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Lens Flare Paradox

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Abstract:
The essay tries to catch a glimpse behind the visual effects employed in computer games by looking at them from an interface perspective. The first part analyzes certain individual effects used in first-person shooters and shows how they are often used as interface elements. The scope is then widened by bringing in the idea of ‚the magic circle' and a discussion of its definition. By juxtaposing the results with Andrejevic's views on reality television and examples taken from popular media culture, the effect, the mediation itself is being carved out as the sole point of interest in media production. What seemed paradoxical at first actually seems to be very consistent in itself.

You find yourself on the roof of a train, shackles on your hands in front of you. No hint of where they came from as you reach the end of the cart and jump feet first through a window. A guy with a gun falls, you grab the weapon, a cross-hair appears in the middle of the screen in the exact same moment as another opponent with a gun tries to find some cover. You shoot him before he can hide. The second one tries to run, but you shoot him in the back before he can get to the end of the train cart. Now there is a short pause. You notice a beer ad in the train, and maybe you can also see the strange speckles that seem to be in front of your eyes, blurry but fixed, not moving, reacting to the light. And as you walk through the corridor and come closer to the ceiling lights a lens flare appears. You reach the next part of the train and there is new bad guys to shoot.

This how the first minute of **Battlefield 3** goes, a first person shooter set in a fictional war in which you participate as an US elite soldier killing thousands of enemies during the course of the game. It is a title out of the very popular genre of ego shooters, also called first-person shooters, a category of games heavily relying on the first person perspective which makes the player see the game world through the eyes of an avatar. These titles, hence the name shooter, generally involve a fair amount of gunfire directed at virtual bad guys with rounds of ammunition discharged putting whole army regiments to shame.

The popular discourse and media attention around first-person shooter games is due to the fact that the majority of them seem to consist only of sequences of aforementioned gunfire including humongous amounts of bloodshed and how this affects the social life of children and young adults. Yet another remarkable feature to most of the titles of that genre lies not in the fact that they simulate violence from a first person perspective, but instead in how they try to reinforce the notion that the player sees the virtual world through the eyes of the avatar. The most basic tool for achieving this is the obvious first person perspective. It restricts the player‘s field of view to that of the avatar and lets him or her discover the virtual world through its eyes. To make the experience even more ‚believable‘ or consistent a wide range of rules are implemented which will be referred to as ‚interface elements‘ in the further reading of this text. As Eva Nieuwdorp puts it:

„Applied to digital games, the interface is invariably made equivalent to either the hardware (controllers and the like) or the software (visual elements of the game world) that generate human-computer interaction (HCI).“ (Nieuwdorp 2009, p.201)

This text will focus mainly on trying to see these visual elements from an interface perspective in order to find some of the functions they have in contemporary media.

While the origins of first person games lie somewhere in the seventies with titles like **Maze War** and **Spasim**, the games that really made the genre popular were **Wolfenstein 3D** (1992) and **Doom** (1993) both developed by **ID Software** (Wikipedia, 2012). These games set a lot of standards for ego shooters, especially in the way they tried to simulate the

first-person perspective by means of visual effects. One of these is an interface element that lets the user know that he is being hurt by an enemy. In the case of this event the screen turns red for short span of time, simulating that the avatar is distracted by the pain inflicted to it. This particular effect is still being used in a lot of titles and can be seen for example in the game **Call of Duty - Modern Warfare 2**. In Modern Warfare 2 small hits are displayed as blurry red crescent shapes indicating the direction of the perpetrator while more intense hits result in having the screen splashed with virtual blood and grit reinforced by a thumping pulse sound suggesting that the avatar has been wounded severely. These kinds of effects are usually employed to heighten the immersive character of the game by introducing a – for the gameplay necessary – interface element in a way that is believable in the realm of the game. Believable in this sense does not necessarily mean ‚realistic' but more something like consistent, as every game creates its own semantic realm the player has to submit to and in which certain rulesets define the elements belonging in it and the elements that are to be revoked (Nieuwdorp 2009, pp.203 - 206).

Therefore seeing the currently selected weapon on screen held by the avatar's hands is less of a barrier to the immersive potential of a game than having a two dimensional icon of the selected weapon somewhere at the border of the screen (which is also common practice in a lot of games). Thus having a representation of the avatar's arms wielding weapons on screen can clearly be seen as an interface element, provided the representation of the weapon switches to another type when the player switches weapons in the game. This particular visual interface element is in fact so popular that there is even artistic works made on its basis. Aram Bartholl's work **First Person Shooter** (2006) for example is a pair of cheap cardboard spectacles with an image of arms holding an AK-47 Kalaschnikow rifle taken from the famous multiplayer ego shooter **Counterstrike** applied to the plastic lenses. By wearing these the user is able to see real life through the eyes of a Counterstrike avatar, bringing the virtual into the ‚real' by means of cardboard and (probably) an inkjet printed foil.

The mix up of semantic layers, in this case the virtual layer of the game Counterstrike and the real world is actually something very common to gaming itself, Bartholl's work only manifests this seemingly paradoxical state of being in two layers of reality at the same time in a way that makes it more transparent to the recipient. This layer on top of reality that is introduced by the game is often referred to as ‚the magic circle'.

„[...]The term magic circle is appropriate here because there is in fact something genuinely magical that happens when a game begins [...]. Within the magic circle special meanings accrue and cluster around objects and behaviors. In effect, a new reality is created, defined by the rules of the game and inhabited by its players." (Salen and Zimmermann, 2004 cited in Copier 2009, p.165)

While the described effects of this semantic realm of the game may be correct, Eva Niewdorp and especially Marinka Copier challenge the term ‚magic circle' because it suggests

a concrete boundary that is to be crossed, and also because it supports the binary notion that a person can only be inside the circle or outside of the circle. Nieuwdorp and Copier deem this explanation insufficient. For example in Nieuwdorp's text **The pervasive interface: tracing the magic circle** (2009) the question of pervasive games which are played in real life but with another semantic layer on top (the game's rules) is being addressed. The parallel handling of these layers or ‚circles' is the essence of a pervasive game, enabling the players to inject the imagined world of the game into reality. Switching roles or layers is therefore nothing magical. We do it all the time, even when we are not in a game context (Copier 2009, p. 166). A police officer for example has to be constantly aware of officially being a representative of the state and its power to enforce law and at the same time deal with being a private person having individual needs and wishes.

„[...]people are crossing it all the time in both directions, carrying their behavioral assumptions and attitudes with them. As a result, the valuation of things in cyberspace becomes enmeshed in the valuation of things outside cyberspace." (Castranova, 2005 cited in Copier 2009, p. 165)

So the boundaries are as permeable as they can be diffuse and we cross them casually all the time while actually being able to stay in multiple parallel realms at the same time. But how do we keep track of all those layers and involved semantic rulesets enabling us to modify our behaviour accordingly?

Now it could make sense to quickly rewind to this text's beginning. In the introductory part there was a short passage about the lights in the scene and the effect they caused, the **lens flare**. Maybe you noticed it right away, maybe you did not, but: assuming that in a first-person shooter we take the perspective of the avatar there should be no lens flare since it is a physical phenomenon that can only occur in lens-based image production and not in natural human perception. So either our character has mechanical, glass-based lenses as eyes or this effect is just incorrectly placed into the game. Either way, it does not matter that much because it is a video game and has no claim to be a truthful, physically correct simulation (or maybe you are a lens-eyed android) but there is something to this paradoxical effect that makes it worth mentioning. The lens flare does not appear by random chance in lots of more action centered games, especially war themed ones. It is a visual interface element we mostly know from war and action movies with **Transformers** (2007) as prime example for over-indulgence in the use of this particular visual effect. Therefore if it is repeated in a video game it serves as a visual identifier of the theme, the world of the game. This helps us build up expectations, and accept the semantic realm the game creates as consistent, as ‚real' in its own terms. A similar phenomenon are the explosions during the space battle over Endor in the famous movie **Star Wars Episode VI: Return of the Jedi** (1983). While the ships are approaching each other in outer space over a planet called Endor, they shoot brightly coloured laser beams at each other (the ‚bad guys' interestingly emitting green laser-beams while ‚good' shoots in a flashy red color).

One after another the hostile ships explode in fiery bursts of flames and with the distinct sounds of explosions. It all seems plausible up to the point where we ask ourselves a simple physical question: if the spaceships are actually in outer space then there is no atmosphere. Without an atmosphere there is no molecules around to transmit sound and there is also no oxygen to feed the fire of the explosions. While the effect may be physically incorrect we still need it because we expect it to be there. Our expectations towards the mediation are already so influenced by a huge history of similar media that, if there was an actually physically correct event happening in that scene, without a boom and a fireball, we would start questioning the integrity of the movie itself. In movies we do not expect real things to happen, we expect things that happen in movies to happen.

This phenomenon is very similar to the way reality television works. In the book **Reality TV** Mark Andrejevic writes about the TV-Show **Survivor** and its paradoxical state of being on the one hand a reality show about survival in nature without technological means and on the other hand a multi million dollar enterprise produced with a staff of hundreds and the best recording equipment available (2004).

„The seemingly self-contradictory tension in the notion of the ‚illusion of reality' recurs at several levels in the ‚Survivor' series. […]. Making reality seem real, it turns out, requires the very latest in high tech audio and video equipment.[…]. This high-budget production process perfectly summarizes the paradox of ‚manipulated authenticity': we can imagine a cast member, clad in a loincloth and clutching a hand-carved spear heading into the water to forage for dinner, followed by a gaggle of photographers and production assistants, shooting with hand-held cameras, dollies and special underwater cameras to catch the action. The production crew never appeared in the versions of the show edited for broadcast but remained behind the scenes - allowing viewers to adopt the position of the voyeur catching the action in all its „immediate" authenticity."
(Andrejevic 2004, p.197)

As it seems as it is not about actual ‚reality' at all but about more ‚authenticity'. But what makes the authentic so different from the real then? Wikipedia says that authenticity „[…] refers to the truthfulness of origins, attributions, commitments, sincerity, devotion, and intentions[…]" (2012). And in a philosophical context it even states that „In philosophy, the conscious self is seen as coming to terms with being in a material world and with encountering external forces, pressures and influences which are very different from, and other than, itself. Authenticity is the degree to which one is true to one's own personality, spirit, or character, despite these pressures." (2012). By applying this to computer games or reality television one could say that the authenticity of their constructed realms lies exactly in the non-truthfulness to nature (or reality in a whole), in the ways they differ from it. „[…] the promise of reality TV is not that of access to unmediated reality (the positivist promise) so much as it is the promise of access to the reality of mediation." (Andrejevic 2004, p.215). So therefore the lens flare, while it may be physically incorrect in the real world

only underpins the consistency of the game's mediation. Andrejevic also talks about a „fetishization of mediation itself" (2004, p.215). While he states this in a reality TV context, it is also true for many computer games which are advertised by their newer and better graphic engines, their improved gameplay and „[...]amazingly realistic effects[...]" (for example **City of Villains**, a game centered around superheroes and villains) (GamesIndustry International, 2005). The same goes for the two biggest milestones in console gaming since 2006, the **Wii** and the **Kinect**. The great novelty was not a particular game or genre of games itself but the the new interface mechanisms invented by the console companies. With the Wii the console itself was actually a lot weaker in terms of computing power than its market rivals. Yet it managed to sell in record quantities only because of its unique and innovative input mechanism, the Wii controller. When the Kinect came out pretty much the same thing happened: everybody was interested in the new, self-titled „revolutionary" (Microsoft, 2012) interface and not the content of the new games that utilized it. It was all about new ways of interaction with the machine.

So when Andrejevic states that reality television is the promise of access to the reality of mediation (2004, p. 215), he sees the mediation as the message instead of the content. And as observed in the examples of the Wii and the Kinect this notion is not limited to the realm of reality television. Adorno and Horkheimer blame this on the predominance of the culture industry:

„The development of the culture industry has led to the predominance of the effect, the obvious touch, and the technical detail over the work itself — which once expressed an idea, but was liquidated together with the idea.[...]The totality of the culture industry has put an end to this. Though concerned exclusively with effects, it crushes their insubordination and makes them subserve the formula, which replaces the work." (2002, pp. 97-98)

Mediation is the desired feature, content is secondary. Layer after layer is piled on top each other to satisfy the need for even more mediating effects. While cross-referencing and building on existing semantic realms is something that is probably as old as storytelling itself, we are now dealing with increasingly complex interleaving and interconnected realms of interfaces. **Max Payne 3**, another shooter, but this time a so called third-person shooter, is a nice example for this development. In the episode **Visual Effects and Cinematics** of the **Max Payne 3 Design and Technology Series** (a series of Youtube videos promoting the game by thoroughly analyzing its visual appearance, effects and interactive components) the narrator praises one of the many new cinematic interface features:

„Rockstar studios developed a custom panel generator that dynamically incorporates in-game footage in real-time.[...]To keep the player in the game world and in Max's consciousness at the same time." (RockstarGames, 2012)

What he is talking about is a visual interface that dynamically creates cinematic (because we know them from the movie **Sin-City**), comic-like panels from images rendered in the game engine, so as not to break the overall visual appearance of the game world by inserting actual comic strips, thus heightening the immersive factor of the title and creating yet another consistent layer inside the realm of the game.

With every iteration, every evolution of media, the mediated semantic realms become more refined and consistent but also more complex as they draw more and more on already constructed realities. Since the introduction of digital media and their dissemination through the internet, cultural production has exploded, especially in terms of „user-created media content" (Manovich, 2008). This implies incredible amounts of newly generated semantic realms, just think of the ever growing internet-meme culture (Knowyourmeme, 2012). Mediation is the sought-after distraction from the real by means of this complex construction of semantic realms, making the content exchangeable. But it is also its own signpost for navigating through itself, telling us which realms we are currently dealing with. It is map and territory at the same time. Just as paradoxical as a lens flare appearing in a first-person shooter.

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Notes:
A famous example for a game trying to be as close to reality as possible was **Operation Flashpoint**, putting off most experienced first-person shooter players but pleasing a small die-hard fanbase which is still active 11 years after its release in 2001. The game did not utilize HUD elements, cross-hairs or other obvious interface elements except in situations where it was hard to avoid, such as subtitles in cutscenes et cetera. This made it very hard to complete the mission objectives. A modfied version of the game was sold to the United States Marine Corps for training purposes.