

# Virtual Vistas: Exploring the Art of In-Game Photography Presence on Social Media



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## **Abstract**

This thesis delves into the emerging field of virtual photography, an artistic form seamlessly integrated into the digital landscapes of video games. Investigating the intricate relationship between the virtual and the tangible, the study meticulously analyzes in-game photographs to unveil the subtleties often overlooked, decoding implied meanings. These visuals are meticulously crafted within the game's interactive canvas, while tools including photo mode and editing software offer creative freedom and subjective viewpoints. Virtual photographers act as intermediaries between the abstract and the concrete, as demonstrated by enlightening case studies of interviewed artists. Across diverse virtual photography genres, the thesis probes the phenomenon of spectacularization, capturing moments that blur the line between reality and imagination in the context of a posthuman condition marked by cycles of renewal.

Furthermore, the research delves into the impact of social media on virtual photographers' identity and authorship. Merging virtual reality with daily life, the cyber realm becomes a platform for artistic expression. Incorporating hashtags and online platforms in posted photographs weaves a hypertextual network, amplifying the reach of digital artworks and nurturing a sense of authorship within a global community. This study redefines artistic expression in a space where pixels and boundless creativity converge, ushering in a fresh era of visual dialogue.

***Key words:*** Photograph, Game, New Media Art, Authorship, Virtual Reality, Screenshot

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## Introduction

Virtual photography, also referred to as ‘in-game photography’, is a burgeoning art form that is rapidly gaining recognition in the domains of gaming and visual media. Nowadays a trend in gaming culture has seen players from around the world identifying themselves in their social media bios as "virtual photographers" or "Vpers." This label reflects the player's use of the in-game viewport to control not only their character, but also a virtual camera that can capture images and footage of the in-game action. By doing so, these players have created a new form of gameplay that focuses on the artistic and creative elements of video game environments, with millions of related posts spreading across social media platforms such as Twitter<sup>1</sup> and Instagram (ShotKit, 2020). For example, a search of the Twitter hashtag *#VirtualPhotography* can reveal a vast array of images shared by Vpers, showcasing their carefully constructed homes in games like *Animal Crossing: New Horizons* (2020), taking selfies with online friends in games such as *Final Fantasy XIV* (2013) and *World of Warcraft* (2004), and even taking virtual tourist photos in historical destinations of *Ghost wire Tokyo* (2023) and *Assassin's Creed Odyssey* (2017) as a way to cope with travel limitations in real life.

In the past decade, capturing images within video games has been acknowledged as a rising type of new media art, equivalent to in-real life photography. Not only recognized by gamers, but also popular to museums and galleries, which have started exhibiting these works. Game developers, organizations, and art galleries have collaborated to create new avenues to showcase virtual photography. For instance, Ubisoft Studio's exhibition *Photomode: Out There in Games* featured photographs taken within their gaming worlds at the Ideal Glass Studio in New York in November 2022 (O'Brien, 2022); In April 2022, selected virtual photography artworks were

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<sup>1</sup> In August 2023, the social media platform ‘Twitter’ underwent a name change to ‘X’. However, for the purpose of maintaining the contextual relevance of the interview with the photographers, this paper will continue to refer to it as ‘Twitter’.

exhibited at Trafalgar Square during the London Game Festival, attracting over 100,000 visitors (Bromley, 2022). This trend has persisted, as The London Game Festival has collaborated with the virtual photography platform TheFourthFocus for the 2023 Virtual Photo Challenge, inviting contributions from the Twitter community (TheFourthFocus, 2023). The selected submissions will be once again presented at Trafalgar Square in the upcoming event (TheFourthFocus, 2023), further emphasizing the consistent rise in the popularity of virtual photography. This example also serves to accentuate the notable increase in the recognition of virtual photography's significance.

As this emerging art gains increasing prominence within the realms of social media and gaming, its recognition within the fields of game and new media art is steadily growing. However, virtual photography remains a relatively unexplored artistic realm for the mainstream audience, despite the attention it is garnering. Hence, this thesis endeavors to deeply explore this novel art form and aims to foster a comprehensive understanding of this emerging trend. Moreover, by analyzing in-game photography, this study sheds light on the contemporary predicament inherent in the domain of digital art, specifically considering factors like AI-generated art and software produced photographs. In an era marked by the escalating engagement of intelligent machines in algorithmic generated art (Mazzone & Elgammal, 2019, p.26), and the potential for digital artworks to be duplicated through various artist-authorship connections (Finnemann, 2016, p.2), queries about the authenticity and artistic essence of creation come to the forefront. Thus, the thesis aims to dissect this evolving phenomenon by centering on virtual photograph creators actively engaged on Twitter, chosen as a case study. The research methodology entails conducting interviews with these virtual photographers and conducting an exhaustive semiotic analysis of their works. Employing qualitative analysis as its research methodology, this paper delves into the realm of in-game photography. This investigative approach seeks to offer insights into how the dynamic landscape of contemporary digital culture and the gaming industry has fostered the emergence of this novel form of

photography.

Situated within the contemporary landscape of gaming culture, this study aims to navigate the intriguing confluence between virtual photography and in-real life photography. It seeks to illuminate how virtual photography manages to encapsulate the essence of its conventional counterpart while embracing its distinct attributes and aesthetic orientations. Additionally, the research delves into the intricate processes through which players, who are actively immersed in virtual realms as audiences, carve out their identities as photographers. This involves active engagement with social media and a gradual evolution of the virtual photography subculture into a burgeoning artistic activity characterized by both scale and authenticity. To comprehensively address these research questions, the thesis is organized into three distinct chapters, each focusing on a specific facet of the phenomenon. These questions guide the exploration:

1. What is the historical trajectory of virtual photography, spanning from its origins to its present status, and how has it evolved into an authentic form of artistic expression within players' digital everyday lives?

2. How does the aesthetic of game photography interconnect with virtual environments, and how does this connection compare to or contrast with traditional real-world photography?

3. In what ways do players engage with social media platforms to immerse themselves in the role of photographers within virtual environments? How does this immersion impact the concept of authorship?

Based on these questions, the first segment of the thesis delves into the history of

virtual photography, tracing its origins and development from the turn of the millennium to the present day. By intertwining the narrative with insights garnered from virtual photographers themselves, this section aims to provide valuable perspectives on the developmental journey of this art form.

The subsequent phase of the study delves into a comprehensive analysis of diverse genres of virtual photography, closely examining the works of various virtual photographers who have been interviewed. Through this exploration, the chapter aims to unveil the unique characteristics and aesthetics that define virtual photography as an emerging visual art form within the context of gaming. By dissecting a variety of genres, including landscape photography and portraiture, specific examples will be presented to illuminate the intrinsic creative diversity inherent in virtual photography. In addition, this chapter seeks to delve into the concept of spectacularization within the digital photographic realm and to contemplate the potential implications of this phenomenon on the posthuman condition.

The third and final segment of the study delves into the establishment of players' authorship as artists within the domain of virtual photography. It investigates the mechanisms through which virtual photographers actively mold and assert their artistic identities on platforms such as Twitter, Instagram, and Discord. These digital arenas serve as virtual galleries where photographers exhibit their work, engage in artistic conversations, and forge connections with fellow artists and enthusiasts. By scrutinizing the strategic maneuvers employed by virtual photographers to solidify their authorship and garner recognition, this part of the research aims to shed light on the evolving dynamics of artistic creation in the digital era.



## **Literature Review**

### **Photography and digital art**

Since its invention in Britain and France in 1839, photography has garnered significant attention from scholars, particularly in relation to its picture-taking capabilities (Harker, 1979, p.2). As a representational system, photography has played a crucial role in capturing likeness and has freed painting from the responsibility of faithfully depicting the real world, thereby allowing artists to explore new possibilities in their work (Kosinski, 1999). Certain studies argue that subjective compositional choices serve as the foundation of aesthetics in photography. From this perspective, it becomes crucial to understand the relationship between photography as an artistic creation and reality, as well as how it influences the meaning of the final photograph. Steinert (1953) emphasizes the importance of authenticity and the constitutive power of the gaze. He views photography as a humanized and individualized process that captures the essence of the subject, fulfilling our innate desire for reality (1953, pp.26-27). In the field of art, Fry (1937) compares the mechanical nature of photography to painting and suggests that the meaning of a photograph arises from the emotional response and personal experience of its author. Wollen (1978, pp.9-28) analyzed the aesthetics of photography and argued that creativity resides in the artist rather than the technology. He revealed that photographers intentionally avoid uniform sharpness of focus and illumination to achieve higher aesthetic quality. Greenberg (1939, pp.34-39) argued for art to isolate itself from the social context of production, during the modern photography era, influenced by modern art, photographers utilized light, form, and composition to offer new perspectives.

Since the 1990s, digital cameras gained popularity, marking a transition from the analog age to the digital age of photography. The mechanical process of photography,

born in the 19th century, reproduced reality with accuracy, creating the illusion of reality (Benjamin, 1937). During this time, a wave of artists, critics, and scholars contributed to a theoretical movement in photography, coinciding with the emergence of reproducibility technology. Key theorists emerged, significantly influencing the discourse on photography. Benjamin (1937) highlighted the potential of photography to liberate and disseminate knowledge. Roland Barthes employed structural linguistics, semiotics, and Brechtian Marxism to uncover ideological messages in everyday images (Barthes, 1981). Barthes (1977) viewed photography as a medium of communication that conveys a message to its audience, leading to the development of photographic semiotics as a means of understanding photographic images that contain a "message without code" (1977, p.45). Sontag (1977) and Bourdieu (1990) examined the social and cultural dimensions of photography. Sontag (1977) juxtaposed photography with other art forms and argued that it presents a subjective interpretation of reality. She also noted that photography imposes a way of seeing and alters reality by appropriating the subject of the photograph (1977, p.4). Berger (1972) argued that interpreting each image is subjective and dependent on personal experiences, beliefs, and opinions, making photography a powerful tool for manipulation. In contrast, Flusser (1985) focused on the broader concept of future "technical images," exploring the relationship between technology and humans beyond photography alone.

In the 21st century, the rise of digital culture has led to various phenomena on social media that have become sources of artistic creation for photographers. This new digital era has blurred the boundaries between art photography and popular photography. Current research on photography not only focuses on the visual image itself but also places significant emphasis on the digital technology that constructs the photo carrier and display environment. It also explores the relationship between the mass production and dissemination of digital photographic images and the interactions between the audience and photographers themselves. For instance, Palmer (2019, pp.385-397) argues that in the networked environment of social media,

photographers may experience decentralization and a potential loss of authorship. Additionally, Richter and Schadler (2009, pp.169-177) explored how digital photography's integration with the World Wide Web has shifted the focus from mass production to mass dissemination, shaping a new role for photography in society, reflecting the virtual self of the users. Suess (2019) examines how both art institutions and photographers can effectively engage with their audience on social media platforms, facilitating the extension of visitors' aesthetic experiences from offline to online environments. O'Hagan (2021, pp.610-631) highlights how social media can serve as a virtual museum, exhibiting works and acting as a flexible branding tool for photographers. Amidst the AI technology surge, scholars study AI-generated digital photography alongside traditional and other visual arts, initially met with skepticism due to intelligence machine involvement (Hertzmann 2018, pp.1-25; Agüera y Arcas 2017, p.18). Mazzone & Elgammal (2019) delve into AI's impact on the new wave of machine-generated art and the artists' row, exploring how the computer programme can simulate art patterns, including those of painting and photography, through machine learning.

### **Game photography in the age of massive digital replication**

Benjamin (1935) argued that the massive mechanical reproduction of images via photography and printing led to a radical loss of aura. This loss of aura began with the photographic apparatus, which replaced a single visual existence with a plurality of copies (Benjamin, 1935). This vanishing of aura could potentially continue with the second wave by virtual photography. In the digital realm of games, subjects can be replicated in even larger quantities by display screens and network, while time, space, weather, and people can be easily manipulated. At the same time, images captured in the virtual world obtain the same authenticity as traditional photos: They convey the essence of photography. The availability of virtual screenshots based on popular games has further expanded people's accessibility to photography and provided new

possibilities for the evolution of the medium in the future.

Nowadays, individuals in modern societies are increasingly exposed to digital culture and the virtual world, wherein visual communication plays a prominent role in a multimedia setting. This has led to a growing significance of the digital photographic image in people's everyday lives, as noted by several scholars (Bastos, 2014; Fusari, 2017; Rossi, 2017; O'Hara & Higgins, 2017; Cruz & Salazar 2016; Sbriccoli, 2016; Strathman, 2015). With the advancement of science and technology, photography has also evolved in form and techniques. The emergence of new media such as the internet, social media, and mobile devices since the 1980s has transformed the way we create, consume, and interact with visual images (Howells & Negreiros, 2012, p.273). This development has created conditions for the spread and growth of in-game photography. At the same time, the germination of in-game photography was born as early as the 1990s, and its development pattern created conditions for it to grow into an extension of traditional photography.

In the 1990s, in-game photography started integrating photographic perspectives and navigation tools with game mechanics (Sandor and Fron, 2001, pp.1-2; Giddings, 2013, pp.41-42), making the combination of photography and games possible and leading to the current trend of sharing game photography on social media. In gaming, players validate the reality of their subjects by controlling the virtual camera (Poremba, 2007, p.50). Robins (1992/2009, pp.99-115) studied photography activity in this alternate space of virtual reality, finding that players exist disembodied, with any engagement with the real world being indirect and mediated through a screen or other imaging technology (Robins, 1992/2009, p.111). This view aligns with Boulter's (2015) study on games and post-human objects, in which he argues that photographic activity enables a prosthetic and cyborgian extension of post-human subjects, exemplified by the virtual photographer and avatar. The avatar serves as a narcissistic projection of the player, mirroring and mimicking the player's physiological responses

(Boulter, 2015, p.60).

### **Game as a form of new media**

Game studies established itself as a distinct academic field at the beginning of the 21st century, carving out its own territory amidst attempts of colonization from literature and cinema, and emerging as a pseudo-field within the realm of new media (Aarseth, 2001). The field emerged in the early 2000s as a response to studies that primarily focused on the social and psychological effects of players, often neglecting the deeper significance of gameplay (Aarseth, 2001; Consalvo and Paul, 2019). This development led to the establishment of dedicated journals such as *Game Studies* in 2001 and Sage's *Games and Culture* in 2006, as well as the formation of the Digital Games Research Association in 2002 (Consalvo and Paul, 2019). During this period, digital games were predominantly associated with console or computer games created by major companies and distributed through physical retail outlets. Juul (2009) extensively examined this phenomenon, including the storytelling ambitions of games and the subsequent 'casual revolution', as well as the widespread adoption of digital distribution platforms like Steam (Juul, 2009). In subsequent years, game scholars further explored disparities within game genres, such as role-playing and massively multiplayer online games, and established a tier system to determine which games were worth studying (Coavoux, Boutet & Zabban, 2017, pp.563-584).

With the advent of web 2.0 and the proliferation of personal devices in the subsequent decade, game studies shifted its focus towards exploring the intersection of the mobile internet, online communities, and social media. Notably, Mäyrä (2011) conducted research on practices such as photo sharing on platforms like Flickr and engaging in mobile games on Facebook. Wohn (2012, pp.74-79) delved into the concept of casual games as spaces where players converge within social networks to collectively construct meaning, and examined gender and race representation in casual games

through content analysis (Wohn & Wash, 2013, pp.155-159).

Simultaneously, as the gaming industry continued to expand, researchers began to place a greater emphasis on the artistic and aesthetic aspects of game design, as well as the engagement of the audience. Costikyan (2015) conducted an examination of performative uncertainty, analytic complexity, and narrative anticipation within games to create distinctive experiences that could enhance the artistic designs. In a similar vein, Juul (2016) analyzed how players and audiences engage with tragic elements in video games, drawing comparisons to other artistic mediums like literature, theater, and cinema. This investigation shed light on the human fascination with encountering discomfort within the realm of interactive media. Furthermore, By exploring both the shared characteristics and unique qualities of games and traditional art, Sharp (2015) provides valuable insights into the process of game design and the assessment of games as a fine art form, addressing the divide between games and traditional arts by presenting a formal aesthetics framework specifically tailored to games. Furthermore, Sharp and Thomas (2019) utilize a fun-centered aesthetic framework to explore various games and related subjects, including the dismissal of fun by game journalists and designers, as well as the extension of play aesthetics beyond the realm of games. Consalvo and Paul (2019) analyze the impact of debates on video game authenticity on game development and player inclusion. They specifically explore how game elements such as genre, visual aesthetics, platform, and perceived difficulty can raise concerns about a game's "gameness."

### **Screenshot as in-game photography**

The specific academic interest in in-game photography can be traced back to the turn of the century, when the rise of Web 2.0 and personal devices sparked a significant transformation in digital culture. Since the late 1990s, games such as *Mario 64* (1996) and *Pokémon Snap* (1999) have pioneered the integration of photographic perspectives and

navigation tools with game mechanics (Sandor and Fron, 2001, pp.1-2; Giddings, 2013, pp.41-42). Building on this trend, Sandor and Fron (2001, p.1) predicted that video games could become the most prominent extension of future photographic art, while Giddings views them as signaling the disappearance of the camera apparatus and the unlocking of post-modern photographic expression (Giddings, 1995/2013, p.42). Besides, Book (2003) and Brinkman (2020) discussed how screen capturing serves as photography in the virtual world, with the similar functions and aesthetic as tourist photography.

The study defining the subject of virtual photography was by Pormeba (2007), she explored how game screenshots simulate photographic techniques by regards it as a remediating practice containing the same value as traditional photos. Since then, many studies of in-game photography have followed, to investigate its potential on simulation and remediation. For example, Moore (2014) did qualitative investigation by graphing the deployment of in-game photography across Twitter and Flickr. Gazzard (2016, pp.151-162) analyzed the virtual photographs stored on Flickr to reflect reconstructed nostalgias in the mediated space. Gerling (2018) investigated Screenshot as a digitally created photograph in everyday life, the specific status and materiality of these images of screens. Backe (2018) discussed the in-game images' potential on myth and metaphor, how they counteract ontological disconnect with reality and establish new visual logic.

As research in this field has accumulated over time, some scholars have developed comprehensive theories in their works regarding virtual photography, aiming to provide more nuanced insights. For example, in the study of Möring and de Mutiis (2019), they explicated the difference between regular screenshots and in-game photography, whereas in-game photography is sophisticated remediation practice, often modified and manipulated using dedicated photo modes and other tools (Möring and de Mutiis, 2019). Moreover, Möring and de Mutiis (2019, pp.75-86) classified in-game photography in four main types, from focusing on imitating photography experience to the image control and modification. which gave out a clear spectrum of

this activity inspired my study a lot. And the work of Švelch (2020) subtly contrasted the existing phenomena on studying in-game photography, argued for the redefinition of screenshot and showed the need for critical literacy of screenshot based images.

In the latest research trend, scholars tend to associate virtual photography with the development of network technology and regard it as a form of visual art. For instance, Tyžlik-Carver (2023, pp. 171-186) addresses the networked character of virtual photography and views the screenshot as a format that reveals the networked character of the image. Rossenova (2023, pp. 208-228) considers in-game photography as a complex, non-linear, and networked form of born-digital cultural expression and representative image of born-digital artifacts, with potential equivalent to the scan or photograph of a painting.

Screenshots have often been regarded and analyzed as a form of remediation of photography (Book, 2003; Gerling, 2018; Giddings, 2013; Moore, 2014; Möring and de Mutiis, 2019; Poremba, 2007, Švelch, 2020). This concept was introduced by Bolter and Grusin (1999), and it refers to the way that new visual media achieve cultural significance by paying homage to, rivaling, and refashioning earlier media. The emergence and development of in-game virtual photography is a typical example of remediation progress, achieved by refashioning and extending cameras that are embedded in the same or similar experiences. Bolter and Grusin (1999) also extend this concept to analyze the remediated self of the audience. From a rhetorical perspective, the self is constructed, imagined. People see themselves today in and through our available media, they are what the film or television camera is trained on, and at the same time they are the camera itself. In the case of in-game photography, the remediation of self can obviously be seen through the user's shooting activities.

### **Research gap**

Virtual photography is a new creative method with great potential. It has not been



widely studied by the academic community for a long time. However, in the past two decades, an increasing number of scholars have focused on it as a research topic and discussed it as a new media activity and postmodern art form. Most researchers follows the remediation paradigm, but may of them relegated to a mere form of remediation of photography (Book, 2003; Gerling, 2018; Giddings, 2013; Moore, 2014; Möring and de Mutiis, 2019; Poremba, 2007), few have further studied the mediated self as expounded by Bolter and Grusin (1999).

Much of the discussion of virtual photography focuses on the imaging techniques and game mechanics themselves (Backe, 2018, Book, 2003; Gerling, 2018; Giddings, 2013), or on quantifying the data and tags involved (Moore, 2014). In other words, most current studies on virtual photography focus on the mechanics of photography in the game itself and how this emerging photography remediates the camera. However, few scholars have explored the phenomenon and behavior itself from the perspective of practitioners. To address this gap, this thesis will interview virtual photographers to discover more aspects of this type of photography and gain a deeper understanding of this art activity.

The existing research on games and social media sharing primarily revolves around mobile games and casual games on PCs (Consalvo and Paul, 2019; Juul, 2009; Mäyrä, 2015, Mäyrä & Alha, 2020). However, with the integration of social media features in the new generation of game consoles and the increasing popularity of one-click sharing of game screenshots, there is a need for further investigation into console games and social media sharing activities. Regarding the aesthetics of game design, the focus has largely been on the perspectives of game designers and developers (Costikyan, 2015; Consalvo and Paul 2019; Sharp and Thomas, 2019), as well as how players engage with games as an audience (Juul, 2016). However, there has been limited research exploring players as artists themselves. Moreover, in the study of Rossenova (2023), she assume in-game screenshot with potential equivalent to the painting or prints, but end up with the negative conclusion, because screenshots

documenting and representing art in online archives and can involve performative, participatory and networked elements outside a browser window (Rossenova, 2023, p. 209). Hence, this thesis will research the participatory online elements attached to virtual photography, and to what extent it can remediate and refashion other forms of representation (magazine, gallery, showcase, etc.).

Furthermore, while virtual photography is often linked to nostalgia and tourism (Book, 2003; Brinkman, 2020), there are few studies that examine it as a form of gallery in its own right. Backe (2018) claims that in-game photography is a tool in the aesthetic repertoire of digital games and explores its metaleptic potential. However, all the data he selected came from relatively crude screenshots taken directly from random nodes, which limits the scope of his research. In the last five years of the new generation of games, many games have included a photo mode that simulates photography activities (Möring and de Mutiis, 2019), offering a more detailed and realistic environment with artistic potential (Consalvo, 2020). This raises questions about how photographs become a representation of the virtual world and what kind of aesthetic they address. These questions will be explored in this article.

## **Theoretical framework**

### ***Photographic Universe***

The concept of the photographic universe encompasses our experience, understanding, and evaluation of the world as shaped by photographs. Vilém Flusser, a prominent figure in the field, highlights the future of images and emphasizes the electromagnetic nature of present and future images. Flusser draws a parallel between capturing photographs from the real world and a game of capture. The photographic

universe, being in a constant state of flux, corresponds to a combination game where each situation represents a unique throw (Flusser, 2000). In his work "Towards a Philosophy of Photography," Flusser theorizes the photographic universe using four technical categories: image, apparatus, program, and information (Schwendener, 2016).

To further explore these concepts, Flusser provides definitions in a lexicon included in the book. Notably, Flusser's interest in game theory becomes evident in his definitions, such as the "Functionnaire" (a person who plays with and as a function of an apparatus), which should not be confused with a "Photographer" (a person who seeks to capture photographs with information beyond the camera's program) (Schwendener, 2016, p.145). One term that holds particular significance is "program" (Flusser, 1993, p.259). While it may seem counterintuitive to interpret photography through the lens of a computer, the computer explicitly reveals what the camera and chemical photography conceal: the reliance on software. Flusser aptly states in the essay "Art and Computer", "Computers are apparatuses that process information according to a program. This is the case for all apparatuses, even simple ones like the camera. However, in the case of the computer, this condition is particularly clear: when I purchase a computer, I acquire not only the hardware itself but also the software that accompanies it" (Flusser, 1993, p.259).

### ***Gaze***

The Gaze, a theoretical construct discussed in John Berger's "Ways of Seeing" (Berger, 1972), acts as a reflective lens, illuminating how society and culture impact how we perceive individuals. This theory elevates awareness among literary critics and readers by exploring power dynamics and equity in our modern world. This framework also draws from various authors and integrates ideas from diverse works of scholars. For instance, Argyle and Cook (1976) delves into the cultural and societal

aspects of reciprocal viewing behavior (Argyle & Cook, 1976). Geetha & Sarulatha (2017) further examines gaze and gender equality in terms of both literal and metaphorical observation (2017, p.1-5). This theory amalgamates ideas from different scholars, weaving a tapestry of notions from different intellectual currents.

Berger's original argument claims that European art often portrayed women as conscious of male observers (Berger, 1972, p.49). Paintings of female nudes symbolized submission to a male "owner" of both woman and artwork (Berger, 1972, p.52). Post-Renaissance European sexual imagery often centered on the male viewer, representing a form of ownership (Berger, 1972, p.56). This extends to lifelike representations in paintings and photography, indicating a desire to possess portrayed objects or lifestyles (Berger, 1972, pp.83-92). In virtual photography, this theory takes a turn. Unlike traditional art, players in virtual realms can freely choose their character's gender. The female protagonist within a game becomes both observed and the player's avatar, adding layers to the concept of the human object gaze. As the female protagonist within a game is observed, and the female body serves as the avatar of the player (which can be any gender), the human object gaze takes on a more intricate and multifaceted nature.

### ***Author and the Authorship***

Foucault (1969, pp.89-174) delves into the process of writing and the question of authorship from an internal perspective, while Barthes analyzes the external consequences, with a focus on authorship in relation to institutions. In "the Death of Authors", Barthes states, "we still lack a sociology of language" (Barthes, 1977 p.185), while Foucault sets aside socio-historical analysis for the purpose of his paper (Foucault, 1969). By collating various quotations, it becomes evident that there are points of convergence between their ideas. Barthes traces the death of the author back to the French Revolution, when authorial language was first used for political purposes. He distinguishes between an "author" who supports literature as a failed

commitment and a "writer" who is more commonly known as an intellectual. In contrast, Foucault (1969) restricts his focus to the unique relationship. The crucial difference is seen to lie in the fact that artists bear ultimate responsibility for whatever objectives they choose to pursue through their work, whereas the forger's central objectives are determined by the nature of the activity of forgery.

Additionally, appropriation artists, by revealing that no aspect of the objectives an artist pursues are in fact built into the concept of art, demonstrated artists' responsibility for all aspects of their objectives and, hence, of their products (Irvin, 2005, p. 123). This responsibility is constitutive of authorship and accounts for the interpretability of artworks. Far from undermining the concept of authorship in art, then, the appropriation artists in fact reaffirmed and strengthened it (Irvin, 2005).

### ***Posthumanity***

In the realm of virtual photography, games act as thematic channels through which the concept of transitioning into posthumanity. This interplay establishes an ecosystem of exchanges that provides players with a tangible encounter with the concept of the "posthuman". These instances can be seen as symbolic depictions of the posthuman condition, surpassing mere thematic elements to encompass experiences that mirror players' personal immersion into the posthuman realm while they engage in gameplay (Boulter, 2015, p.2). This journey is steered by a complex web of technological interactions involving player-console/computer, player-avatar, and player-narrative (Boulter, 2015, pp.15). Consequently, these virtual landscapes evolve into fertile domains for the reconstruction and reimagining of one's sense of self.

Moreover, the spatial dimension of the game, functioning as an archive for each

unique play session, adds an additional layer of intricacy. Engaging in virtual photography becomes a method of documenting these archived conditions, revealing how the emerging subculture crystallizes the posthuman condition during gameplay. The progression of the game unfolds within a space that embodies both destruction and reconstruction, resonating with the very concept of the catastrophic posthuman subject. This spatial attribute within the gaming environment aligns with the core essence of the posthuman subject's essence. This subject extends beyond the virtual world, manifesting as a player situated in physical space and real-time. The fusion of virtual and tangible encounters enhances the exploration of posthuman subjectivity within the context of virtual photography (Boulter, 2015, p.114).

### ***Spectacularization***

Contemporary digital media places significant emphasis on visual effects, often resulting in the distortion of real-life references to heighten their visual impact. This phenomenon, termed "spectacularization," is driven by the eagerness to portray a multitude of subjects on screen (Maza, 2014, pp.2-4). Spectacularization is not confined to movies alone, but is also prevalent in video games, which share similarities in their production and consumption as cultural products. Leveraging computer technology in game making enables players to witness awe-inspiring wonders. Game developers have crafted intricate narratives and immersive settings to outshine their competitors, ranging from recreations of historical events in ancient times to treacherous landscapes inhabited by wildlife and fantasy warriors, and even futuristic worlds populated by mechanized monsters illuminated with neon lights.

Furthermore, in this thesis, the concept of spectacularization extends beyond the game creators' construction of the in-game photographic universe. It is also manifested through the creativity and imagination of the player in the role of the photographer when utilizing the photo mode. The introduction of photo modes has empowered players to exercise greater control over the virtual environment in open-world games, enabling them to interpret and engage with its textures more freely, even after

undergoing spectacularization. This interplay between game developers' artistry and players' photography skills results in a captivating and immersive experience within the virtual world.

## **Methodology**

This thesis utilized qualitative research methods, specifically in-depth interviews and visual semiotics, due to the research focus on the artistic creation and aesthetics of virtual photography. Different from previous research that predominantly examines the technological aspects of virtual photography (Backe, 2018; Book, 2003; Gerling, 2018; Giddings, 2013), or focuses on quantifiable audience factors such as age, race, and gender to identify patterns (Wohn, 2012), this research places its emphasis on the aesthetic and artistic authorship of virtual photography. Furthermore, virtual photography, emerging as an art form within social media, is cultivated and honed by game players themselves. It relies less on specific quantitative data or predefined markers, and more on intuitive decision-making by these players. This mode of intuitive decision-making has often been overlooked in scientific investigation, possibly due to science's inclination toward analytical rationality (Flyvbjerg, 2001, p.17). Hence, this study opts to emphasize qualitative data collection over quantifiable metrics like gender, race, pageviews, etc. The objective is to analyze how players utilize virtual photography as an intuitive means of expression while actively engaging with games and related content.

The aim of the thesis is to comprehend the experiences and context of virtual photography as a creative practice and how the audience/photographers' activity intersects with the real world and social media. The researcher prioritizes the subjective perspective of the photographer, where understanding the subjects being photographed serves as a means to achieve a deeper understanding of the

photographer's intentions and artistic expression. Certain research questions cannot be adequately addressed using quantitative methods. The choice of in-depth interviews allows for a deeper exploration and understanding of the subject matter by directly engaging with the artists who create this form of art.

To conduct the interviews, the researcher took an active approach by engaging with the Twitter community, participating in online photography events, and forming connections. Essentially, the culture and aesthetic of virtual photography is constructed based on how individuals understand it, or in other words, the meaning associated with such terms are socially constructed and interpreted (Fujii, 2018, p.81). The goal of this study was to acquire knowledge about virtual photography as a growing form of online popular activity and visual art creation. Consequently, the research aimed to explore the meanings attributed to specific forms of social action and investigate the contexts that influence these actions. By doing relational interviews within the targeted community, the researcher aimed to comprehend the meanings ascribed to this particular type of social action, as well as the social worlds and cultural forms that arise from it (Fujii, 2018, p.5). Establishing relationships with interviewees not only facilitated a deeper understanding during the interviews but also fostered a comfortable and relaxed environment, encouraging participants to share more detailed information (Fujii, 2018, p.3). Furthermore, the engagement of interviewees through their social media accounts facilitated additional insights and corrections during the subsequent analysis. This interaction not only enhanced the accuracy but also enriched the comprehensiveness of the gathered information.

The snowball strategy was employed to expand the pool of participants, resulting in a total of twelve virtual photographers<sup>2</sup> from diverse countries around the world. These in-depth interviews, conducted via Zoom, discord and Telegram, lasted approximately 45 minutes to 1 hour each, and structured by the designed questionnaire. Due to

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<sup>2</sup>In addition to the twelve interviewed artists, virtual photographer Kai also provided a collection of photos along with brief captions for the study, even though he couldn't partake in the interview.



various constraints, such as time zone differences, some interviews were conducted through email or messaging platforms. A meticulously crafted list of interview questions laid the groundwork for steering in-depth discussions and facilitating a thorough exploration of the research topic. These interviews were carried out in a semi-structured format, where the interviewer adhered to a predetermined set of questions while also providing flexibility for impromptu inquiries (Wengraf, 2001, pp.3-4). This method adeptly amalgamates the advantages of both structured and unstructured interviews, culminating in a unified and all-encompassing approach to data collection (Wengraf, 2001, p.1). Employing this model of sequencing diverse interview experiences and strategies aims to foster openness, allowing novel concepts to emerge during the interview based on the interviewee's input (Wengraf, 2001, p.61).

The analysis of interview data following the 'Common-sense Hypothetico-inductivist Model', which involves collecting all relevant facts and analyzing them to determine the theory that emerges from the data (Glaser & Strauss, 1999, pp.45-49). Based on induction, the arguments and theories are suggested or mandated by the facts reflected in the data. The in-depth interviews were conducted using a semi-structured approach, with the researcher/interviewer incorporating partially prepared questions aligned with their concerns and initial theoretical framework (Wengraf, 2001. p.2). The interview consists of four parts, aiming to explore different aspects of virtual photography (see. *Appendix 3: Questionnaire for Interview*). The first part serves as an introduction, discussing the interviewee's motivations, favorite games for photo mode, and comparing virtual photography to real-life photography. The second part delves into the nature of virtual photography, the role of the photographer as the author, and the tools and software used. The third part focuses on aesthetics, exploring the desired artistic style, techniques, and key elements for creating impactful in-game photos. It also touches upon influential artists and advice for establishing oneself as a virtual photography artist. The final part examines the significance of virtual photography communities, including motivations for joining and their impact on the artist's work. It also invites reflections on the distinction between in-game screenshots and traditional photography. Although there is a proposed sequence for the interview sections, the

questions may be adjusted based on the interviewee's responses, allowing their concerns, values, and experiences to take center stage during the conversation.

Additionally, the use of visual semiotics enables the analysis of artworks produced by the interviewed artists. This visual analysis helps to uncover the implicit and often unspoken aspects of the artists' work, complemented by their own contextual knowledge and insights. The combination of in-depth interviews and semiotic analysis provides a comprehensive understanding of virtual photography as an art form, its contextual background, and the messages it conveys. After the interviews were concluded, this study adopted semiotics to thoroughly examine the photographic works created by the interviewed photographers. Semiotics, when applied to photography, involves deconstructing the signs and messages inherent in visual texts. A producer or sign-maker possesses an intended meaning that they wish to convey. This meaning is then encoded into a form provided by a medium, with the producer selecting the form that best suits their purpose (O'Neil, 2008, p. 90).

Barthes (1957) embarks on a semiotic exploration of signs in his work 'Mythologies', delving into an analysis of social codes, and notably underscores how our actions and choices serve as conduits for the communication of our social identities. Semiotics encompasses the entirety of what can be perceived as a sign, while texts, in contrast, possess greater ambiguity and susceptibility to diverse interpretations, often appearing opaque rather than transparent. Additionally, information embedded within an image can be categorized into denotation and connotation, resembling primary and secondary messages, as suggested by Eco (1986, p.63) In this thesis, the semiotic framework is employed to comprehend the nuances of denotation and connotation. Photographs have the unique ability to capture fleeting and irreplaceable moments, extracting them from the continuous flow of human existence. In the realm of virtual photography, these captured instances within games possess a profound allure, offering a chance for introspection through revisualization. It's important to note that

while photographs in the physical world serve as visual keepsakes and testimonials of our identities (Danesi, 2002, p.107), the virtual world remains relatively unexplored in this regard. Hence, one of the core objectives of this thesis is to use semiotic analysis to reveal the experience and playing conditions that are woven into in-game photographs, often escaping immediate recognition. Through analysis, the aim is to amplify the visual impact of these images and unravel the implied implications embedded within the signs they portray. This exploration takes place within the distinctive context of the subculture of game photography, shedding light on the intersection of visual storytelling, technology, and identity in the digital age.

## **Chapter One: What is Virtual Photography?**

This rising subculture of virtual photography revolves around a type of gameplay that focuses on capturing and sharing the graphics of various games. With image capturing and rendering capabilities, video games provide players with the ability to take pictures within the digital environments they inhabit. These "cameraless photographs" allow players to document their individual gameplay experiences and express their creativity through artistic creation, all while maintaining a sense of control over the creative process (Poremba, 2007, p.49). However, despite this growing recognition, virtual photography is still unfamiliar to many. Questions arise, such as how virtual photography is carried out in games, how photography without a camera is possible. This chapter will focus on these questions and explore the intricacies of virtual photography.

### **1.1 Screenshot situations, photography perspective, and the born of photo mode**

Screenshots in computer games function similarly to real-life photography, as they capture and visually represent the intricacies of the game world. Their history can be traced back to screen image photographs of cathode ray tubes and X-ray screens, and they have played a significant role in demonstrating the possibilities of interactive computational processes (Gerling 2018, pp.150-151; Tyżlik-Carver, 2023, pp.174-176). These early screenshots, or "screenshot situations", have modeled forms of interaction between humans and computers that are now commonplace, helping to visualize a certain concept of interactivity (Tyżlik-Carver, 2023, p.176). With the development of graphical user interfaces and personal computers, screenshot technology has evolved and now provides a transparent image of computer use. Infrastructures like screens or monitors, digital display hardware, memory boards, and image compression algorithms such as JPG or PNG formats all play a role in making visualizations of computational processes possible (Tyżlik-Carver, 2023, p.176). Captured using keyboard shortcuts, screenshots serve as a representation of the interactive computer and its usage. In the modern age of personal computers and other

digital devices, taking a screenshot is as simple as pressing the shutter on a camera. For example, in *World of Warcraft* (2004), to produce a game photo, players simply need to hide the game's user interface by pressing the "ctrl+z" key combination, allowing for an unobstructed view of the game's visual content and taking a screenshot. By capturing and sharing moments of gameplay through screenshots, players can generate engaging content suitable for sharing on online forums or social media platforms.

Meanwhile, the camera's eye-view, developed in the game since the 90s, enables the players to become the virtual photographer that films the in-game action with an invisible camera (Poremba, 2007). The burgeoning of the photographic perspective can be dated back to when *Mario 64* (1996) started to integrate gameplay with the enabling players to observe the game from their character's point of view (Sandor and Fron, 2001, p.2). Games from the same period like *Pokémon Snap* (1999) and *The Sims* (2000) offer players even greater freedom to experiment with photography as a narrative tool, helping the player establish the identity as a photographer (Giddings, 2013, pp.41). For example, *Pokémon Snap* challenges players as journalists to capture candid shots of Pokémons, while *The Sims* allows players to capture screenshots and create their own family sagas (Giddings, 2013, pp.42). These early games demonstrate the potential for photography to be used as a tool for creative expression within the world of gaming.

Around the turn of the millennium, gaming consoles such as Nintendo DS, Nintendo 3DS, Playstation PSP began to offer generic screenshots, which further blurred the line between video game screenshots and general photography. For instance, *Figure 1.1* showcases two types of virtual photography available on the Nintendo 3DS (2004). The console comes equipped with a screenshot function that can be activated by pressing the 'R' and 'L' buttons on the back. The left side of the *Figure 1.1* shows a

player using an ID photo booth within the game to create their virtual ID card. The right side of the picture demonstrates how players can take photos from different angles in any scene through the built-in screenshot function of the game console. Furthermore, photos taken through screenshots are displayed in the built-in 'slideshow' photo gallery alongside real-life shots taken through the camera lens (Figure 1.1). This combination of screenshot function and play mechanism in the game console, as well as the classification of screenshot files in the system, reveals that in-game screenshot, as a legitimization for photography, was further promoted by game developers and players.



**Figure 1.1:** Game Photos On the Nintendo 3DS (2004).

Source: Photograph Yimeng Li

The next evolution of virtual photography comes with the incorporated 'photo mode' that caters to the player's graphical preferences and is designed with camcorder-like functionality. The first game to introduce photo mode as a feature was *Gran Turismo 4* (2004) on the PlayStation 2. Since its initial implementation in *Gran Turismo 4*, numerous video games have incorporated photo modes into their features. Often referred to as 'photo travel' or 'photo mode,' this mode allows players to capture in-game screenshots with advanced camera controls and editing options to assist players to take better screenshots. With a simple touch of a button, users can hide the

game's user interface and capture pure screenshots. Additionally, photo mode provides users with the freedom of a free camera, allowing them to capture images from various angles within a designated area. Users can also control the field of view (FoV) and depth of field (DoF) with manual focus and aperture settings. In addition to these features, photo mode often includes color filters and creative borders, providing users with further customization options. In some games, pushing a button permits the player to freeze the flow of activities and step out of the game to focus on the isolated photographic condition (Möring and de Mutiis, 2019, p.78). “In games with photo mode integrated, by pausing the game and entering the photomode, I can choose the exact moment I want to crystallize” (Gonçalves, 2023). With the options inside the photomode, players can use the photo mode to build the game image they want, and when the layout is complete choose to hide the game UI and press the Screenshot button.

Using the *Animal Crossing* series as a case study once again, it is worth noting that the latest iteration, *Animal Crossing: New Horizons* (2020), has incorporated two new photo modes that exemplify the evolution of in-game photography: The first mode simulates a real-life commercial photography studio, operated by the player's neighbor Harvey. In Harvey's studio, players have greater control over the photography space, enabling them to freely adjust the subject position, clothing, lighting, background, and furnishings (*Figure 1.2*). Moreover, in addition to taking photos, players can also record a movie by pre-setting the character's movements. The second photo mode is the addition of the "pro camera" in the updated 2022 version, which features a retractable lens that can switch freely between bird's-eye photos, selfies, and handheld camera modes (*Figure 1.2*). These features demonstrate how game developers are continually innovating to enhance players' experience by providing them with greater freedom and creativity in virtual photography. The inclusion of these new features in the game also highlights how the mechanics of in-game photography have evolved to match the semiotics of contemporary photography, providing players with a more realistic and immersive experience.



**Figure 1.2** 'Harvey's photo studio' and the 'pro-camera' mode in 'Animal Crossing: New Horizons' (2020). Source: Photograph Yimeng Li

This use of handheld cameras or photography studios as a means of gameplay is common in social simulation games, offering players the opportunity to capture and document their virtual everyday lives. However, some games have taken this integration of photography further, incorporating it in unique ways to enhance gameplay and storytelling. In *My Time at Portia* (2018), for instance, players take on the role of a builder who can work part-time as a photographer for a local newspaper and create in-game photo frames to display their work. Similarly, in *Disney Dreamlight Valley* (2023), players can use a handheld camera to take selfies with Disney characters, simulating the experience of taking photos with characters at Disneyland. These examples illustrate how video games are utilizing photography as an immersive aspect of gameplay and storytelling.



However, the integration of virtual cameras into game design transcends the realm of social simulation games, extending to various other genres as well. A prime example lies in the open-world action game *The Legend of Zelda: Breath of the Wild* (2017) and its sequel *Tear of Kingdom* (2023). Here, the protagonist Link wields an ancient camera to capture images of animals, weapons, flora, and creatures, effectively creating an in-game encyclopedia. Similarly, "Super Mario Odyssey" (2017), known for pioneering the initial virtual camera perspective, employs an automated virtual camera that captures 'hint art' depicting crucial events and locations to assist players in puzzle-solving. Furthermore, the samurai action game *Ghost of Tsushima* (2020) showcases the prowess of photo mode. This feature enables players to manipulate time and date, alter lighting sources, weather conditions, and even depict elements like swirling petals, blood-stained sword strikes, and mud-covered terrain. These meticulous details and incorporation of Oriental aesthetics significantly enhance the visual experience, underscoring the evolving role of virtual photography in diverse gaming contexts.

## **1.2 The development of sharing mechanism and photo quality**

*“The photo mode was not born for Virtual Photography, but over the years this world has always made itself known more, and now all the manufacturers know that we enjoy taking the pictures and improving them.”*

*(Arianna, 2023)*

The increasing use of virtual cameras across various game genres highlights the significance of photography as a tool for immersive gameplay and storytelling. Moreover, these in-game photographs serve as a record of players' daily gaming experiences, which they can freely share on social media platforms such as Twitter, Twitch, YouTube and Facebook. For instance, *Super Mario Odyssey* (2017)'s hint art photos can be saved in the Nintendo Switch's system album by pressing the screenshot

button, which enables players to share their captured images to their Twitter and Facebook accounts. In recent years, many new versions of game consoles such as Nintendo Switch, PlayStation 4/5, Xbox Series X/S, and Xbox One, have incorporated a one-click share to social media feature in their system albums, effectively turning in-game photography into a virtual selfie on social media. This emerging trend has laid the groundwork for the widespread popularity of virtual photography in the last five years.

The advancement of virtual photography is further facilitated by the increased computing power of stationary game consoles. Handheld consoles, exemplified by the Nintendo Switch, prioritize portability and weight reduction, while stationary consoles, represented by the PlayStation 4/5 and Xbox series X/S, prioritize power to run games and are comparable in size to a small personal computer. They operate by connecting to a player's personal television or other display, enabling significantly improved graphics and smoother gameplay. Stationary consoles provide games with highly realistic character models and intricate open-world environments that have reached new levels of aesthetic ambition, making them the dominant force in the field of virtual photography. In a survey carried out by the 'Virtual Photography Gamers' community, which gathered 164 responses (Virtual Photography Gamers, 2023), the data reveals the preferences of virtual photographers in terms of gaming platforms. The results show that it was found that 60.4% of virtual photographers use PlayStation consoles, 15.2% use Xbox consoles, while 23.8% use personal computers. Only 0.6% choose to use handheld consoles (Virtual Photography Gamers, 2023). The results of this survey are also consistent with the trend learned through the interviews in this study.

Meanwhile, the new generation of blockbuster games has made fine graphics a production priority. In addition to featuring elaborated photo modes, these games also put a huge effort into improving the photographic subject, such as breathtaking open-world vistas with stunning detailed designs. These games offer players an

opportunity to capture images with astonishing levels of detail that rival real-world art photography. “I remember when *Uncharted 4* came out and it was the biggest news that we could see light shining through ear cartilage and stuff” (Bookmancer Legendarium, 2023) , one interviewee described how the photorealistic details of the game *Uncharted 4* (2016) on PlayStation 4 caused sensation among virtual photographers. Taking advantage of this trend and the potential for social media word-of-mouth advertising, numerous blockbuster games now incorporate dedicated photo modes that offer players a range of options to enhance their screenshots, such as advanced camera movements, artistic rendering, and saturation adjustments. As Möring and de Mutiis (2019) and Urban (2022) note, these photo modes imbue otherwise plain screenshots with the qualities of artistic photography.



**Figure. 1.3** *'The Last Of Us Episode 6: Video Game Differences And Similarities'*. Source: Photograph HBO Max.

In the past five years, photo mode has emerged as a popular feature that enables players to capture and share immersive in-game experiences through virtual photography. The inclusion of this feature is attributed to the advanced graphics capabilities of modern consoles, which incorporate improved character models and animation work, thereby enhancing the cinematic experience. Furthermore, the more

fluid and visceral combat action in modern games provides an additional layer of immersion for players. For example, *The Last of Us* (2013) on PS4 and its sequel, *The Last of Us Part II* (2022), showcase these advancements, featuring a delicate huge world that encourages exploration. The games' realistic lighting and detailed interiors with their unique stories contribute to the quality of the virtual photography produced through the photo mode, which can even rival stills from the HBO Max TV drama that base on the same story (*Figure 1.3*, HBO Max, 2023). Therefore, photo mode in modern console games not only provides players with an immersive experience but also offers a platform for high-definition photography.

### **1.3 Modifications and editing Softwares**

In 2019, Möring and de Mutiis (2019, pp.75-86) provided a summary of the four primary types of virtual photography, namely simulated photography central to the game condition, additional photo mode production, artistic screenshotting, and photo modifications. Möring and de Mutiis' summary, to some extent, corresponds with the development history of virtual photography (Möring and de Mutiis, 2019, pp.75-86). However, this paper argues that the development sequence should begin with the early combination of simulated photography condition and screenshot, followed by the birth of photo mode, and culminate in the enhancement of degrees of freedom in various modifications.

Although station consoles and built-in photo mode in games have become today's mainstream of virtual photography, the field of virtual photography is also evolving towards higher degrees of freedom, which is an essential factor that impacts the quality of virtual photography. Moreover, some virtual photographers have more stringent requirements for their own photography and prefer to use specialized game computers, which possess even better characteristics than game consoles (Bruining, 2023; White, 2023). These allow them to enjoy an unlocked framerate, mods, and

other features that game consoles cannot provide. Additionally, skilled virtual photographers create their own photo mode extension, or they modify and edit game settings to achieve more personalized visual effects (McMaken, 2023; PolarNinja, 2023; White, 2023). For instance, Frans Bouma, an engineer and virtual photographer active on twitter, designed a series of modifications and enhanced photo modes that have gained popularity, providing players with greater control and freedom in the virtual photography space (McMaken, 2023; PolarNinja, 2023; White, 2023). Furthermore, some players not only rely on photo mode but also use image editing software such as Photoshop and Lightroom to process the output of photo mode, which has become one of the trends of shaping their unique aesthetics.

#### **1.4 Crystallize moments in game: Everyday life, human imagination and the universe of technical images**

In 1977, Susan Sontag's essay *On Photography* discusses the historical issues that have arisen in the field of image-making. She notes that the invention of photography has led to a significant increase in the quantity of images being produced, which has altered the way people perceive and interact with images. Sontag suggests that photography's introduction has modified the human condition, as people are now educated by photographs and have developed a different visual code from the past (Sontag, 1977, p.1). This has resulted in people's gaze adapting to the eye of the photographic device, enlarging their notions of what is worth looking at and what one has the right to observe. As a result, the grammar and ethics of the gaze have been redefined, making photography a fundamental element in understanding modernity.

Sontag (1977)'s concerns from forty years ago remain relevant today, as digital media continues to transform how we see and understand the world. The interaction between humans and technology has significantly intensified with advancements in portable devices, mobile internet, web 2.0, and other technologies shaping contemporary civilization (Mirocha & Contreras-Koterbay, 2016, p.10). The replication of images made possible by photographic devices has been surpassed by the widespread

influence of digital technology. Our choices, actions are digitally captured, transformed, and presented to us in a seemingly seamless and natural manner, resulting in digitized visual expressions that revolutionize our everyday lives. In-game photography, as described in the previous section, is one manifestation of this phenomenon, based on screenshot technology and virtual camera perspective. The emergence of virtual photography enables a third-wave redefinition of the grammar and way of seeing since the advent of the camera. In this context, the screenshot button acts as a digital counterpart to a camera shutter, allowing players to appropriate moments from their digitized everyday life that take place in the virtual space. As an example, one interviewee mentioned that she used photomode in the game *Horizon Forbidden West* (2022) to take landscape photos and shared them on Twitter with describing texts, to create an in-game travel diary. She compared and connected this experience to the traditional way of documenting her life with written and photographic records decades ago:

*“I used to do photography before in the dark ages without the Internet or smartphones, you had to actually use a real camera... and the diary was made with paper. Now of course I can just use a virtual camera... You have no idea how much I love technology, dear! ”*

*(Moreira, 2023)*

Since the rise in popularity of virtual photography among gamers, scholars have turned their attention to the conditions of photography without a physical camera in video games, they considered it as a remediation of physical camera and the simulation of traditional photography (Book, 2003; Gerling, 2018; Giddings, 2013; Moore, 2014; Möring and de Mutiis, 2019; Poremba, 2007, Švelch, 2020). From this perspective, the activity of virtual photography gains the same authenticity as real-life photography. However, little attention has been paid to the digital environment in which virtual photography takes place. In-game photography does not simply exist in isolation: It relies not only on photography techniques and virtual lenses, It also means the photographer putting themselves into a certain relation to the virtual world behind the screen. Just as in traditional photography, the photographer's situation and its

relationship with the photographic subject appropriated contain a kind of knowledge that reflects power, Photography of the game world also reflects the power of the player as a link between the virtual and the real.

In the case of virtual photography, the mathematical code brought forth by the computer has led to the emergence of alternative worlds in games that mingle with reality, the following example from the interview description demonstrates the experience of the in-game photographic activity base on the alternative world behind the screen:

*“I strongly stand by the fact that the real-life is a 'world', just as any virtual world is a 'world'. Photography is a way to share one's vision of this 'world', to crystallize subjectively relevant moments or to simply share the beauty of such a 'world'... In that sense, Virtual Photography is the same. ”*

*(Gonçalves, 2023)*

To further clarify this alternative world dwells in the virtual space of games, the term "photographic universe" coined by Vilem Flusser (2000) is particularly relevant. Flusser's ideas build upon Susan Sontag's discourse and expand towards digital images, arguing that every medium generates a unique realm through its specific code. This notion spans from ancient Greek philosophy of the atomists (Flusser 1988, pp.20-24) to the chemistry of photography in the eighteenth century (Howells & Negreiros, 2012, p.184), and to the modern era of mathematical thinking and computer technology. As such, each image produced by these technical processes constitutes its own universe. Within this universe of technical images, programmed by apparatuses, lies an attempt to explain texts, and technical images are themselves applications of texts. In the case of virtual photography, as the technical image born inside the games devices, how is its photographic world composed with computational programs and the illusion of imagination and power? This section argues that, rather

than simply simulating traditional cameras, the essence of virtual photography lies in the fact that computer code simulates and exaggerates the real world, allowing us to manipulate and exercise our freedom in the technical photographic universe.

In-game photography has been compared by some players to touring and taking artistic photographs of a building (Ariana, 2023; Bookmancer Legendarium, 2023). However, unlike physical architectures, which can be experienced directly, the game object is not a tangible entity but a phenomenological one. Players cannot perceive the game object directly and must construct an idealized version in their minds. In the realm of digital code, algorithms, and virtual events, players can only access specific game sessions determined by their choices and the game's parameters (Aarseth, 2009, p. 65). As a result, a general play session cannot be accessed, and each action taken by the player eliminates other potential actions. Consequently, players do not possess complete knowledge of an ideal game object and instead must rely on their imagination to create an idealized version of the game (Aarseth, 2009, pp. 65-66). This potential uncertainty based on individual action positions virtual photography as another form of photographic activity that records personal experiences and situations. Meanwhile, through the use of external software and the manipulation of photo mode mechanisms, virtual photography offers the opportunity to incorporate human imagination into the image-making process. This paradigm shift challenges our understanding of the boundaries between digital and physical spaces, offering opportunities for creative expression and critical reflection.

The intersection of the game situation and human imagination is manifested in the freeze option provided by photomode. While the pause feature in video games allows players to freeze an in-game situation, photo mode with its built-in pause feature goes beyond merely taking a screenshot. Instead, it captures an instantaneous slice of time in virtual space that players can manipulate according to their design: “The photo



mode pauses the action and then one can take pictures of the motion or fighting or posed portraits from all angles” (PolarNinja, 2023). This enables players to explore and photograph virtual spaces from various angles, such as from high altitudes or cliffs, providing the virtual camera view with greater versatility and flexibility.

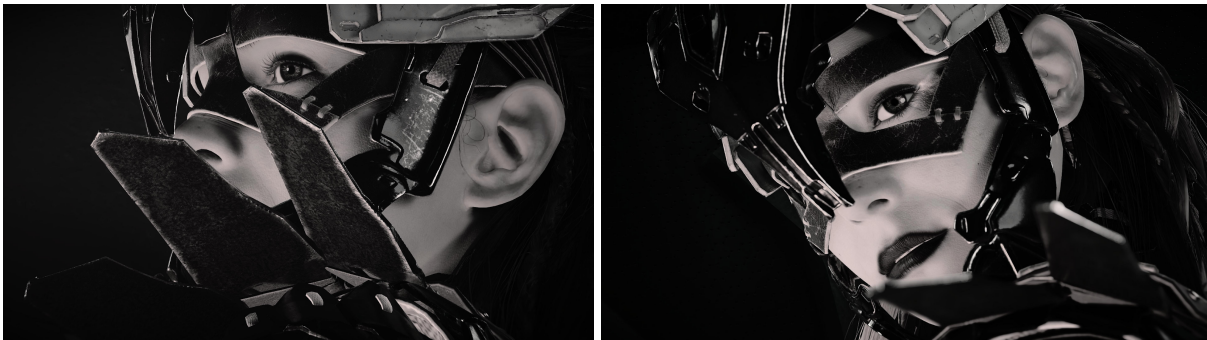
Furthermore, the selection of the lens angle also offers more freedom on the photographic perspective, as the camera without a physical entity does not require a solid support. After freezing the image, the over-the-shoulder camera's position can be moved freely in the air around the protagonist of the game within a certain range using the joystick of the game controller, allowing for arbitrary adjustments to the lens angle. As one player remarked, "the camera radius isn't really restricted—it is at some point, but the radius is big enough for me" (Suni, 2023). In addition to controlling game characters and camera positions, photomode image-making involves manipulating the environment and other decorative details. Game developers continuously expand and refine photo mode features and options to cater to players' creative needs and align with their artistic vision. Through the cases discussed above, we can observe the deconstruction of traditional photography into the virtual realm, and the recombination of photographic steps. In this photographic universe constructed by manipulatable computer algorithms, the capturing of images and situations precedes the arrangement of photographic objects and environments. Instead of extensive preparation work, the photographer captures the scene first. For example, a professional photographer who also plays games describes the differences between virtual and real photography:

*“Especially when taking a portrait shot, it may take an hour of preparation to process just one photo of a real person. But in games, the perfect model is already there... you just make color adjustments and other adjustments like this. “*

*(White, 2023)*

In addition to photography itself, the reimagining and recombination of photographic

art creation structures extends to image texture and post-processing. For instance, the initial process of black and white photography in the early stages of photographic history involved silver chloride exposed to sunlight and fixed with sodium chloride. By placing objects against sensitized paper, delicate and intricate contact prints of objects, known as "photogenic drawing," were produced (Howells & Negreiros, 2012, p. 185). Seth Giddings (2013, pp. 41-55) views in-game photography as a form of "drawing without light," and compares it with 19th-century black and white photography, whereas virtual photography is the remediation of physical photography. However, from the perspective of a photographer, virtual photography is not merely a drawing, and the mimic light itself is a human imagination of photography.



*Figure 1.4* Black and white portrait photography situation built through the game. Source: Photography Yimeng Li

Unlike black and white images produced in the 19th century due to the physical properties of photography or post-processed black and white images made through Photoshop and smartphone selfie apps, in-game photography achieves black and white through the "filter" function of photo mode, which not only acts as a filter but also directly and comprehensively turns all objects in the scene into black and white. This is achieved through changes made to the entire photographic universe via computer code. As illustrated in *Figure 1.4*, when using the black and white filter in photo mode, the space on the screen becomes a complete black and white world. Changing the direction and movement of the protagonist or adding goldeneye paint through "face paint" shows that every perspective displays the objects as black and white. This represents an idealized photographic situation of black and white that is

imagined based on traditional black and white photography, constructed in the virtual world through computer devices and algorithm programs.

In his discussions of the coming era of electrical power, Flusser (1997) predicts that man will no longer be the center of society. Instead, devices and their programs will take center stage, with humans serving as mere conduits between different devices (Flusser, 1997, p.88). Two decades ago, Flusser envisioned a future for electronic photography that has similarities to, but is not entirely identical with, the situation in virtual photography today. He writes of alternative worlds emerging from computers, composed of lines made up of point-elements, surfaces, and eventually bodies and movable bodies, that are not only colored and able to produce sounds, but may even become touchable, smellable, and tastable in the near future (Flusser, 2002, p.202). In today's virtual photography, we have embraced the universe of out-of-point elements and movable bodies, built within the game's computer code-built spaces. While the tangible world is primarily represented through an invisible hand composed of the imagination and algorithms of the player's photographer, this invisible hand can also reach into the game world to unmask an avatar: "I use mode, an external software code that removes the mask from some of the superhero characters to make them more expressive for photography" (PolarNinja, 2023). Through this invisible hand, players and game developers are using the power of technology to empower people from the functions of technical image apparatuses, giving them control over the virtual world and re-establish their freedom in the programmed world. And as the hardware and software related to games continue to improve, virtual photography is moving in that direction with the development of games and programming technology.

Furthermore, in the virtual expanse of the game world, players find themselves enveloped in a posthuman context, marked by the erosion of memory, history, and the very potential for recollection within every isolated gaming session and duplicated

game instances. To counteract this phenomenon, players immerse themselves in the realm of virtual photography, weaving a connection between memories on the precipice of dissolution within the game and their real-life social media profiles. In this vein, although the environment and visual elements of a game remain unaltered with the mass copying and distribution of game products, each player's gaming session is unique. The instances captured from these experiences—repeatedly destroyed and regenerated—are inherently distinctive. The player's imaginative manipulation and reimagining of the game's visual realm hinge on this process of reconstruction after destruction, culminating in the crystallization and rebirth of a specific moment. This state of posthumanity also bestows upon game photographers the authorial ownership of virtual photography, infusing it with subjectivity. This phenomenon will be further discussed in the following chapters.

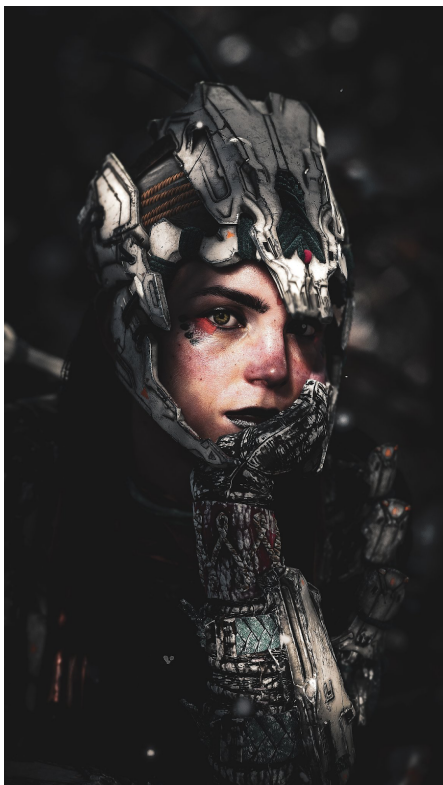
## **Chapter Two: Exploring Various Genres of Virtual Photography Through Case Studies**

The interplay between virtual photography, the digital environment, and its connection to social media has given rise to the spectacularization of photographs and the emergence of a novel visual aesthetic. Building upon the examination of the development and operational aspects of contemporary virtual photography in the preceding chapter, this chapter focuses on selected virtual photography works obtained through interviews. By conducting semiotic analysis, the chapter aims to uncover the underlying meaning and significance behind specific images, drawing insights from the ideas and descriptions provided by the interviewed authors. The findings will be categorized and summarized according to different types of virtual photography, shedding light on the rich and diverse information embedded within these captivating visuals.

### **2.1 Portrait: The touch of light on the virtual human object**

According to Phatak and Borkar (2020, p.682), digital photographs that have visually dominant subjects generally evoke stronger aesthetic interest. In the realm of photography and aesthetics, Wollen (1978, pp.9-28) discovered that photographers intentionally avoid uniform sharpness of focus and illumination to enhance the visual appeal of the images. This approach is rooted in the understanding that our eyes are naturally drawn to salient elements that are sharply defined, brightly lit, or vibrant in color. In virtual portraits, this technique is also employed and exaggerated due to the controllability of the light source. When capturing these portraits, virtual photographers have more control over lighting and angles compared to traditional portrait photography, which often requires elaborate equipment and makeup to

achieve desired effects. While modern games strive for increasingly realistic visuals, in-game photography tends to accentuate these elements through meticulous control of lighting, akin to real-world photography. A popular arrangement in virtual photography involves a dark, highly contrasting figure, accomplished through the use of dark hues and careful implementation (Tinio, 2023). For instance, in *Figure 2.1* (Veren, 2023), the upper left corner features a light source that intersects the frame, drawing attention to the character's face, particularly the eyes and lips highlighted in the title. This effect can be achieved by manipulating virtual light sources, such as the sun or moon in photo mode, to align with specific in-game moments. Alternatively, players can position characters near light sources like lamps or torches and adjust their angles to capture the desired lighting. The artificial yet precisely controlled lighting on the character's face remains consistent regardless of the in-game time or weather conditions, and this artificial lighting can also be manipulated in photo mode (Veren, 2023).



**Figure. 2.1** “Frozen lips, but curious eyes”  
Source: Photograph Veren



**Figure. 2.2** “Submission for Guerrilla  
Snap of the Week theme: Autumn”  
Source: Photograph Suni

In this photograph (*Figure 2.1*), the specific angle of light cutting across the face of the person creates a prominence at the core of their features, while the darkness surrounding the image acts as a framing device, emphasizing the part that contains information and fine details - namely, the face and the static arm of the person. The eyes and lips at the center of the face, which convey the virtual character's emotions, are achieved through changes in facial expression and the painting details of the character in photo mode. The red corner of the eye echoes the two red highlights above the gray armor, while the black lip gloss corresponds to the dark background, creating a visual center. The small areas of color in the dimly lit picture that are close to black and white act as signifiers, connecting with each other and echoing the title attached to the photo.

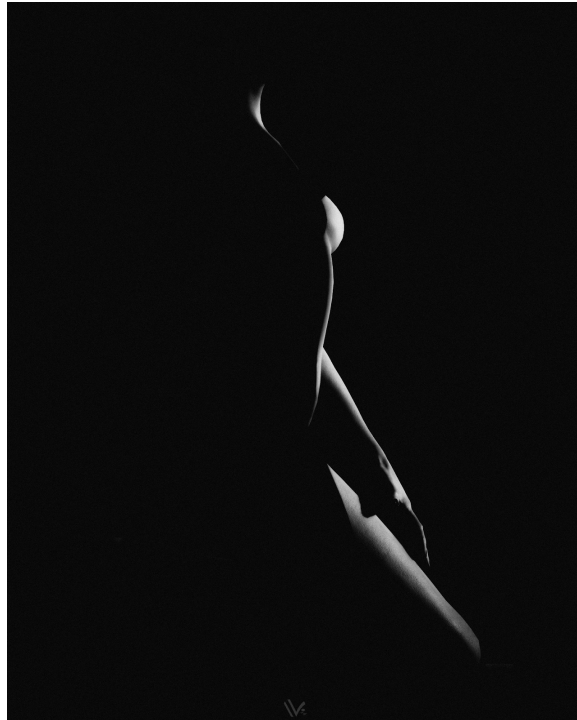
The story of the female character, Aloy, is conveyed through the signified layers of emphasis. In the dark and quiet forest of the game, Aloy, a female warrior skilled in avoiding danger by sneaking through large plants, is depicted with her cheek resting on her hand and frozen lips, conveying her quiet and stealthy nature. Her eyes, decorated with red eyeshadow, are emphasized as a symbol of her warm, brave, and curious personality, suggesting her constant observation and readiness. The camera language guides the audience's attention to the center of the character's face, where emotions are expressed through the progressive use of lighting. The realistic gameplay style captures the virtual character with a level of skin texture and body detail akin to that of a live-action photograph. The heroine's minute wrinkles, freckles, and the subtle sheen of facial makeup, as well as the texture of her clothing, are meticulously rendered. Additionally, the photomode feature enhances the visual experience by introducing a wide range of effects such as fog, snowflakes, and lighting particles. However, it is the exceptional rendering of textures that truly enriches the overall visual quality (Veren, 2023).

In contrast to the previous portrait, *Figure 2.2* (Suni, 2023) features the same character in a different angle and focal length of the lens, resulting in a delightful emotional tone and atmosphere (Suni, 2023). The gold palette and autumn leaves serve as indexical signs, referring to the theme of fall. The light source from the front highlights the character's eyes, while the dark portion in the lower left corner subtly reveals the character's surprised lips. This symbiotic relationship between the player and the game character is further emphasized through the use of macro photography, which intensifies the emotional details of the character and their surrounding environment. And this emotional resonance is then transferred to the player, who also feels a sense of discovery and immersion as they explore the game world. In that case, the use of virtual photography in video games allows for a new form of portraiture that not only captures the appearance of the characters but also their emotions, environments, and relationships with the player (Suni, 2023). By using techniques such as macro photography and indexical signs, game photographers are able to create portraits that are rich in meaning and symbolism, reflecting the complex interplay between the virtual and real worlds.

## **2.2 Nudity and the sensual image**

Amidst the abundance of detailed and visually stunning environments in video games, artists sometimes opt for a minimalist approach when depicting virtual figures. *Figure 2.3* (Veren, 2023) exemplifies this aesthetic with its full-body view. Set against a dark background, the central focus is solely on the female body. It can be considered an implicit nude portrait, where the feminine form is delicately framed by a light source on the right. The composition evokes a sense of tautness and relaxation, as evidenced by the curvature of her back and the raising of her toes.





**Figure 2.3** *“Ease your grip”*

Source: Photograph Veren

The artist characterizes their minimalist portraits as "sensual images" that evoke strong emotions and ignite the viewer's imagination. Berger (2015, p.335-340) once discussed Frida Kahlo's choice of materials, specifically painting on smooth surfaces like metal or Masonite to preserve the integrity of her vision, akin to the smoothness of skin. In a similar vein, within the intangible world behind the screen, the artist employs precise and soft illumination as a metaphor for the player's gaze and sensitivity, guiding attention towards intricate details and fostering contemplation. Through adopting this approach, the artist has undergone personal and artistic growth, deepening their understanding of concepts such as sexuality, femininity, taboos, and sensuality (Veren, 2023). They have come to appreciate how lighting can enhance the sense of eroticism and convey nuanced elements (Veren, 2023). As a result, their artistic style has evolved into a profound reflection of their authentic self. The artist's ultimate objective is to create captures that offer a profound aesthetic experience while sensually unveiling the raw and intense expressions and gestures of the human body. By doing so, they aim to elicit a profound response from the viewer,

encouraging them to explore the depths of their own emotions and perceptions (Veren, 2023).

The depiction of the female body in virtual photography raises important considerations regarding the dynamics of the gaze and power relations between the viewer/player and the virtual subject. The concept of the male gaze has shed light on the historical objectification of women in visual arts and media, and this framework can also be applied to virtual photography. In this context, the virtual female body is often created as a post-human object, existing primarily for the visual pleasure and consumption of the player/viewer. However, it is crucial to recognize the agency and intentionality of the artist behind the virtual photography. In this way, the virtual body becomes more than just a passive object of the player's gaze but a medium for the artist's expression and self-reflection:

*“My style came to reflect who I am in the most profound of ways”*  
(Veren, 2023)

Furthermore, the context of virtual photography within video games adds another layer of complexity to the power dynamics between the player and the virtual subject. The player's control and agency over the virtual character can generate a sense of immersion and identification with the character, blurring the boundaries between the player and the virtual subject. This challenges traditional notions of portraiture as a representation of a fixed and static subject. From this perspective, virtual photography in video games presents unique opportunities and challenges for exploring the representation of the human body and the power dynamics between the viewer/player and the virtual subject. By critically examining the gaze and power relations at play in virtual photography, we can gain a deeper understanding of how gender and agency are negotiated within the virtual space. It allows players to question and challenge existing power structures, offering possibilities for subversion and reimagining of the representation of the female body in art and media.

### **2.3 Human landscape: take glimpses of life in the game**

Human landscape photography is a genre of photography that captures the intricate relationship between individuals and their environment. The genre aims to showcase the interplay between people and their surroundings, while simultaneously highlighting the impact that human activity has on the built environment. This type of photography can be used to document cultural practices and traditions, as well as the diversity of human experiences and ways of life across different regions and communities. In virtual photography, this interplay is often exaggerated as the human landscape is built using codes and 3D models that transcend time, space and character restrictions, thereby distorting reality to some extent. This spectacularization of the human landscape in virtual photography offers a unique perspective, further emphasizing the relationship between individual experience and their surroundings.

*Figure 2.4* (Tinio, 2023) presents a captivating photograph showcasing a Victorian garden scene, where The gentle rays of the setting sun gracefully caress a majestic tower in the distance, casting an enchanting glow that conjures a sense of nostalgia, reminiscent of the aesthetics found in vintage yellowed photographs or evocative oil paintings from bygone eras. In the foreground, a beautiful fountain surrounded by intricately designed plants captures the viewer's attention. However, what distinguishes this photograph is the intentional blurriness and ambiguity of the entire scene. Amidst this ethereal atmosphere, the backlight on the left delicately outlines the silhouette of a man dressed in Victorian attire, serving as a visual cue that harks back to the historical context of this photograph. Furthermore, the composition reveals a group of individuals engaging in conversation near the fountain, also adorned in period costumes. This adds depth to the image, emphasizing the attention to historical detail. Notably, the perspective from which the photograph is taken is that of the player photographer, resulting in a unique and immersive experience for the

viewer. Through the lens of virtual photography, viewers are provided with a remarkable opportunity to embark on a figurative journey through time and experience the historical era firsthand. The intentional blurring, combined with the strategic use of lighting and composition, creates a captivating visual narrative that transports the viewer to a bygone era. The photograph in *Figure 2.4* not only showcases the technical prowess of the player photographer but also invites viewers to engage with the rich historical context and experience the allure of the Victorian garden scene in a profoundly personal and embodied way.



***Figure 2.4 Untitled***  
Source: Photograph Angela Tinio

However, when it comes to urban cityscapes, cyberpunk aesthetics, film noir atmospheres, astronomy photos, and science fiction imagery, photographers often employ techniques such as high saturation, high contrast colors, and captivating

lighting. The aesthetic of cyberpunk photography captures the essence of the megacity or urban sprawl, a central theme in sci-fi literature and television since the 1980s (Halden, 2019, p.217). Cyberpunk imagery often depicts a high-tech megalopolis characterized by towering structures, holographic advertisements, neon lights, and juxtaposed with decaying slums (Halden, 2019, p.217). With the advent of online digital photography, creators from various backgrounds, including professional filmmakers, digital storytellers, and concept artists, are using the global cyberspace to explore these futuristic cities that increasingly resemble our everyday urban landscapes (Halden, 2019, p.220). The gaming scene provides an ideal platform for digital art creation, allowing photographers to accentuate the core of cyberpunk photography through intense and controlled light sources and captivating colors.

In the realm of game cityscapes, photographers draw inspiration from cyberpunk aesthetics, film noir atmospheres, astronomy photos, and science fiction imagery. Techniques such as high saturation, high contrast colors, and captivating lighting are frequently employed to evoke the distinct essence of cyberpunk photography. For example, in *Figure 2.5* (Arianna, 2023), the neon lights adorning Tokyo Tower in the distance radiate a vibrant brightness, evoking the appearance of burning embers and blending harmoniously with the red umbrella in the foreground. The juxtaposition of two streetlights on the same street creates a captivating interplay between contrasting blue and yellow hues. This combination, along with the towering spires of Tokyo Tower, creates a futuristic and somewhat eerie cityscape. The photographer conveys a profound admiration for Tokyo and the opportunity to capture images within the virtual game setting (Arianna, 2023). This unique experience enables her to delve into her connection with Shibuya and capture the essence of Tokyo in this digital realm, resulting in a multitude of photographs taken at this virtual location. The vibrant red color of the tower not only enhances the composition of the sky and elements at its base but also exudes an atmosphere of intensity, mystery, and grandeur. The presence of scattered umbrellas throughout the virtual streets resonates with them, with the red umbrella in the photograph carrying particular significance. Notably, there is a

mysterious figure behind the virtual lens, captured as they lower an umbrella to photograph a red neon sign in the distance. The game's high-contrast and bright color overlay contribute to a futuristic cyberpunk aesthetic within the graphics.



*Figure 2.5 Untitled*  
*Source: Photograph Arianna*

#### **2.4 Natural landscape and still life: the ecosystem of another world**

Landscape photography captures the essence of natural beauty, offering a profound aesthetic experience and fostering an outdoor activity that shapes the dynamic relationship between humans and nature (Baranova, 2015, p.25). As highlighted by Rolston (1995, p.375), the aesthetic experience of natural landscapes is not an inherent quality of the landscape itself but rather emerges through individuals' reactions to

these environments. This underscores the subjective nature of the experience within a specific environment, which also extends to the landscapes themselves. In video games that depict various countries or fictional worlds, the portrayal of natural landscapes takes on an exotic or magical quality, stimulating the imagination and providing a means to recreate nature and engage with imaginative scenarios.

*Figure 2.6* (Kai, 2023) showcases a landscape shot taken within the fictional world of *Assassin's Creed Valhalla* (2020), where players immerse themselves in England and the Nordic cold region as assassins. The photographer's mood aligns with the game's setting, creating a mutual complementation and metaphorical connection between the player and the in-game natural environment. Moreover, landscape photos in games draw inspiration not only from real-world nature but also from the compositional aesthetics seen in traditional landscape painting and photography. This idea extends to how players perceive landscapes as perspectival entities distinct from nature itself. In this specific photograph, the photographer draws inspiration from the composition of natural landscape oil paintings (Kai, 2023). By deliberately placing the horizon line in the lower third of the frame, the composition emphasizes one-third land and two-thirds sky, while the moon and tree are positioned near two of the four points of interest, following the rule of thirds (Kai, 2023).

In contrast to portrait photography, which focuses on precise lighting to highlight details and skin texture, virtual landscape photography deliberately arranges and captures the overall atmosphere of a special moment in the game. This approach allows for documenting the ecological environment and climate characteristics of the game world through the atmosphere portrayed. The photographer's mood aligns with the game's setting, illustrating the mutual complementation and metaphorical relationship between the player and the in-game natural environment. Moreover, landscape photos in games draw inspiration not only from real-life nature but also from the compositional aesthetics found in traditional landscape painting and

photography.



**Figure 2.6** *A beautiful night in England*  
Source: Photograph Kai



**Figure 2.7** *Natural beauty*  
Source: Photograph Dani Moreira

Macro photography of natural plants employs dramatic lighting techniques to showcase the complete form of the subject, unlike natural landscape photography, which aims to capture the entire game experience in virtual wild environments. Macro landscape photography, on the other hand, emphasizes capturing specific details in nature through lighting, focusing on the entirety of the plant. This approach further amplifies the details of the fictional fantasy ecosystem, creating a unique landscape that contributes to the game's narrative. An illustration of this approach can be seen in *Figure 2.7* (Moreira, 2023), featuring a fictional flower named "Winter's Dawning" found only within a tribe in the future world of *Horizon Forbidden West* (2022). Since the plant is fictional and unfamiliar, the player takes on the role of an encyclopedic photographer, illuminating every flower and accentuating the plant's full form with striking contrast against the background. This photography process becomes an



adventure of exploration, allowing the player to discover the intricacies of the fictional ecosystem within the fantasy world.

## **2.5 The possibility of impossible: Spectacularization of virtual photography's visual effects**

In comparison to the spectacularized of film and TV series, games grant their audience a unique control over the camera lens, endowing them with the freedom to interpret the virtual landscapes crafted by developers through manipulation of this virtual lens. This process of "spectacularization" is a deliberate act, and its outcome is intended to be purposive. Contrastingly, in the realm of movies, the effect of 'spectacularization' serves dual purposes—it aligns with the narrative and artistic intentions of the film creators while also catering to the audience's yearning to witness extraordinary marvels come to life (Maza, 2014, p.1-9). The virtual camera lens afforded by games further satisfies this desire, enabling viewers to zoom in on specific details according to their own imaginative whims, thereby incorporating subjective interpretation and choice into the exaggerated experience (Bookmancer Legendarium, 2023).

The intersection between the spectacle of game situations and human imagination is exemplified by the pause option provided by photomode. While the pause feature in video games enables players to freeze an in-game situation, photo mode, with its built-in pause feature, offers more than just a screenshot. It captures an instantaneous slice of time in virtual space that players can manipulate according to their design. In the technical universe of gaming, players have greater freedom of movement than in the physical world, with characters capable of jumping, climbing, and flying without risk. This enables players to explore and photograph virtual spaces from various angles, such as high altitudes or cliffs, providing the virtual camera view with greater versatility and flexibility.

The analysis of various genres of in-game photography in the preceding sections demonstrates how they achieve spectacularization of visual images through distinct approaches. Players creatively distort and enlarge specific elements, offering reinterpretations that result in the creation of novel works of art. This phenomenon is driven by the sharing mechanisms of in-game photography and the nature of social platforms. Forno and Faller (2021, p.3) assert that social media is also defined by spectacularization, popularity, and social status, gauged by metrics such as "likes," shares, friends, and the dissemination of visual content like pictures, videos, or news. Debord (1997, p.13) also argues that the proliferation of specialized images in the world occurs within an automated image-centric society, where individuals deceive themselves. Consequently, images on social media are often edited to remove imperfections and present a polished facade, deviating from reality to impress the audience. In today's digital era, people readily share experiences on social media, capturing and disseminating the sensations of distant places and times through cameras and recorders.

While films rely on extensive action sequences and animation effects to achieve this illusion (Maza, 2014, p.2), certain adventurous photographers seek real-life breathtaking scenes to capture similarly captivating images. Apart from the players' ambitions, this sub-culture of game visual sharing holds significant marketing and advertising value for game companies, motivating them to continuously enhance the performance and freedom of photo modes. This drive stems from the desire to gain greater exposure for their game products on social media and within their game communities online.

*Figure 2.8* (White, 2023) and *Figure 2.9* (Gonçalves, 2023) exemplify the riskless spectacularization effect achieved through the utilization of photo mode to capture selfies in the virtual gaming world. In contrast to real-life extreme photography, where

individuals like the famous "Russian Spiderman" Kirill Oreshkin take life-threatening risks by climbing skyscrapers to capture breathtaking selfies (Cascone, 2015), extreme photography in the game realm offers a much safer and unrestricted environment to achieve similarly captivating images.



*Figure 2.8 Untitled.* Source: Photograph Anna White



*Figure 2.9* “And here we see Aloy practicing martial arts, 200 feet above the ground 🐼🌩️” Source: Photograph Pedro Gonçalves

*Figure 2.8* portrays a different Spiderman played by the player, alongside a pet cat in the center of the frame. The cat's vibrant yellow fur and cheerful expression contrast strikingly against the deep purple hue of the overall picture, evoking a sign of excitement and joy embodied by the central feline figure. Such images are challenging to control and achieve in reality photography due to safety and animal protection

ethics. However, the photographic universe of virtual photography grants players the freedom to capture and manipulate such extreme scenes.

Moreover, as depicted in *Figure 2.9* (Gonçalves, 2023), the player can ride a mechanical dragon mount to soar midair and then employ the photo mode option to alter the character's expression, action, as well as adjust the camera angle, position, and distance. The image conveys characters jumping off the dragon mount and practicing martial arts 200 miles in the sky. Upon deeper examination of the denotations, the image deviates from the tension often associated with traditional extreme photography. The camera's distance is no longer limited by the length of a selfie stick or arm, and both the camera and the subject no longer require a physical fulcrum. The characters' limbs dance freely in the air, and their blue body paint echoes the sky, emphasizing the spectacular floating scene. The cloud-framed background signified a feeling of lightness, floating, and relaxation, while the emoji of cloud and karate uniform was added to the title description to further connote the author's ideal imagination. It echoes the joyful expression of the characters and conveys a mood of freedom, relaxation, and astonishment that is unattainable in real life. The digital nature of the personas allows for reduced risk and multiple attempts to perfect the ideal picture.

## **2.6 A thousand lives in game: the posthuman condition and the re-creation upon destruction**

In essence, every time a player initiates a new game session, this practice serves as a conduit for safeguarding cherished memories and creative encounters from the game's universe. The game's archival functions act as markers of the inevitable path towards loss, prompting reflection on Walter Benjamin's insight in "The Work of Art in the Age of Mechanical Reproduction." Benjamin laments humanity's "self-alienation,"

enabling the enjoyment of its own demise as a form of aesthetic pleasure (Benjamin, 1968, p.242). Games indeed embody this alluring fascination with destruction. Moreover, Bolter (2015, pp.114-115) asserts that the concept of the posthuman, whether realized as an image or a reality, fundamentally rests upon the notions of loss, destruction, and catastrophe. The archival aspect within the realm of games has an inherent spectral quality, an uncanny allure that beckons us towards a juncture of aporetic desire for catastrophe. It begs the question whether a yearning for an impending catastrophe in the future is consistently thematized by video games, perhaps constituting a parable for the posthuman future. This parable depicts an uncanny catastrophe that remains pending but is in perpetual occurrence within the game. The archive's role within the game environment is to function as a marker of the inescapable nature of loss. Loss stands as an intrinsic component, and the inclination to archive serves not solely as a strategy to alleviate this loss but also as a space where the yearning for it materializes, solidifies, and becomes tangible (Bolter, 2015, p.114). In that sense, virtual photography emerges as an even more precise technique for archiving game instances intentionally designed to undergo and embrace loss:

*"I can record whatever I experience in the game...sometimes I played through a game and didn't plan to take a photo, then I realize I miss a certain moment so much, I need to capture it again. That literally takes me hours to find it back... but it's fun to record my game journey."*

*(Bruining, 2023)*

Another illustrative instance (*Figure 2.10*) from the interviews also demonstrates how specific game settings tend to fetishize both catastrophic and remarkable loss, while players re-imagine and reconstruct this phenomenon within the game's context of posthuman condition:

*"I was wandering around, the sun suddenly ascended above the horizon. The environment was so captivating in that light that I came to a halt. I believe I kept the game paused for quite a while."*

*(Bookmancer Legendarium, 2023)*



**Figure 2.10** *Untitled*. Source: Photograph Bookmancer Legendarium

This snapshot is captured within the realm of *Horizon Forbidden West* (2022), a world reborn from the ashes of human civilization's downfall. The landscape is adorned with flourishing greenery that envelopes the remains of machinery, juxtaposed with invasive red plants devouring the terrain. During the course of exploration, a player could encounter a perilous confrontation with a discarded mechanical entity or opt to cease the game, effectively ending their play. In these moments, the virtual world symbolically mirrors its own demise in the player's real-life context. Yet, in this specific instance, the player, acting as a viewer, seized the moment to capture a virtual photograph, intending to share it on social media. Similarly, as discussed earlier, whether it's the ancient event of the Victorian era (Tinio, 2023), the futuristic Tokyo street walking (Arianna, 2023), or the stealthy assassin's night escapades in England (Kai, 2023), the game's design often guides players through sequences of tasks that culminate in vanishing or conclusion. The archive allows for the preservation of crucial game nodes, enabling revisitation of these moments at will. Virtual photography encapsulates the posthuman scenario within the game. As current reality lacks the physical potential for cybernetic extension, games inherently manifest as futuristic fantasies. The fulfillment of posthuman desire, momentarily experienced by the player in real time, takes on an amplified dimension of fantasy and yearning. It is as described by one virtual photography artist:

*“Playing video games is almost similar to reading books, if you’ve read a book, then you lived a thousand lives.*

*(Tinio, 2023)*

## **Chapter Three: The Virtual Authorship**

As discussed in earlier chapters, virtual photography has been acknowledged as a digital art form that goes beyond simple screenshotting, incorporating the player/artist's subjective experience and creativity. However, its departure from traditional photographic methods raises intriguing questions about authorship, especially when the photographic images are derived from the game developer's design. The Internet has led to a fundamental re-evaluation of authorship and ownership of text, as digital contents and programs are easily downloadable and manipulable, allowing for appropriation and misuse of content (Danesi, 2002, p.166). Hence, in this chapter the focus is on understanding the concept of authorship for video game players who take on the role of photographers. We achieve this by analyzing the discourse of interviewed photographers from Twitter, shedding light on how they shape and define themselves as artists. Furthermore, we explore how the identity of virtual photographers as a distinctive subculture, deeply intertwined with social media, is firmly established and celebrated within the virtual community. By delving into these aspects, we aim to gain valuable insights into the evolving landscape of virtual photography and its impact on contemporary digital culture.

### **3.1 The appropriation of virtual objects, and the authorship of virtual Photographer**

In traditional perspectives, the concept of the author is closely linked to the origin of a work, its message and meaning, and the sole authority for its interpretation (Rouhvand, 2016, p.26). However, this understanding was challenged in the 20th century by thinkers like Roland Barthes, who famously argued that the emergence of the reader necessitates the "death" of the author (Barthes, 1977). Similarly, Michel

Foucault (1969) proposed that the role of the author is shaped by the complex interplay of social, cultural, and historical discourses, serving as tools for classifying, grouping, excluding, or canonizing works . The artistic movements of the 1960s provided concrete examples that illustrate these theoretical ideas. Appropriation artists, for instance, would create copies of existing artworks with minimal manipulation or alteration and present them as their own works (Irvin, 2005, p.123). Duchamp's addition of a pair of whiskers to his copy of Mona Lisa serves as a notable illustration of this approach. Similarly, virtual photography as an artistic creation can be understood as going beyond mere capture of the game world's reality within the game environment. Through the use of photo mode and software editing, virtual photographers employ their imagination to manipulate the photographic object, resembling the practices of appropriation art in the realm of game visual art design.

This process also challenges the notion of authorship in contemporary digital culture and art. It involves not only the appropriation of existing art but also raises questions about the author's authority to interpret the work and the transformation of the audience's reinterpretation process into an act of imagination. Furthermore, it explores the interplay between the audience and authorship within cultural and artistic products built on widely replicable code files. The interpretability of an artist's works is rooted in their role as the author of their creations, while the products of contemporary forgers lack this interpretive quality. Therefore, the artist's authorship relationship with their work is not solely based on the mode of production or the type of product. Instead, it is defined by the artist assuming ultimate responsibility for every aspect of the objectives pursued through their work, encompassing all aspects of the work itself (Irvin, 2005, p.133). In the case of virtual photography, this reaffirmation of authorship is reflected in the audience's immersive, reinterpreted, and individual creation of image art after the replication of game art, built by code, regardless of whether it is considered innovative in any relevant sense or not.



Since its inception, virtual photography has been regarded as an activity akin to photography, utilizing a manipulable lens to capture established objective elements and creating new photographic authenticity. This perspective is not only supported by existing research but also widely accepted among virtual photographers. In this study, all respondents agreed that virtual photography has the same artistic legitimacy as traditional photography. Just as tradition captures buildings, trees, and people that already exist in the real world through the lens of a photographer. However, a crucial difference arises from the greater interpretive agency afforded to the imagined reality in virtual photography compared to the generalized photographic author. In essence, the virtual photographer appropriates existing artistic creations within the game and their imagination plays a crucial role in the visual narrative of virtual photography. One photographer interviewed described this phenomenon during the interview:

*“Often the shots will have little connection with the mood or plot of the game itself. For example, one can take VP of interior decoration or clothing or NPCs in an action game, that shows no action at all. Even the environments of a horror game may look cozy in the right photo. Alternatively, quiet and cozy games may look surprisingly dark and foreboding in certain pictures.”*

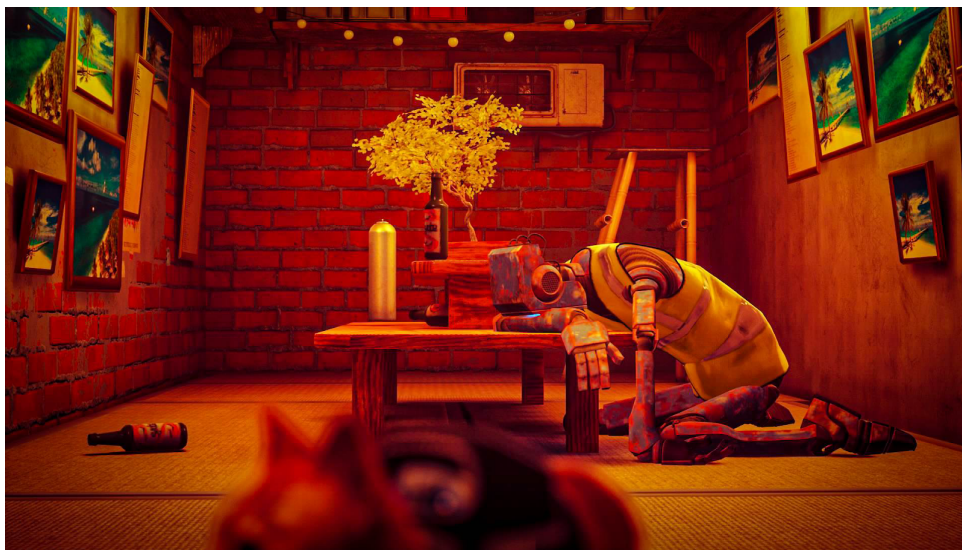
*(PolarNinja, 2023)*

Another virtual photographer who specializes in portraiture presented her work with a portrait, featuring a rusty, abandoned robot seated at a table in a room of the game *Stray* (2022) (Figure 3.1). Initially, the robot, both in the game’s decaying cybercity and in real life, is typically connoted as an cold inanimate object. However, through the meticulous arrangement of angles, lighting, and composition by the artist, the robot appears to come to life as a human character. The proximity of the removed masks, the scattered wine bottles, and the image of the robot with its face buried in its arms, accentuated by the light from above, evoke a sense of a living, intoxicated, and sorrowful human being. Furthermore, by adjusting the contrast, adding a subtle shimmer to the robot's arm, and placing a potted plant on the table, these elements

stand out at the center of the picture. Does the faint blue light on the arm imply that the abandoned robot will move and drink like a human, and will show a sad machine face like in the title ‘: (’ ? Does the presence of the flower symbolize vitality, suggesting that the robot may possess a semblance of life? The answer is yes. This photograph is categorized as a portrait by the artist, along with other human portrait photography, and it is imbued with a sense of posthumanity as interpreted through the artist's perspective:

*“I enjoy finding them in a moment by themselves and guessing what they are thinking about or doing...I want to highlight humanity. Even though the games are fake, they are made by people, and each bit of each game represents something that meant something to someone”*

*(Chancey, 2023)*



**Figure 3.1** ‘: (’. Photograph: Chancey

The presence of the robot in this portrait also serves as a metaphor that signifies the essence of authorship of virtual photography. Within the game's photographic universe, all objects captured through the lens, whether they are plants, people, or elements such as light and weather, exist within a virtual world fueled by imagination rather than objective reality. While developers construct a digital technology universe that emulates the physical laws of the real world, similar to the creation of robots, the

power to interpret these virtual objects is not solely vested in the designers. Instead, these digital landscapes are open to reinterpretation as new artistic creations through the appropriation by viewers who bring their own subjectivity, imagination, and humanity into the process. This distinction highlights the fundamental difference between virtual photography and mere screenshots of games, as the former involves a creative process that adds depth, meaning, and personal expression to the captured scenes. Furthermore, this distinction also highlights the fundamental difference between virtual photography and traditional photography. For instance, Sontag (2003) argues that it is exploitative to view distressing photographs of others' suffering in an art gallery, examining visual representations of war and violence. However, when we examine the images depicting pain captured in *Figure 3.1* (Chancey, 2023), or the depictions of crime and violence within other games, it becomes apparent that virtual photography operates differently from traditional photography in terms of its relationship with reality. The portrayal of pain or other emotions in virtual photography does not involve the appropriation and exploitation of reality from others, but rather stems from the artist's inner world of imagination. It represents a creative interweaving of emotions originating from the author themselves, rather than a mere possession of reality. Therefore, virtual photography, with its deliberate composition, technical manipulation, and expression of the player's individual vision, goes beyond mere documentation, aiming to create evocative and expressive visuals that convey deeper layers of content and denotation.

### **3.2 From audience engagement to artistic creation: “What we experience become resources of art”**

According to Barthes, the notion of the author is constructed by culture to emphasize concepts such as ownership, credit, and individual prestige, thereby undermining the author's authority over their own work (Barthes, 1977). In the previous section, we examined how virtual photography enables artists to express their subjectivity by appropriating in-game objects and challenging the authority of game developers over

in-game visual art. However, the question of ownership within this process of appropriation remains a topic of debate. To what extent does the virtual photographer possess ownership of their work? This section will delve into this issue and explore various perspectives surrounding it.

During an interview, a photographer shared a collection of landscapes she had created in a mobile phone game (Bruining, 2023). One particular photo depicted two game characters observing pink clouds from a bridge in the sky (Bruining, 2023). Upon initial observation, the composition and lighting of this photo were found to be skillfully executed. Interestingly, this set of photos was not edited using photo mode or any other software but were captured directly from the game's cutscene using a mobile phone. This raises the question of whether a photo derived directly from a cutscene can be considered a virtual photography creation, and whether the individual who takes the screenshot can be regarded as the author of the image. The photographer has initiated a discussion within the virtual community and offers the following perspective:

*“It's from cutscene, you don't adjust that much, but it contains your own experience. You need to rush into that certain moment to get it, and it contains your idea. ...I clicked the button to screenshot it but that's not really for sophisticated photography, that's just for sharing the shots.”*

*(Bruining, 2023)*

According to a survey conducted by Bruining (2023) involving 164 virtual photographers in the Twitter community, the question of whether cutscene screenshots can be considered equivalent to virtual photography yielded diverse responses. Among the participants, 32.9% responded affirmatively, 48.2% disagreed, and 18.9% were uncertain. Those who do not consider cutscene screenshots as virtual photography argue that these images are captured based on predetermined angles, lighting, and arrangements designed by the game developer, rather than the player's own editing of

the game's visuals (Bruining, 2023). Consequently, the authenticity of the cutscene lies with the game developer, while the virtual photographer's authorship is perceived to be more dependent on their choice of subject matter:

*“Most VPer's do not count screenshots of cutscenes as VP, because someone else created the camera angles, lighting etc...A VPer's style is done by having a particular subject matter, specific techniques, colors, editing, subjects or approaches.”*

(PolarNinja, 2023)

*“I see VP more as an extension of traditional photography and it goes beyond, because with the photo mode, you actively manipulate your image and your scenery with your given settings.”*

(Veren, 2023)

The distinction between game screenshots and virtual photography as an art form is rooted in the player's control over the camera and their ability to manipulate the visual elements within the game. Through the manipulation of camera angles and the application of various tools like look-up tables (LUTs) and filters, players infuse their unique perspective and artistic vision into the captured images. This transformative process turns the dynamic virtual world of the game into a static representation, allowing for creative reinterpretation.

While simple screenshots of game events or cutscenes may be considered casual photography, these images possess the capacity to condense and reflect the player's experiences within the digital realm. Furthermore, they can be further edited and manipulated to enhance their artistic quality and originality. For instance, *Figure 3.2* illustrates three photographers capturing the same character, Gaia, within the same game event (Arianna, 2023, Moreira, 2023). Despite the shared game landscape and character, a closer examination reveals that the distinct positions of the photographers in the virtual space and the differing temporal contexts result in the condensation of

personal experiences, attributing authorship to each individual creator. Moreover, these three photos from different angles also encapsulate different posthuman conditions experienced by different players in the same archived game event. In particular, the central photograph showcases characters engaged in conversation, captured by the player within the game cutscene's given angle. However, after the capture and subsequent editing process, comparing with the left and right photographs obtained through photo mode, it still highlights the undeniable artistic quality and authorial originality inherent in the image.



**Figure. 3.2** *Portraits of Gaia, by three different players.*

Source: Photograph Arianna (left), Dani Moreira (middle) and Yimeng Li (right).

When reaching the more elaborate in-game art photography, it involves a deliberate process of composition and the expression of the player's unique way of seeing. The control over the lens and subject matter further elevates these images to the realm of art, to the artwork responsibly by the certain author. Elaborate in-game art photography shares similarities with Pictorialist photography in terms of its compositional process and the manifestation of the player's unique perspective. One interviewee described how does the virtual photography revealing the author's way of seeing, which became the key to the artistic originality of virtual photography:

*“These photos are the results of painstakingly calibrating the best suited LUTs (look up tables/filters) for hours to deliver exactly the kind of vibe I’d want the viewer to feel.”*

*(Tinio, 2023)*

Barthes' notion of the "death of the author" challenges the traditional emphasis on the author's intention and biography in determining the meaning of a work. Instead, Barthes argues that the reader's interpretation takes precedence and that the author's role becomes less significant. In the context of contemporary digital texts, such as virtual photography in games, where visual elements can be manipulated and appropriated, the reader's engagement and manipulation of digital files can be seen as a process akin to photography. In this context, the reader becomes an active participant and co-creator, blurring the boundaries between author and reader. Through this process, players not only document their manipulation of the game environment but also convey a distinct photographic representation of their virtual condition at a specific moment in time and space. These virtual photographs encapsulate the player's subjective experience and emotions, offering viewers a glimpse into the player's individualized virtual journey.

*“When I'm getting the shot, I'm trying to give you certain spheres... You are absolutely feeling this emotion: the atmosphere of the beautiful lights pouring down from the sky. ”*

*(White, 2023)*

Upon closer examination, it becomes apparent that the notion of authorship still holds significance in the artistic creation of virtual photography. While the player/virtual photographers may freely appropriate and incorporate works from other artists, their unique perspective of experience, artistic choices, and the way they edit and reinterpret the images shape the final meaning and interpretation. The virtual photographer's voice, as both the reader and the author, holds significant influence in shaping the artwork and contributing to its artistic value within the realm of game photography. As players engage with the existing virtual world models and game

context, these elements transform from mere commodities to a canvas of extension and fluidity, akin to a photographic universe. The player's unique perspective and gaze infuse creativity into this virtual world, allowing their emotions and experiences to imbue the art with authenticity. It is through this interplay between the player's vision and the virtual environment that the virtual photograph attains its aesthetic essence and resonates as a form of art creation:

*To feel their captures, go with the flow, and let themselves be inspired by what they sense in the moment... life is a world of the senses, and so what we experience can be our best resources for our art. Never be shy and always be authentically bold with what you do.*

*(Veren, 2023)*

### **3.3 Hypertextuality, and the establishment of author identity**

In today's digital landscape, an increasing number of individuals actively engage in the creation of digital content. The data generated daily has become more diverse, reflecting a wide array of purposes manifested in distinct ways (Finnemann, 2016, 2). Consequently, a growing diversity of knowledge formats emerges. Within this context, players not only assume the role of artists but also become the audience, leading to the formation of online virtual photography communities and the accumulation of knowledge. As a form of born-digital visual art, virtual photography is unique as its nature allows the image to be represented as URL text and easily shareable across various platforms. Social media serves as a pivotal platform for virtual photography, facilitating the creation of network links on the author's page and enabling the spread of images in multiple formats.

Hypertextuality plays a pivotal role in reshaping the conventional roles of authors and readers within a text, offering the potential to interweave multiple plot trajectories into a unified narrative (Danesi, 2002, p.68). In the context of this thesis, while Twitter



stands out as a prominent platform for virtual photographers to create both visual and verbal text, their creations also find resonance across various other social media platforms. The subculture of virtual photography flourishes within the realm of hypertextual computer textuality, a domain marked by interconnected texts that empower users to navigate through interlinked documents using hyperlinks (Finnemann, 2016, 2). Social media platforms serve as crucial conduits for the dissemination and exhibition of digital artworks crafted by virtual photographers. Notably, platforms like Twitter often witness virtual photography pieces accompanied by short descriptions and hashtags, fulfilling versatile functions. These hashtags provide supplementary context and categorization based on genres, facilitating the construction of digital portfolios and fostering the development of individual artistic identities:

*“It's like we really become artists and we have a portfolio. There we establish ourselves in those communities.”*

*(Bruining, 2023)*

Players actively organize hashtag-based sharing campaigns and competitions on popular social media platforms such as Twitter and Instagram, creating vibrant online showcases where virtual photographers can proudly present their artistic works to a wider audience. Hashtags serve as powerful tools for communication and interaction within the virtual photography community. For instance, this paper's case study of virtual photography culture on Twitter reveals the emergence of dedicated communities such as *Picashot*, *VPRetweet*, *ThePhotoMode*, and *ArtistofSociety* (2023, Gonçalves). These communities curate and manage their respective eponymous hashtags as virtual galleries, serving as dynamic spaces for hosting events, contests, photo calls, and various interactive activities.

*“When I started VP I participated in all the themes... Some communities had one new theme a day for a whole month. That was both challenging and very educational...Participating in those themes really kickstarted my journey as a VP and built experience very fast. ”*

*(PolarNinja, 2023)*

Through the utilization of hyperlink, virtual photography communities foster a sense of unity and engagement among their members. Virtual photographers gain visibility and attract more viewers to their work. Exploring different themes and participating in various campaigns also contributes to the development and evolution of their individual styles in capturing virtual shots. For example, one virtual photographer, who manages the virtual community, described the trend she observes during the interview:

*“I work at the @VGPNetwork. I never expected to have that many followers and to do so much! At least 200 people enter it everyday...I try to comment on everyone's pictures and encourage them, because it doesn't take much to make someone smile and keep going with virtual photography. ”*

*(McMaken, 2023)*

Furthermore, The hypertextuality observed in the virtual photography community extends beyond individual posts and encompasses the interconnectedness of artists' presence on various social media platforms. On Twitter, many players and community accounts take active measures to promote their virtual photography by prominently displaying links to online platforms on their homepages. These platforms include popular social media platforms like Instagram, communication hubs like Discord, Picashot, dedicated virtual photography websites such as Kptur, and virtual photography art e-magazine like FOCUS. Through strategically shared and placed links, virtual photographers facilitate the circulation of their art across different online spaces. The integration of various online spaces enables virtual photographers to engage with diverse audiences, receive feedback and recognition. By utilizing the array of hyperlinks associated with a photo, visitors can effortlessly discover the creator's identity and, simultaneously, delve into a vast collection of similar genre-related images. This interconnected approach not only amplifies the impact of their art but also strengthens the virtual photography community, creating a cohesive and supportive network of artists and admirers alike. This availability also encourages more players to engage in artistic creation of virtual photography. In a manner

reminiscent of computerized bulletin boards and newsgroups, the internet provides a platform for individuals to freely share their thoughts, opinions, and creative works, resulting in a decentralized and diverse information landscape.

*“It's like networking... there are certain tags people use... Those pages often also list hashtags you can use in your posts so they'll see and share your work too. That's huge for exposure.”*

*(PolarNinja, 2023)*

Concurrently, game developers actively foster the dissemination of players' high-quality virtual photographs on social media platforms, strategically employing them as a potent form of marketing promotion for their games. This is achieved through mechanisms such as retweeting player-created artwork and organizing photography competitions. By encouraging players to share and showcase their in-game photos, developers capitalize on the opportunity to exhibit the impressive graphics and performance of the game. Consequently, the widespread sharing of these virtual photographs within the community of players serves as a subtle yet effective form of advertising. Moreover, the process of virtual photography allows players to skillfully capture and present the intricate details and visual allure of the game world, effectively accentuating the game's unique strengths and alluring potential new players. This natural and authentic method of advertising, facilitated by the virtual photography subculture, engenders a sense of enthusiasm and genuineness among players, prompting them to eagerly share their creative works with others.

Game developers also actively engage with virtual photographers, offering recognition and appreciation for their artistic contributions. The organization of photography competitions and themed events fosters a sense of camaraderie and encourages players to fully explore the potential of the photo mode. Such commendation from the developers substantiates the identity of virtual photographers as legitimate artists and reinforces the authenticity of their creative expressions. As an

illustrative instance, one player shared his journey into the realm of virtual photography, which began with his participation in photo contests and being encouraged by the game company on social media platforms:

*“I started my VP journey in 2022...I followed Asobo Studio, they were announcing a VP contest. I was very intrigued, so I went back to the game, opened photo mode and did experiments.*

*They have the most supportive companies behind them...they really like it when people recognize the details in their game! When game developers share or like my captures, it means I'm doing it right.. ”*

*(2023, Gonçalves)*

As players enthusiastically partake in these photography events, they contribute further content and knowledge to the evolving art form of virtual photography. This collaborative and supportive environment fosters continuous growth and innovation within the virtual photography community. Consequently, the symbiotic relationship between game developers and virtual photographers not only benefits the marketing endeavors of the games but also elevates the status of virtual photography as a revered and esteemed art form expanding within and outside the gaming community.

## Conclusion

In conclusion, this project has explored the fascinating realm of virtual photography, delving into its various aspects and shedding light on its significance within the digital landscape. Through semi-structured interview and semiotic examination of virtual photography, this project has provided insights into this emerging field.

Mazzone and Elgammal (2019, p.26) studied software-generated digital art, drawing attention to a pivotal distinction: art algorithms serve as tools rather than artists themselves. While we share this perspective, our viewpoint transcends the mere categorization of AI algorithms as conventional artistic tools. Unlike traditional tools such as paintbrushes imbued with oil paint, which remain static and devoid of life, computer programs entail a more intricate and multifaceted integration. Our contention deviates from the notion that computer programs function solely as tools for human input, as proposed by Mazzone and Elgammal (2019, p.26), and advances the concept that these programs embody the artist's subjectivity within the digital realm. This embodiment extends into the realm of interactive re-imagination, a phenomenon uniquely evident within the subjective reality of the gamer. In the specific context of virtual photography, the phenomenon of interactive re-imagination assumes heightened significance. In this arena, the computer program not only serves as a creative instrument but also encapsulates the player's subjective reality, projected into the expansive and immersive landscape of the game. This dual role of the game program as both a creative tool and a conduit for the player's subjective perception introduces a novel dimension of interaction and artistic expression. The virtual environment emerges as a dynamic arena where the player's individualized experience converges with the meticulously designed reality of the game, thereby profoundly shaping the form and essence of the visual compositions that emerge through the medium of virtual photography.

Hertzmann (Hertzmann 2018, p.26) asserts that art algorithms are tools, not artists. We concur with this perspective; AI algorithms are distinct from human artists in that they lack artistic agency. Yet, they extend beyond being mere tools akin to brushes daubed with oil paint – static and lifeless. Artists evolve their mastery with tools over time, and these tools actively contribute to the physical process of artistic creation in traditional media. However, this thesis contends that a computer program is more than a tool; it embodies the artist's subjectivity within the digital realm and facilitates interactive re-imagination, reflecting the gamer's subjective reality. In the context of virtual photography, this interactive re-imagination mirrors the subjective reality of the gamer. The game's program serves both as a creative tool and a projection of the player's subjective reality into the game space. This synthesis of the player and the canvas generates a unique posthuman scenario within a specific moment, akin to a form of cybernetic self-extension. This process counters the loss of memory, history, and remembrance that occur within the game's narrative. Through interactive re-imagination, players engage in a dialogue with their virtual surroundings, shaping a narrative that intertwines their subjective experience with the inherent virtual environment. In this manner, the computer program becomes more than a static tool; it evolves into an active medium for expressing the player's subjectivity, redefining the boundaries of artistic creation in the digital realm.

Photography has traditionally been closely linked to capturing genuine events—a record of reality. However, in the realm of video games, the concept of "real" takes on a different dimension, one that deviates from traditional understanding. This prompts the question: why would photography exist in a space where conventional reality is not present? Here, the notion of virtual photography comes into play. Virtual photography, as a unique form, operates within an alternative photographic universe, documenting the virtual reality embedded in computer code and images. While the

game world thrives on imaginative constructs, the act of photographing within the game world captures the player's everyday experiences and offers insights into their perspectives. This aspect imparts a distinct human quality to the image capture process within the digital virtual realm, echoing the essence of traditional photography's focus on capturing everyday life through a lens of digitalization. As game technology advances, more complex and lifelike game environments become attainable through enhanced hardware capabilities. This evolution paves the way for the development of photo modes, which replicate the traditional photography process within the virtual setting, often expanded and refined through software editing, game hacking, and the incorporation of extensions to augment player freedom.

However, virtual photography surpasses the mere remediation of traditional photography and realistic replication. It has forged a distinct aesthetic, characterized not only by remediation but also re-imagination. By delving into specific photographic works, this study uncovers that virtual photography possesses a tendency towards spectacularization. As game environments evolve, they not only emulate intricate virtual realities but also mirror the physical and spatial laws of the real world. Moreover, they extend beyond reality's boundaries to amplify and exaggerate elements, serving as a canvas for players' imaginations and the interplay between players as both audience and game world participants. Through manipulable artificial light sources, players' gazes and senses are visualized, reflecting personalized emotions and experiences within the virtual realm. This interplay allows for the interpretation of game experiences within the game's fictional context and the realm of re-imagination. Simultaneously, the heightened controllability of the virtual world empowers photographers to transcend the constraints of the physical world, unleashing creative possibilities previously unattainable. In essence, virtual photography not only mimics the world of traditional photography but also pushes the boundaries of creative expression through its capacity to merge reality, imagination, and human interaction within the dynamic landscape of digital gaming.

In "Permanent Red," published by Berger in 1960, he delves into the world of fine art, focusing particularly on sculpture and painting (Berger, 1960). His argument posits that these artistic forms can only possess value if they inherently reference the objective world with precision and optimism. He underscores that complexity and dynamism in artistic form can authentically arise only through human observation of the objective reality: "imagination is not, as it is sometimes thought, the ability to invent; it is the capacity to disclose that which exists" (Berger, 1960, p. 61). However, rooted in the virtual domain, detached from the objective reality, virtual photography finds its foundation in the human imagination and re-imagination of in-game scenarios. Often characterized by exaggeration and presented in a striking spectacular manner, it captures abstract moments that mirror the post-human condition in a fleeting cyber moment.

Transposing Berger's viewpoint from over half a century ago to the current landscape of virtual photography, it becomes evident that it resides within the realm of the abstract. Berger's rejection of abstract art is grounded in his humanistic and Marxist beliefs, which emphasize the importance of anchoring art in the objective world to featuring recognizable subject matter (Berger, 1960). However, in today's new era, where personal devices and the internet pervade every facet of our digitized life, the domains of gaming and social media have seamlessly integrated into daily routines. Individuals on social media platforms are increasingly asserting their authorial rights within this digital realm. The emergence of virtual photography challenges Berger's stance, revealing the inherent digital reality within virtual worlds, alongside the cyber extensions characterizing modern society. Through this lens, the ascent of virtual photography contradicts Berger's viewpoint, showcasing the intricate interplay between digital and tangible reality. This evolution marks a significant shift in the way we perceive and engage with art, as the virtual realm becomes an interactive and



intelligent canvas where creativity and imagination intertwine with advanced technology to produce artistic experiences.

The examination of authorship and author identity of virtual photography has highlighted the dynamic and evolving nature of creative practices in the digital age. As technology continues to advance and virtual environments become increasingly sophisticated, virtual photography will undoubtedly continue to evolve and redefine our understanding of the photographic medium. It offers a unique space for artists to explore, experiment, and challenge traditional notions of photography, while also providing a platform for personal expression and engagement with the virtual world. As virtual photography continues to grow and evolve, it is important for researchers, artists, and practitioners to further explore and critically analyze this emerging field, uncovering its full potential and understanding its impact on the broader realm of photography and visual culture. The emergence of virtual photography embodies this metaphor. The game's features that allow everyday life moments to be paused and manipulated more deeply, symbolizing the capture game that is an extension of people's use of photography to capture situations in everyday life under the background of the electronic age. The protocols of the World Wide Web serve to amplify the potential of hypertext connections, spanning various temporal dimensions within which interlinked texts reside (Finnemann, 2016, p.2). Virtual photographers extend their image network to the virtual photography community by incorporating hashtags into their posts. Simultaneously, the act of entering a moment within the game not only encourages players to partake in photographic endeavors but also fosters artist identity establishment and knowledge contribution.

(Words counts: 21633)

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## Appendix 1: Timetable of the Interviews, List of Participants and their Photographs

<b>Completion Time</b> <small>(Central European Time CET; UTC+01:00)</small>	<b>Artist Name</b>	<b>Twitter Account</b>	<b>Digital Signature</b>
Mar 11, 2023 5:00 PM	Anna White	<a href="https://twitter.com/AnnaWhiteVP">@AnnaWhiteVP</a>	
Mar 12, 2023 3:53 PM	Arianna	<a href="https://twitter.com/VrPhotoGmess">@VrPhotoGmess</a>	
Mar 12, 2023 8:35 PM	Dani Moreira	<a href="https://twitter.com/DEX_exiled">@DEX_exiled</a>	
Mar 15, 2023 6:26 AM	PolarNinja	<a href="https://twitter.com/PolarNinjaVP">@PolarNinjaVP</a>	
Mar 17, 2023 2:48 PM	Stefanie McMaken	<a href="https://twitter.com/StefanieMcMaken">@StefanieMcMaken</a>	
Mar 21, 2023 4:42 PM	Pedro Gonçalves	<a href="https://twitter.com/vp_alcachofra">@vp_alcachofra</a>	
Mar 24, 2023 10:29 PM	Chancey	<a href="https://twitter.com/takeachance_VP">@takeachance_VP</a>	
Mar 25, 2023 7:26 PM	Suni	<a href="https://twitter.com/alpha_sunii">@alpha_sunii</a>	
Mar 25, 2023 9:46 PM	Rheanna Bruining	<a href="https://twitter.com/VPFutureMain">@VPFutureMain</a> <a href="https://twitter.com/FutureVPsupport">@FutureVPsupport</a>	
Mar 26, 2023 7:19 PM	Andreea Geanta / Veren	<a href="https://twitter.com/verendrye_vp">@verendrye_vp</a>	

<b>Completion Time</b> <small>(Central European Time CET; UTC+01:00)</small>	<b>Artist Name</b>	<b>Twitter Account</b>	<b>Digital Signature</b>
Apr 8, 2023 11:06 PM	Angela Tinio	<a href="https://twitter.com/MissEvieFrye">@MissEvieFrye</a>	
May 1, 2023 8:28 PM	Bookmancer Legendarium	<a href="https://twitter.com/bookmancer_myth">@bookmancer_myth</a>	

*\*Note: Photographer Kai ([@KaiVirtualPhoto](https://twitter.com/KaiVirtualPhoto)) was unable to participate in an interview. However, on March 27, 2023, Kai provided a collection of photographs along with a concise explanatory note via email. Part of these materials have been included in this paper with Kai's permission for illustrative purposes.*

Arianna (2023) 'Untitled', Twitter Post, Viewed 24 June 2023,  
<<https://twitter.com/VrPhotoGamess/status/1672357898964410368?s=20>>.

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Bookmancer Legendarium (2023) 'Untitled', Twitter Post, Viewed 1 May 2023,  
<[https://twitter.com/bookmancer\\_myth/status/1628042723121831947?s=20](https://twitter.com/bookmancer_myth/status/1628042723121831947?s=20)>.

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<<https://twitter.com/MissEvieFrye/status/1598676423287660544?s=20>>.

Veren (2023) 'Ease your grip', Instagram Post, viewed 23 Mar 2023,  
<[https://www.instagram.com/p/C16iq0ToNqL/?utm\\_source=ig\\_web\\_copy\\_link&igshid=MzRIODBiNWF1ZA==](https://www.instagram.com/p/C16iq0ToNqL/?utm_source=ig_web_copy_link&igshid=MzRIODBiNWF1ZA==)>.

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<[https://www.instagram.com/p/CqN6kf5oWwT/?utm\\_source=ig\\_web\\_copy\\_link&igshid=MzRIODBiNWF1ZA==](https://www.instagram.com/p/CqN6kf5oWwT/?utm_source=ig_web_copy_link&igshid=MzRIODBiNWF1ZA==)>.

White, A (2023) 'Untitled', Twitter Post, viewed 27 May 2023,  
<<https://twitter.com/AnnaWhiteVP/status/1662531928568868869?s=20>>.

## **Appendix 2: Informed voluntary consent**

I agree to participate in Yimeng Li's thesis project about virtual photography. This degree project aims to understand the trend of sharing in-game photographs within online communities and explore the aesthetics behind them.

Through in-depth interviews with virtual photographers, this research will analyze game screenshots as a form of new media art and attempt to discern how it has evolved in the current media landscape, as well as speculate on its potential future directions. The data obtained from the interview will be utilized in this research.

### **Information on the processing of personal data**

The following personal data will be processed:

- The audio/text of the online interview
- Your Twitter ID and nick name

Personal data will be processed in the following ways:

- The audio conversation will be transcribed and analyzed for academic research purposes.
- The audio and conversation text will be stored on the researcher's personal devices, but will be deleted after September 2023.
- We won't use your artwork directly in the article, unless we obtain your permission after the interview.

We do not share your personal data with third parties.

Lund University, Box 117, 221 00 Lund, Sweden, with organization number 202100-3211 is the controller. You can find Lund University's privacy policy at: [www.lu.se/integritet](http://www.lu.se/integritet). You have the right to receive information about the personal data we process about you. You also have the right to have inaccurate personal data about

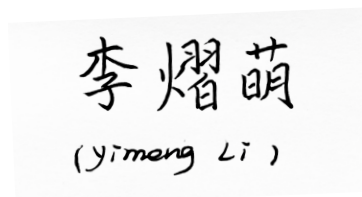
you corrected. If you have a complaint about our processing of your personal data, you can contact our Data Protection Officer at [dataskyddsbud@lu.se](mailto:dataskyddsbud@lu.se). You also have the right to lodge a complaint with the supervisory authority (the Data Protection Authority, IMY) if you believe that we are processing your personal data incorrectly.

If you have more questions, please contact Yimeng Li at [yi4061li-s@student.lu.se](mailto:yi4061li-s@student.lu.se).

Date:

Respondent's signature: (See above)

Researcher's signature:



李熠萌  
(Yimeng Li)

## Appendix 3: Questionnaire for Interview

### Part1. Warm up

1. What makes you start to be a virtual photographer?
2. What is your motivation for taking shots in games?
3. How often do you do it?
4. What is your favorite game regarding photo mode and taking shots?
  - Why do you enjoy taking photos inside this game?
  - Do you have a favorite object or character to shoot in that game, why?
5. Do you also take photos frequently in real life?
  - How do you use your real photos, do you use them in the same way with virtual photographs, or not?
  - In your opinion, what is the difference between your real photos and the virtual photos?

### Part 2. Between 'real' and 'virtual'

7. Someone says in-game screenshots are not the same as the traditional photography, because they are captured from games and based on the game developer's work. what do you think?
  - In what way could (could not) virtual photography be seen as photography?
  - In what way is the photographer the "author" of a virtual shot and craft them?
  - In what way could virtual photography be seen as an unique form of art?
8. What kind of device do you use to do virtual photography?
  - How do you feel about the virtual camera inside it?
  - Does it feel the same with a real camera machine when you use it? Or the opposite?
9. Do you use any extensions/additional softwares for Virtual Photography? What is the purpose of using them?
  - Do you use it to remedy the limitation of the virtual camera?
  - Or, Do you use it to add a special aesthetic to the virtual photograph?
  - Do you also do the similar thing for your real daily photos?



### **Part 3. Aesthetic**

10. As an artist, what kind of aesthetic do you want to reveal through your photography?

- What are the key elements to build the style of your art?
- What do you want to highlight, to express through your artistic creation of virtual photography?

11. Can you give me some examples of your work that makes you proud?

- Why do you regard them as your best production?
- What kind of technique did you use to create them?
- In your mind, what are the vital elements to build a good in-game photo?

12. Are there any Virtual Photography artists who inspire you?

- Are they famous or have they been very important in the online community? What makes them masters?
- Why do you think their works are good?
- Can you give me an example to demonstrate what elements make their virtual photograph good?
- What could potentially make such a photo bad?

13. How do you establish yourself as a good artist of virtual photography?

- Or, in other words, imagine there is a new person coming to the community, and wish to become a true master of virtual photography. What would you suggest that person do?

### **Part 4. Community**

14. Which virtual photography community(s) is (are) the one you join the most?

- (Optional) As the admin/volunteer/staff of your community, what is the motivation to build and maintain this community? What do you expect to see in the group, and do you have any suggestions for newcomers?
- To what extent does it influence you and your art creations?
- Why is it important for a virtual photographer to join those online activities?