gaze of the machine. The shift is in those who operate the surveillance camera and the power this control brings. However, as I have demonstrated, vision is constructed by several agents, including an often-silent agent: the camera. As surveillance technologies “propose new modalities of attention and watchfulness in our everyday lives” (Whitson and Simon 2014: 316) and contribute to partial ways “of organizing worlds” (Haraway 1988: 583), we should consider these cameras as parts of surveillance assemblages where each agent contributes to how we think and play with and through cameras.

This study of the game camera in general and diegetic surveillance cameras specifically draws attention to and problematizes the increasingly partial and embodied cyborg visions with which worlds are viewed. Such a pluralistic and situated vision between human and nonhuman agents will be increasingly relevant as we outsource more perceptual capabilities and agencies to the machines around us. Cyborg vision crosses the “border” between human and nonhuman and is a term that can help scholars explore human-technical surveillance assemblages within, between, and outside of the realm of games. Playing cyborg vision’s embodied experiences of surveillance in games allows us to reflect on the way in which camera technologies are intertwined with everyday life, and the power dynamics that are present in these assemblages. The permeability of vision within these virtual environments is then mirrored in the intersection between virtual environment and physical world. Through these layers of cyborg vision, games allow power fantasies and their critique—the hiding, hacking, destroying, protecting, disrupting, escaping, subverting, investigating, commanding, complying, avoiding, and exploiting—to coexist within a space of play.

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