

# Photography in Video Games: the Artistic Potential of Virtual Worlds

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**Abstract:** Photography has acquired a place and a growing meaning within video games. To this has contributed the abrupt graphic evolution of video games, the spread of a growing number of virtual environments such as Second Life, and the creation of projects that demonstrate the photographic potential of virtual worlds.

In this paper we aim to study the different ways in which photography may exist as an artistic expression of video games. By facing them as imagery mazes containing an undeniable creative potential, we explore the act of photography as gleaning and as a core mechanic that enables gamers and artists to create an original view of their experiences.

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## 1. Photography and video games: a complex relationship

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The relationship between photography and video games is extremely complex due to the strong antagonism evidenced by their natures. Photography's analog nature is characterized by a matrix of sand grains (minimal unit), while video games' digital nature is characterized by a pixel matrix (minimal unit), or binary information. Another issue is the dichotomy of presence/absence of the concept 'photographic referent', introduced by Roland Barthes:

I call 'photographic referent' not to the *optionally* real thing that refers to an image or a sign, but the real thing that was necessarily placed before the lens without which there would be no picture. (Barthes 2008, 87)

Unlike digital images, in a photograph it is extremely difficult to manipulate its visual information.

Once recorded, the visual information is irreversible. The image is individual property, is frozen, static. Any movement can only be as much as an illusion. The digital image represents the extreme opposite. Each component of the image is changeable and adjustable. Not only can the image be controlled and manipulated as a whole but also, and more significantly, each individual aspect of it. (Weibel 2000, 29–30)

Still, it is important to consider that the history of photography also shows a significant openness to different techniques, trends and applications. Photography established not only a close proximity to the truth through report photography (Bauret 2010, 33–4) but also, and due to its association with various artistic movements<sup>1</sup>, acted as a deceptive illusion (Bauret 2010, 97–8).

Video games, as creators of digital images, explore the potential that their fantasy allows, introducing a major flexibility regarding their representations. Yet, the representations shown in the majority of video games suggest an increasing proximity regarding their real world referents. These representations distance themselves from the abstract and arbitrary and become closer to the tangible and iconic; a more motivated representation of real, of photography. As such, the distance between video games and photography is becoming increasingly shorter.

For this reason, terms such as 'realism' or 'photorealism' are more associated with video games (McCarthy et al. 2005, 85, 104). In many video games, the creation of three-dimensional virtual worlds is informed by photographs of reality itself. That is the case of *Wheelman*, in which the virtual representation of Barcelona was mainly based on a set of real photographs. Barcelona became the photographic referent and the photographic referent became the digital referent. In such cases, the photographic image as a reality remnant (Aumont 2009, 93) is an instrument that approximates the reality to their virtual recreation. As Tim Shymkus points out, with the growing graphical representation it is possible to achieve a greater 'realism', making it more believable to the eyes of anyone who plays (Morris and Hartas 2004, 24).

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1. In the first half of the twentieth century, photography has maintained a privileged relationship with Surrealism, adding different perspectives to those defined by the concept of truth and that the nature of analog photography highlights.

## 2. From analog to digital

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Since the first photograph of Joseph Nicéphore Niépce in 1822, there has been a huge evolution of images and photography in particular. The emergence and nurturing of digital photography in the end of the twentieth century, has originated an increased 'democratization' of photography.

From analog to digital; the great mayhem that affects all forms of message as well as the different treatment processes and communication has obvious repercussions on the world of photography. (Bauret 2010, 21)

Digital photography is a delicate concept. It combines two clearly conflicting opposites (analog photography and digital imaging) and raises a dangerous idea of replacement. Regardless of the analysis of its nature or support, digital photography should be understood as an evolution, as a modern image in the field of photography. This image explores the modernization of the record itself to digital format. Digital photography is the result of hybridization between traditional phenomenology of analog photography and the computerized nature of digital image.

With digital devices increasingly automated and with a quality arguably evolutionary, anyone has the opportunity to 'play' with them. "*The look and spirit of the photographer are now free from any technical constraints*" (Bauret 2010, 21), so there are less constraints on the photographic praxis (Flusser 1998, 74–5). The device is "*a toy and not a tool. (...) The man who handles it is not a worker, but a player: it's not homo faber, but homo ludens*" (Flusser 1998, 44). Despite the evident automatism, some digital cameras such as the Nikon D40, allow for the photographer to choose manual settings (focus, aperture or shutter speed) before taking a picture. This extends the technical capabilities of the device, as well as the knowledge of the photographer who handles the cameras in order to "*overpower them and trust them with significant accurate and precise function*" (Bauret 2010, 45). However, although it is possible to explore and assimilate a number of applications of phenomenology analog photography in these devices, the indexical character that has always been part of its definition and its analog nature is lost. The captured images assume a digital nature similar to video games' nature (pixel matrix), reinforcing an undeniable proximity. While pressing the shutter button of the device, the image is automatically scanned, converted into information in a JPEG file format and stored on a memory card. In a video game, by pressing the printscreen button, the computer temporarily registers in its memory the image's information captured on that screen. Later, the player can record this log to a file with the JPEG format and save it on the computer disk. This possibility encourages an open field for experimentation, in which players can simulate 'photographic acts'.

## 3. Imagery mazes

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The three-dimensional virtual worlds of today's video games offer light, environment, perspective and depth of field. They offer an aesthetic that invites the player to a closer and attentive look, a deeper contemplation and visual immersion. Its interactive image

produces a virtually infinite set of other images, where contemplation is often superimposed to action. As in reality, the majority of the video games' virtual worlds allow for unlimited freedom imagery. 360 degrees simulate what we can visually grasp, not simultaneously but through choices and intentions by the player. "He is free to look to any part of the image (as he is free to look at any part of the reality)" (Aumont 2009, 163).

Some producers of video games seek to evolve their work in order to emphasize the full potential of gaming visuals, primarily in how they are able to simulate realistic effects in digital aesthetics. In this context, aesthetics must be understood as a reflection of experiences, since the players are invited to increasingly enjoy virtual environments that are capable of stimulating an insatiable sense of contemplation. This idea of contemplation in video games resembles the idea of contemplation of reality. The player will have to make choices and act accordingly, in order to select what he wants to contemplate on the screen. Despite the dynamics associated with the interactivity of video games' images, they can still encourage a mental connection exercise that allows players to 'get into the image' while playing and thus contemplate, 'scrutinize', 'get into' (Barthes 2008, 110–1) the digital matrix and explore its imagery labyrinth much like a photographer explores reality (DuChemin 2009, 2–7). All photographs of the world form a maze (Barthes 2008, 83), and each individual within it explore a path defined by personal readings and interpretations. In video games the same occurs with each player. As he gets into the images, he becomes more immersed in the maze that holds them.

Immersion does not privilege images more than before; rather, it simply takes images to another level. It is important to remember that immersion is only possible if the immersant *agrees* to participate. (Burnett 2004, 77)

'Sandbox' video games such as *Grand Theft Auto IV* or *Fallout 3*, have mazes conceptually opened to the capture of an endless set of images. The player immerses into these mazes while controlling the character within the virtual world, and contemplates what lies ahead of his eyes. All elements related to the composition of visual images define the depth of the maze, and force the player to stay and explore it, facing a mental and continuous negotiation process. The interest becomes the image as a dimension, as a latent history, and the players, unlike photographers, record these images while immersed in the virtual situation.

For a photographer gazing through a viewfinder, reality is mediated by the camera. Some describe a distancing sensation, one in which the photographer is disengaged from a situation. (Albor 2010, see also Flusser 1998, 74)

Imagery mazes of most video games support a greater transparency. An observation without camera in a virtual world may, in many cases, comprise several advantages; there is no restriction for the captured image, no fear of approaching possible dangers, or any kind of theatricality by the virtual characters in manufacturing poses or behavior change before the lens (Barthes 2008, 18–9). Such advantages considerably extend the authenticity in virtual worlds that, although from different perspectives, has been exploited both by players and by various photographers and artists. The player actively

captures screenshots while involved in the events of the virtual worlds, while photographers and artists prefer to act as observers. The player tries to illustrate his experience while photographers and artists seek to disclose the different experiences (especially multiplayer) that occur in virtual worlds. The interesting aspect is to observe that, although different, they prospects created by both are always the result of their presence in these mazes. Whether the subject is active or passive the captured screenshots show a similar artistic potential, since “*the vision of the photographer is not to see but to be there*” (Barthes 2008, 58). As one can build a reflection from reality, also in video games one can build a reflection from the virtual. This look is the gleaning of images of the virtual in which one is and one’s experience, allowing the construction and emergence of a visual *corpus* holding meaning and consequently open to critics.

#### 4. The photographic act as gleaning

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This idea is explored by Agnès Varda in her 2000 documentary titled *Les Glaneurs et la Glaneuse*, which refers that “*glean is to catch the debris after harvest*”, an ancient custom that is still active today, although in other contexts. Proceeding from Jean-François Millet’s painting *Las Glaneuses*, Varda builds a reflection at the persistence of gleaners of contemporary society; those who live of other debris, which “*collects debris in our satiated society*”. The author’s critic is also a self-critical view of her insatiable desire to show images of a reality that exists but nobody wants to see or take part. The author draws an important analogy as she acknowledges being the main gleaner of her documentary. Her role is to glean the images of the observed reality:

In gleaning of images, impressions, emotions, there are no laws. Figuratively, gleaning is a mental activity. Glean facts, acts and information. For me, as a person with poor memory, the things I gather are the ones that summarize my travels. (Varda 2000)



Fig. 1. Agnès Varda in *Les Glaneurs et la Glaneuse* (2000)

The same holds true for photographers. The photographic gesture is a gesture that involves gleaning. The photographer is, like Agnès Varda was during the documentary, a gleaner of images from reality, who seeks to establish new circumstances according to the available technical possibilities (Flusser 1998, 51). Currently, perhaps because there is a saturation of pictures of reality and therefore greater difficulty in capturing

new images, many photographers and artists seek to create new circumstances in virtual environments. In their projects, the virtual is approached as an environment to be explored for its creative and evolutionary amplex demonstrated over the years. An environment where people search, read, write, learn, meet, talk and play. In short, an environment where they spend much of their daily time. In the 2006 exhibition *Photographs from the New World* in New York, the English photographer James Deavin presented a series of images captured within the virtual world of *Second Life*.

*Second Life* is wrongly named. Rather than a pale imitation of “first” or “real” life, *Second Life* is best understood as a new extension of the human senses, and a tool used in different ways by different people for different things. (...) *Second Life* programmers believe that most users don’t yet understand the full potential of the environment in which they are currently gaming, chatting, shagging and so forth. (...) This will change over time, one way to understand these photographs is as a piece of *Second Life* history, markers of a time when people were still viewing the new world through the eyes of the old. (Deavin 2006)

Eva and Franco Mattes, known as 0100101110101101.ORG, also presented some projects, such as *Portraits*<sup>2</sup>, with several series of images taken in the virtual world of *Second Life*. Their work seeks to represent and explore the relationship between identity and public presentation in virtual worlds regarding the endless possibilities to create and fantasize. They seek to document the existence of a (virtual) society in order to understand their evolution (Bauret 2010, 58–60).

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2. 0100101110101101.ORG, Portraits, available at: <http://0100101110101101.org/home/portraits/index.html>, last accessed on March 18th, 2013.

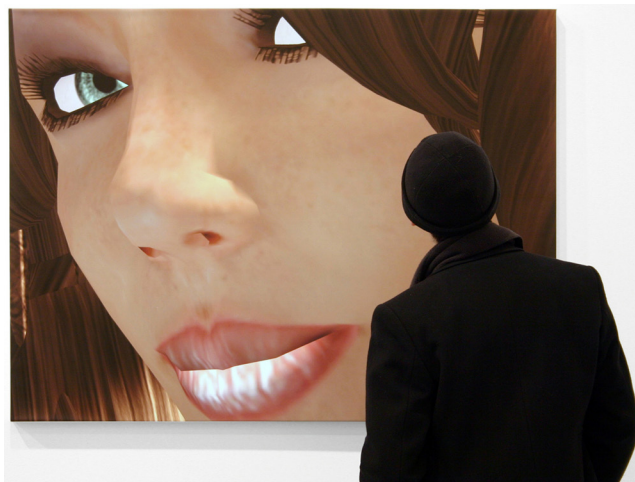


Fig. 2. Portraits, by Eva and Franco Mattes, as known as 0100101110101101.ORG.

Marco Cadioli, known as Marco Manray, is a photographer of virtual worlds. In his website<sup>3</sup> he publishes projects on the images he captures in the virtual world that he discovers and explores, both on the Web and in many video games. Cadioli builds on the theoretical foundations of photography to broaden the discussion on what he considers to be an emerging form of artistic expression.

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3. Marco Cadioli: Projects, available at: [www.marcocadioli.com](http://www.marcocadioli.com), last accessed on March 18th, 2013.

I travel across the net like a Japanese tourist in Europe. I jump from a place to another. I travel across the net like a reporter to tell everything about a place made of information. I take shots at the net.<sup>4</sup>

In 2005 he published *ARENAE*<sup>5</sup>, a black and white report on various war scenarios, summarized in a series of images captured on video games like *Counter-Strike*, *Wolfenstein: Enemy Territory* and *Quake III Arena*. “Even today, photographers participate in all conflicts that occur on land, at sea and in the air, more or less protected, more or less respected” (Bauret 2010, 33–4) and Marco Cadioli participated in conflicts that took place in the virtual space. The photographer seeks to discover “never seen visions and wants to discover them on the inside of the camera” (Flusser 1998, 52). Likewise, Cadioli sought to uncover insights within the virtual worlds of video games. In *ARENAE*, Marco Cadioli, like Robert Capa, sought mostly action, the dynamics of the event, the conflict in virtual scenarios fueled by players in online experiences. Unlike Robert Capa, Marco Cadioli had the advantage of having a ‘security’ that only virtual worlds allow by “providing the psychological experiences of conflict and danger while excluding their physical realizations. In short, a game is a safe way to experience reality” (Crawford 1997, 14). As Cadioli points out, the images captured in video games are photographs of war, they “dramatically resemble pictures of a real war, as well as photographs of actual war resemble video games”.

When vision is spoken of in photographic terms, it is not spoken of merely as the things you see but how you see them. Photography is a deeply subjective craft, and the camera, wielded well, tells the stories you want it to. (...) You are central to your photography, and the camera is merely the tool of interpretation — not the other way around. (DuChemin 2009, 11)



Fig. 3. *ARENAE*, screenshots from *Counter-Strike*, by Marco “Manray” Cadioli.

Before pressing the printscreen key, Marco Cadioli had to plan what he wanted to capture. To some extent, what he captured became as important as what he excluded (DuChemin 2009, 14), because it involved a selection and therefore an intention. As a photographer and not a player, Cadioli immersed in the mazes of video games to glean information, experiences, and actions in the form of images. He built a meaningful *corpus*, opened to multiple readings and interpretations, a corpus defined as a documentary record showing the events occurred in these virtual worlds.

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4. Marco Cadioli *Internet Landscape*, [www.marcocadioli.com/internet-landscape](http://www.marcocadioli.com/internet-landscape), last accessed on March 18th, 2013.

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5. Marco Cadioli *Internet Landscape: reportage from the net, ARENAE*, available at: [www.marcocadioli.com/internet-landscape/arenae/index.html](http://www.marcocadioli.com/internet-landscape/arenae/index.html), last accessed on March 18th, 2013.

The work of these artists and photographers has been important in order to demonstrate that the practice of photographic acts within virtual environments, although simulated and technically limited, can be possible. Video games have evolved to extend these photographic acts to increasingly accessible discoveries, also appreciated and respected by the players. Just as Agnès Varda collects things that summarize her travels, players collect images that summarize their gaming experiences. Many like to exhibit these images at virtual galleries on the Web. Some of these galleries are created for free at sites like Flickr, where players can store and share their screenshots. Building upon Flickr's slogan ("*Share your photos. Explore the world.*"), the players, besides showing virtual worlds of video games, try to show how they see them personally. They invite visitors to explore scenarios, characters, actions and events they experienced. All these galleries result from every player's insights. However, the occurrence of the photographic potential in video games is subjective, as is photography (Barthes 2008, 36–7), to the gameplay that each one experiences.

Faced with a reality, two photographers do not see the same thing or react the same way, because the act involves their own photographic experience, sensitivity and culture. (Bauret 2010, 47)

For this reason there are a growing number of galleries created on the Web with a substantial set of screenshots captured by several players during their experiences. The website and gallery [DeadEndThrills.com](http://DeadEndThrills.com), created by Duncan Harris, is a very good example of this. Players, photographers and artists, seek to convey artistic and expressive values in the digital images that they capture. They essentially show what they have gleaned from these virtual worlds.

## **5. The photographic act as a gameplay core mechanic**

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Photography is being increasingly explored in several ways. Sport video games, such as the *FIFA* series, let the players watch the replays of various moments, celebrations or even expressions of players. Others like *WipeOut HD* feature a photo shoot mode, allowing the capturing of screenshots of undertaken races. But, most importantly, in many video games, photography has emerged as being a gameplay mechanic. *Dead Rising* or *Afrika* are examples that explore the process of capturing screenshots with the aid of virtual cameras. The characters have at their disposal cameras, which allows players to control a set of techniques (such as zoom, scale, depth of field) to enhance the results of various visual compositions. In these titles, whenever one selects the camera, the perspective changes from third-person to first-person and the player begins to see the virtual world through the viewfinder. The photographer "*is not committed to change the world, but to force the camera to reveal its potential*" (Flusser 1998, 43), and in video games, the player is also not committed to modify the virtual world, but similarly to force the virtual camera to reveal its potential. The diversity of images depends on the diversity of intentions by each photographer. Although simulated, the act of 'taking pictures' as a gameplay mechanic is in itself a sign of the photographic potential that video games possess.





Fig. 4. Frank West, the protagonist and photojournalist in *Dead Rising*.

In *Dead Rising* the player controls Frank West, a freelance photojournalist who, with his camera, documents an invasion of zombies in a shopping center. Despite being free to pick whatever he wants, the player must be aware that all pictures are evaluated according to a scoring system that considers the captured elements, situations and actions. The goal is to cover the entire event and report, through images, a story that is being told through the progression of the game.

In *Afrika*, the character that the player controls is a professional photographer who aims to record various moments of the animal world, in particular virtual scenarios of the African continent.

The quality of a photograph in *Afrika* depends entirely on how the game's camera operates. Depending on shutter speed, lens type, and positioning of the six axis (which controls the orientation of the camera as though it were the camera itself), an animal in motion may be blurry, off center, or seemingly still. The game world is perceived from within via the camera, not just from outside via the screen. In game cameras immerse players in a unique way. (...) *Afrika* adds depth by rewarding players money based upon the specific goals of a mission, as well as angle, target, distance to the subject, and technique (likely a combination of depth of field, exposure, and camera shake). (Albor 2010)

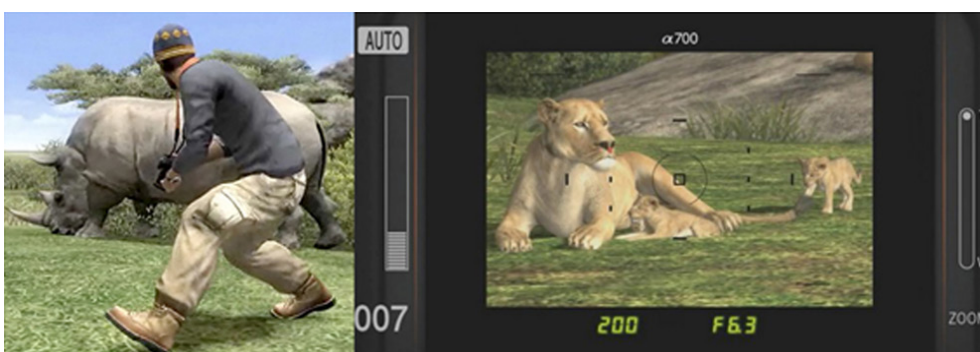


Fig. 5. The photographic act as a gameplay core mechanic in *Afrika*.

The monetary aspect of the game is of special importance as the player needs to purchase new equipment and improve the quality of the captured images. *Afrika* is the video game that greatly incorporates photography. In sum, all the above mentioned titles demonstrate that, albeit simulated, it is possible to perform photographic acts in various virtual environments.

## 6. Conclusion

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The last ten years have been extremely important to reinforce the closeness between photography and video games. As we demonstrated, there is an undeniable photographic and artistic potential that has recently gained greater recognition. This is confirmed by projects of various photographers and artists like James Deavin, Eva and Franco Mattes or Marco Cadioli and the numerous galleries created by players on the Web. Video games such as *Dead Rising* and *Afrika* have explicit core mechanics that include the process of capturing screenshots, enabling and motivating players to capture and share their own experiences.

Even though we have seen a significant improvement on video game graphics, and consequently on their photographic potential, technology evolution and new generations of gaming consoles will certainly bring novelties to the gaming world. It is however essential to understand that this artistic potential will only be noticed and explored within the limits of photographic *praxis*. In essence, more important than technology, video games or graphics evolution is the gamers and artists' ability to recognize and explore photography as an artistic expression of video games. Therefore, future work within this area should focus on the impact of video games evolution on the perception that gamers and artist have of their artistic potential.

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