

# The Mirror Chiasm

## Problematizing Embeddedness in Video Games Through Mirrors

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### Introduction

Human society has always dealt with virtual extensions of its “reality.” These were used to open the everyday to spaces of magic or myth. Forms of virtuality can be found as early as in cave paintings and have ever since accompanied the way human beings have tried to make sense of their existence. Video games can be seen as the peak of this evolution, generating fantastic game spaces in which the players actively experience narrations of all kinds. The evolution of games was paralleled by an evolution of the simulation of space, going from simple 2D to full immersive spaces in virtual reality.<sup>1</sup> The strive for a perfect illusion and all the consequences that go with it—which has already been the subject of novels and movies for centuries—has been accelerated by new technologies. The recent creation of the Metaverse by Marc Zuckerberg has triggered a competition among the key players—mainly Microsoft—to create the most perfect virtual reality into which we can transfer many of our activities, from work to leisure. Virtual realities are created with new technologies, and they are completely isolated from the actual, thus helping us to forget our limited, human condition. This detachment is not only given by the degree of virtuality of game environments, but also by their mechan-

1. Friedrich von Borries, Steffen P. Walz, and Matthias Böttger, eds., *Space Time Play: Computer Games, Architecture and Urbanism: The Next Level* (Basel: Birkhäuser, 2007).

ics, which leads the player to constantly follow a goal without the time to be concerned with anything else. While on the one hand video games offer a more active spatial perception than other media such as cinema or theater, the activity of the player is strongly channeled by its rules.<sup>2</sup> The higher the degree of illusion is achieved, the less a player can refer himself to his actual condition. This calls for devices that can problematize this perfection and disturb the embeddedness of the player in the virtual reality of a game.

In fact, the argument I would like to bring forward in this chapter is that the quality of virtual—be it on screen or VR devices—as a corollary to actual space is only given when the former still leaves open a door to the latter. That is, when a threshold between virtual and actual remains open and can be experienced or trespassed and when we can map the virtual on our daily life experience. It is not by chance that myths, fables, tragedies, and comedies—as fantastic as they might be—are always somehow related to everyday situations. And for their enactment, they have always been tied to some spatial thresholds, such as the fireplace, the theater, or the cinema. On the contrary, the current tendency of virtual reality is to make us completely immersed in it without any ties to the actual condition. The question is: how we can problematize this situation and lever on the mediation of this experience? One of the most powerful tools in this sense is unplanned: glitches and bugs of all kinds and sorts. These have been analyzed and discussed widely, as they manage to make us discover “beyond the scenes” of games and of programs.<sup>3</sup> Glitches often generate impossible spatial situations, with unprogrammed places that should not be accessible, like the hospital set in *Grand Theft Auto IV* (2008) where you can suddenly enter an undefined space. The possibilities of glitches have created an interesting movement of “countergaming,” or working against the game by trying to directly modify it to make it function differently.<sup>4</sup>

2. Stephan Schwingeler, *Kunstwerk Computerspiel – Digitale Spiele als künstlerisches Material. Eine bildwissenschaftliche und medientheoretische Analyse* (Bielefeld: Transcript, 2014).

3. Rosa Menkman, *The Glitch Moment(um)* (Amsterdam: Network Notebook Series, 2011).

4. Alexander Galloway, *Gaming Essays on Algorithmic Culture* (Minneapolis: Electronic Mediations, 2006).

This opens an interesting aspect of the nature of space in video games: while games might suggest the existence of both “exterior”—landscapes, cityscapes—and “interior”—apartments, prisons etc.—spaces, these are experienced as seamless landscapes with no real difference, because of the same constraints and mechanics they are subjected to. Players are constantly moving in a “landscape of events,” to quote French philosopher Paul Virilio.<sup>5</sup> The example of this “other space” in *GTA IV* is thus particularly enlightening because it opens and disturbs our embeddedness in the virtual space of the game. That is, the appearance of a space that can be perceived as an “exterior” to the “interior” where we act as characters allows us to understand and acknowledge its mediateness. As such, glitches can help us to relate the (virtual) interior to an (virtual) exterior and thus to the actual.

In everyday life, an interior always implies the existence of an exterior, and there are many possible thresholds that define intensities and degrees of the relation of these two. It appears evident that there can be no interior if not in relation to some exterior; my apartment is an interior to the city outside, which is its exterior. There are many thresholds with different ways to connect the two, such as doors, windows, or balconies.

Game spaces are representations of the actual world, but they are not simply copies of it. The transformation in the virtual space of games also implies a transformation of houses and cities to something different. And as such, windows, balconies, or doors are not the same as they are just connections without any kind of “thickness” and do not represent thresholds, only passageways.<sup>6</sup>

5. Paul Virilio, *A Landscape of Events* (Cambridge, MA: The MIT Press, 2000).

6. About the possible quality of in-betweenness in video games, see Ulrich Götz, “Zugänge zu Zwischengängen—Konstruktion eines räumlichen Modells,” in *Digitale Moderne: die Modellwelten von Matthias Zimmermann*, ed. Natascha Adamowsky (München: Hirmer, 2018): 231–248.

## Mirrors: Agents of Reflection

It appears thus important, in the light of the increasing closeness of games and virtual reality, to reflect on agents, which are capable of troubling the illusion and suspend the separation. For this chapter, I would like to move the attention to another device which has the potential to generate the same effect as glitches and bugs. It is a device with a long history we can refer to, but which in video games has not received the attention it deserves: the mirror. Mirrors are rare in video games, primarily due to insufficient rendering power on the part of the CPU and GPU. Mirror effects have only recently become more sophisticated and life-like; it is now possible to realistically reflect a character, for example, through water. As game spaces are graphical simulations, the effect of mirroring must also be simulated. This can be achieved by introducing materials which reflect the environment or by doubling and inverting spaces, thus simulating the effect of an actual mirror. These representations are very taxing for one's computer, and this is only compounded exponentially when a series of mirrors face each other. As computing power has increased, more mirrors have appeared with the potential to effectively disturb our embeddedness. They open the interior of games to another space that remains inaccessible and as such is perceived as "exterior" unless the mirror can be trespassed. Mirrors then can become agents of "reflections" both literally and metaphorically.<sup>7</sup>

Mirrors appear to be particularly fitting for this task, as they have always been agents of magic and were used to "communicate" with other worlds. They were part of several ancient myths, such as the killing of Medusa by Perseus through a deflecting shield which prevented him turning to stone, or Narcissus, famous for falling in love with his own reflection. Mirrors also represent thresholds to grim worlds, where souls are taken

7. The etymology of "to reflect" is complex and leads back to the Latin term "reflectere," which means to "bend back." Reflecting, in the sense of thinking, then implies a movement of thought back and forth inside the head. It is the movement which generates the thought.

away and demons lurk. Because of this, some cultures cover mirrors in houses of mourning. Most children know that vampires do not cast reflections in mirrors, a source of visual humor in films as recent as *What We Do in the Shadows* (2014).

Mirrors are ambiguous thresholds that hold the potential of opening a pathway in both directions. Not surprisingly, they have also played a major role in magic and alchemic procedures, such as the *Spirit Mirror* allegedly owned by Anglo-Welsh astronomer and occultist John Dee to summon spirits and angels. Mirrors, because of their ambiguous nature and the capacity to transform what is reflected and not simply represented, were ideal instruments for any kind of magic or spiritual rituals. We can also find examples of exterior uses of mirrors to modify the reality of landscapes: in England the upper class would wander through their incredibly artificial “natural” landscapes—the “English landscape garden”—by holding a so called “Claude Glass,” named after French painter Claude Lorrain, and looking back through it. The small mirror, convex and often cased in a powder box, was sensed to reproduce the landscape in the mirror in a way to be closer to the landscape paintings that had influenced their design. This was a virtual reality device *ante litteram!*

The mirror as device to question reality and perception, to break the boundaries of media, and thus to problematize the relationship of exterior and interior, has been used often in painting or cinema. Three well known paintings are particularly enlightening in this sense: Jan van Eyck’s *The Arnolfini Portrait* (1434), Diego Velázquez’s *Las Meninas* (1656), and Parmigianino’s *Self-portrait in a Convex Mirror* (c.1524).

van Eyck’s *The Arnolfini Portrait* (1434) is such an example: at the two sides of the stage we find the married couple looking at the observer and holding hands. It has been suggested by art historian Erwin Panofsky that the painting might have had a legal character,<sup>8</sup> but what is troubling is the presence in the middle upper part of the painting of a round, convex mirror which inevitably attracts the attention of the observer. Not only do we

8. Erwin Panofsky, “Jan van Eyck’s *Arnolfini Portrait*,” *The Burlington Magazine for Connoisseurs* 64, no. 372 (Mar. 1934): 117–119; 122–127.

see the reverse of the couple, but two more persons which stand behind them and would be invisible if not for the mirror. Furthermore, the small dog which stands at the foot of the couple interestingly is not mirrored. Thus, the small mirror breaks the boundaries of the frame and extends the space of the painting to the actual observer, who would hypothetically be mirrored into the scene, but is obviously not.

An even more famous and often discussed painting with a mirror playing a major role is *Las Meninas* by Diego Velázquez (1656).<sup>9</sup> Here, it is the painter that stands in the scene, and he is caught in the act of looking towards the observer, where (supposedly) the royal couple, which he is portraying, is standing (see image 3.1). Here again, not least also because of the disposition of the other figures in the painting, the space of the scene is exploded, and, through the mirror, it opens a new dimension in which the observer is projected. The staging of the figures and of the rooms is extended to the observer by the space he is standing and the space of the royal couple, which would be hypothetically identical.

Of a different order is the painting by Parmigianino, *Self-portrait in a Convex Mirror* (c. 1524), when the painter was only twenty-one. Here, the mirror does not act as a threshold and multiplier of spaces but as a device troubling and problematizing perception: the convex mirror creates a distorted image of the painter which he reproduces into the painting. This allows Parmigianino to question the canons of perfection and of identity by representing his distorted body with a huge hand and arm in the foreground and a small head in the background. These examples show very well how mirrors can be used as devices that problematize the medium in which they are used, and, because of their reflecting nature, they break the isolation of the medium.

9. See, for example, the analysis of this painting by Michel Foucault in *L'archéologie du savoir*, 1969.



Image 3.1: Diego Velázquez, *Las Meninas*, 1656, Museo del Prado (Wikipedia).

Mirrors continue to be an inspiration for art. Conceptual practitioner Dan Graham uses them extensively. His model installation *Alteration to a Suburban House* (1978) shows how the mirror, both literally and metaphorically, can suspend a divide and problematize it by creating a reflected threshold. The work is based on a series of small-scale models of single-family houses without façades. Mirrors are placed on the whole long side

in the interior of the houses. Thus, the interior of one house is projected into the interior of the next, creating a new exterior based on these two interiors. The resulting play of reflections questions the enclosed nature of suburbia.

In the Italian *giallo* horror film *Profondo Rosso* (1975, dir. Dario Argento) the protagonist walks through a hall with creepy paintings looking for a murderer. It is only at the end of the movie that one realizes that one of the paintings in reality was a mirror in which the murderer was reflected, which is profoundly uncanny and shows to what extent our attention can be steered. Hopefully, similar approaches will be used in the medium of video games to explore the potential of mirrors. As Georges Teyssot has underscored, *play* and *mirror* in German have the same root: “Spiegel” and “Spiel.”<sup>10</sup> Mirrors are close to play as their effect opens a set of effects and a game of reflections, which seems unstoppable at times (see image 3.2).



Image 3.2: Dario Argento, *Profondo Rosso*, 1975, film still.

10. “Play and mirror share the same root in German: *Spiegel* (mirror) and *spiel* (play, or game). During the baroque and rococo periods, with its fictive perspectives, the *Spiegelkabinett* creates a theatre of illusion which celebrates the collective narcissism of the princely court. The resulting abyss (the *mise-en-abyme*), first blurs and then ruins the mimetic chain of (social) representations, in effect creating *Trauerspiel*, a baroque drama.” Georges Teyssot, “Mapping the Threshold: A Theory of Design and Interface,” *AA Files*, no. 57 (2008): 7.

Mirrors also play an important role in cultural history in the establishment of bourgeois interiors and their separation from a dangerous exterior. With the serial production of mirrors, these were not confined to the houses of the few wealthy, but also seen in many private houses and mansions: everywhere, the bourgeoisie was emerging as a new social class. The increasing call for security resulted in closing houses and apartments to the dangerous outside, but through mirrors it was possible to again have an opening to a magical exterior. The mirror thus took over the role of windows and doors as a different kind of opening, as the actual outside was too dangerous to be kept open. The exterior to which these interiors were relating to are now the virtual exteriors created by the mirrors. These would produce a secure opening to a magical world, seen best if they were put in front of each other, thus creating the well-known effect of the “infinite mirror.” The disposition of mirrors in apartments and mansions became a design discipline of its own, and nothing was left to chance. Paintings of interiors of the time always show a precise disposition of mirrors with different angles of inclination to obtain the best effect.

The use of mirrors became ubiquitous in almost every bourgeois *intérieur* to the point of a true fashion, which became criticized by many, including Edgar Allen Poe. In an essay published in 1840, Poe fiercely criticized the use of mirrors as in bad taste as they would create both uniformity and chaos. But, at the same time, the success of mirrors as an element of decoration was enormous.<sup>11</sup> Despite such critiques, mirrors entered so many houses and apartments at the time. Mirrors allowed for an opening of the interior to a seamless exterior that would not bare danger for the inhabitants. The exterior was the modern city, a city of rising industrialization, chaos, danger, noise, and pollution. No wonder the fine gentleman didn’t want to put his apartment in touch with this reality. He was striving for privacy and for “Gemütlichkeit,” coziness.

11. Edgar Allen Poe, “The Philosophy of Furniture,” *Burton’s Gentleman’s Magazine*, no. 5, (May 1840): 243–245.

With the advent of modern architecture and this obsession for transparency, the bourgeois *intérieur* and all its possible thresholds would steadily disappear towards a continuous space merging inside and outside. While architecture in the nineteenth century was all about design from the exterior—the city and the façade—to the interior, modernism’s design procedure was inverted, moving from the interior to the exterior, from the furniture to the city. While mirrors played no particular role in modern architecture, which was all about clarity—both literally and metaphorically—and transparency, the contemporary advent of new technologies in the houses—the modernist “house as machine”—led to a “complexification” of the interior. And while the modernist radicality was not embraced by the masses, the rising complexity of networks would open the house to a new “digital” exterior.<sup>12</sup> This process is still ongoing, and the devices have multiplied: from electricity, radio, phone, and television to portable devices, virtual reality, and video games. This leads to the observation made above of virtual realities that suggest a transparent relation to our actual life but are in reality separated from it by the increasing capacity of technology.

Everything is connected, even if in an invisible way. The completely cut off house is unimaginable, seen only in stories such as E.T.A. Hoffmann’s “Ein Brief von Hoffmann an Herrn Baron de la Motte Fouqué” (1818) where the protagonist, Rat Krespel, would have his house built with no plan. Instead, he would let walls and ceilings without opening creating an inaccessible hollow space. Only in a second moment he would start to determine where the workers would have to place an opening.<sup>13</sup> The house is then metaphorically tied to our faces, with the windows representing our eyes. How disturbing is the association of windows with mouths, as in the movie *The House with Laughing Windows* by Pupi Avati (1976)

12. “En fait, puisque la maison devient l’endroit de passions contradictoires, elle apparaîtra, d’un côté, comme la forteresse de l’intimité’ (la notion anglaise de ‘privacy,’ ou celle de ‘Gemütlichkeit’ en allemand), alors que, de l’autre, elle se présentera comme un microcosme quadrillé de frontières mobiles.” Georges Teyssot, “Fenêtres et écrans: entre intimité et extimité,” in *Appareil*, MSH Paris Nord, École doctorale “Pratiques et théories du sens” (2010), <https://doi.org/10.4000/appareil.1005>.

13. E. T. A. Hoffmann, *Die Serapionsbrüder*, ed. Wulf Segebrecht and Ursula Segebrecht (Frankfurt am Main: Deutscher Klassiker Verlag im Taschenbuch, 2008), 17–29.

where the eyes of the house—the windows—are painted as mouths. It is all about inside and outside, interior and exterior, and the relation that is installed between the two. This is exactly what virtual reality is cutting off.

## Mirrors in Games

On the backdrop of this rich history, it is evident that mirrors are more than just reflecting surfaces. The question arises if we can transfer their qualities to video games to problematize their closeness as they do in other media.

One of the characteristics of mirrors is to create confusion. Just think of the *Hall of Mirrors* in Versailles, which is an excellent example of what mirrors can achieve in an interior space when they are paired and put in front of each other, creating the effect of multiple reflections. One can only imagine the gaiety and delight of the dancers and covenants during a party in this room, accompanied by the music of Jean-Baptiste Lully, or later Jean-Philippe Rameau, with a wild play of reflections.<sup>14</sup>

Again, Paul Virilio, when discussing the nature of virtual space, makes an analogy between virtual reality and the *Hall of Mirrors* in Versailles:

We have before us a stereo reality. Like the lows and the highs that create a field effect, a relief effect, we have now actual space and virtual space. And the architect has to work with both. Just as the architects of Versailles worked with the gallery of mirrors. Except that no it is not simply a phenomenon of representation; it is a place of action.<sup>15</sup>

14. The *Hall of Mirrors*, on a side note, was an important step towards the industrial production of glass. It should in fact not be forgotten that the production of mirrors in the past was difficult and expensive. Up to the seventeenth century, mirrors were a rare product and in the hands of few specialists. At the time, Venetians were holding the monopoly of glass production and the famous *Hall of Mirrors* in Versailles, realized between 1678 and 1684 by Jules Hardouin-Mansart, was an important touchstone for the *Manufacture royale de glaces de miroirs* (later *Compagnie de Saint-Gobain*) created by Jean-Baptiste Colbert to break this monopoly. Venetian glassmakers were invited to Paris in an early example of industrial espionage.

15. Paul Virilio and Sylvère Lotringer, "After Architecture: A Conversation," trans. Michael Taormina, *Grey Room* 3, (Spring 2001): 41.

Note that Virilio underscores how the virtual world is not a space of representation, but of action. If we look at the virtual worlds of video games, there is obviously an aspect of (mis)representing the actual world, at the same time, at the core of these spaces is the possibility of action, of manipulating something, be it only the character played in them.

The ultimate confusion and, in a sense, perversion, of the baroque “Spiegelkabinett” or “Cabinet des Glaces” was the house of mirrors in funfairs and amusement parks. German born Gustave Castan would file the first series of patents for an “Irrgarten” maze. An American version would soon appear and be one of the attractions of the Chicago 1893 World’s Fair. The “Mystic Labyrinth” was advertised with the following words:

The Labyrinth and Crystal Palm Garden seem ABSOLUTELY WITHOUT END, yet when one tries to penetrate he constantly finds himself FACE TO FACE with his own image. Endless vistas appear, etc., and one always seems to be standing in the identical same spot, and wholly ROBBED of all ideas of direction—as great a MYSTERY as human ingenuity can provide.<sup>16</sup>

At the same time, this kind of use of multiple mirrors in games still challenges calculation power. We can only imagine the effect of such a play of mirrors and how this would open infinite exteriors to the interior of video games.

The effect of opening up a door to another dimension which cannot be entered, if not by one’s own reflection, is more likely to be already found in video games. French philosopher Michel Foucault, in his lecture “Des espaces autres”<sup>17</sup> (1967), defines the mirror as something in-between utopia and heterotopia. It is a utopia because it is a place without a place, but also a heterotopia as it is a real object through which I am at the same time real and unreal. It is this quality which could make the mirror so powerful in video games. Unfortunately, so far, not many games have used the potential of mirrors to problematize the embeddedness of

16. Handbill for the “Mystic Labyrinth” mirror maze at the Chicago 1893 World’s Fair.

17. Michel Foucault, “Des espaces autres,” *Empan* 54, no.2 (2004): 12–19, <https://www.cairn.info/revue-empan-2004-2-page-12.htm>.

the player. Often mirrors are used literally as doors, and by doing so they lessen their quality as the mirrored space becomes accessible and is again nothing but a seamless interior. If the mirror is used as a tool of reflection, then it opens a continuous interior of the game as an inaccessible exterior that could help the player to refer his virtual game to his actual experience.

Good examples of mirrors in video games can be found in the survival horror game series *Silent Hill* (1999–2012). In *Silent Hill 2* (2001), the protagonist James looks at himself in a mirror in the intro scene, but he is actually looking outside the game to the player. In *Silent Hill 3*, the potential of mirrors is really unlocked: here a creepy room has a full-size mirror where the character is reflected up to a point before the mirrored image detaches itself and remains still. The effect is troubling as we see something which is at the same time inside and outside of the game. In *Doom 3* (2004) there is also a mirror scene in a toilet, and, once the character looks at itself in the mirror, a video shows the character aging very quickly. In *Control* (2019), the game's female protagonist must unlock a room with a mirror in a particular level and pass through it. She then enters a mirrored space in which she faces an army of doppelgängers generated by the very same mirror (see image 3.3).

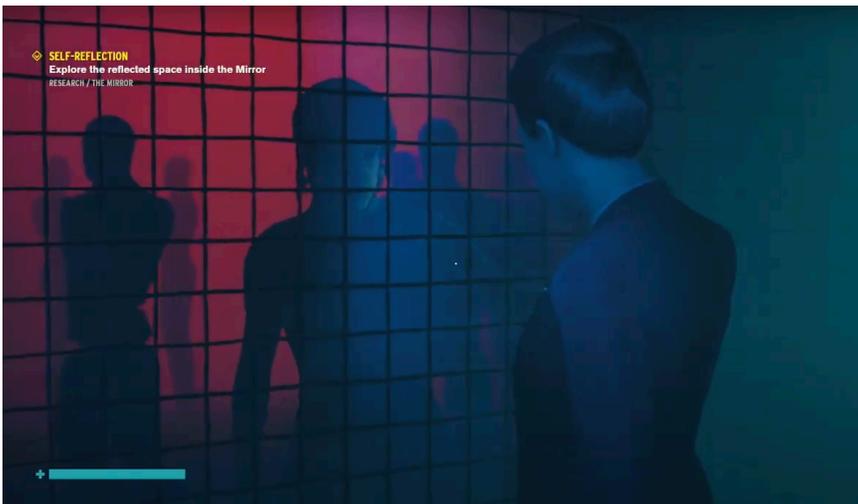


Image 3.3: Remedy Entertainment, *Control*, 2019, screenshot.

These are some examples that show us what mirrors can do in video games and how they can be used to open the interior of games to an exterior, which is special, as it cannot be accessed. Yet, in order to do so, the mirrors must remain static and not be portals or screens, because then the magic of its reflection is gone, and we identify the mirrors as elements of the interior of games. That is, they are not opening up a virtual exterior, but remain part of the seamless interior. The mirror as a magical portal to another world is obviously a well-established literary trope, as in how Lewis Carroll's Alice enters Wonderland:

In another moment Alice was through the glass, and had jumped lightly down into the Looking-glass room. The very first thing she did was to look whether there was a fire in the fireplace, and she was quite pleased to find that there was a real one, and blazing away as brightly as the one she had left behind.<sup>18</sup>

The mirror here is a barrier between reality and fiction, between the interior of the room and the interior or exterior of the fantasy world. Similarly, in *Le sang d'un poète* (1930, dir. Jean Cocteau) a young poet is urged by an animated statue to pass through a mirror, which then transforms into a surface of water and allows him to travel back and forth between a kind of alternate dimension. This dimension is filled with other rooms, other interiors to explore, again suggesting further portals and doorways (see image 3.4).

18. Lewis Carroll, *Through the Looking-glass, and What Alice Found There* (London: Macmillan, 1930 [1871]).



Image 3.4: Jean Cocteau, *Le sang d'un poète*, 1930, film still.

My point is that, to act as devices that reveal the mediateness of the game environment to the player, mirrors should simply be tools of reflection and not portals. That is, the complexity and refinement of video games calls for a downscaling of the mirror to its simplest effect, which is just reflection.

A last aspect emerges here which concerns matters of identity. The moment a character sees itself in the mirror, particularly in first-person perspective, the player sees “himself” in the mirror for the first time. Thus, he must question his identity as player—as a mediated character—and about the relation of these two. French psychoanalyst Jacques

Lacan has done extensive work on the process of apperception of infants and calls the moment of self-recognition a child's "mirror stage."<sup>19</sup> For Lacan, the infant's discovery of the self in the mirror is an important step in the construction of identity, which is processed through difference (oneself to others) and helps babies interpret and cope with the absence of a mother. The moment a player sees "himself," one is recalled of the moment a child sees and recognizes himself. But here, on the contrary, there is a moment of detachment, as the player for the first time consciously realizes he is not the character or exits the illusion the game has created. Here, mirrors again act against the embeddedness of the players and map the space of the game to the actual space. Foucault has extended Lacan's insight by pairing mirror and corpses as devices that help us to perceive the existence of our body.<sup>20</sup> Every time my character dies in a game, I see its corpse on the ground, and I am then projected out of the interior of the game to "game over." We should not forget that the root of "illusion" comes from "in-ludere," to play in. The death of my character then sanctions my "ex-ludere," my exit from the magical world of the game. Mirrors, on the other hand, allow me to experience an exterior during the game, and this is an argument in favor of a more extensive use of them in video games.

19. Jacques Lacan, *Le Stade du miroir comme formateur de la fonction du Je: telle qu'elle nous est révélée dans l'expérience psychanalytique* (Paris: Presses universitaires de France, 1949).

20. "C'est grâce à eux, c'est grâce au miroir et au cadavre que notre corps n'est pas pure et simple utopie. Or, si l'on songe que l'image du miroir est logée pour nous dans un espace inaccessible, et que nous ne pourrions jamais être là où sera notre cadavre, si l'on songe que le miroir et le cadavre sont eux-mêmes dans un invincible ailleurs, alors on découvre que seules des utopies peuvent refermer sur elles-mêmes et cacher un instant l'utopie profonde et souveraine de notre corps." Michel Foucault, *Les Corps utopique, Les Hétérotopies* (Paris: Lignes, 2009): 19.

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