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Screening Play: Rules, Wares, and Representations in "Realistic" Video Games

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Introduction

Johan Huizinga's *Homo Ludens* (1955), a touchstone for the study of play, provides a basic theory of how games operate in the life of "Man the Player." The crux of his position is ontological: the human being is founded on play. Though Huizinga insists that play is the basis of human culture and informs all existence, his spatial concept of play, positing that games establish a "magic circle" within the mundane, suggests a divide between the everyday world and the world of games. Within the magic circle, one becomes a different person in a different world, a player whose actions take on new meanings warranted by the structure of the game's space and, most importantly, the game's rules. However, Huizinga's theory cannot be applied to video gaming without a careful consideration of the material conditions that make the magic circle of video games unlike that of other games.

The conceptual leverage point is found in the basic observation that the defining element of video gaming is the game apparatus' screening of player from played. In sum, a video game is a type of screen game and, like all screen games, is played upon and through an apparatus of interaction founded on separating players from the field of play. More to the point, this separation is not an impediment to the game play. On the contrary, it is the *sine-qua-non* of this type of play—screen-play—as such.

In highlighting the apparatus as the keystone for the magic circle of video gaming, we displace players—the subject of ludology—and "text"—the subject of narratology. This is not to deny the importance of players' agency or the meanings of texts in video gaming; rather it is to reconsider these with regard to the screening of player from played inherent in the gaming apparatus. To better understand the situation of homo ludens in these more mediated play spaces, we turn to Jacques Lacan's account of "split" subjectivity and retread it by explaining how it may well explain the operation of a magic circle spanning three dimensions of screen-play: rules (Symbolic dimension), representations (Imaginary dimension), and wares (Real dimension).

In the end, we come around to the other space of Huizinga's theory—the connections with the non-game world—to show that the value of video game play is also found beyond the apparatus, that the experience and enjoyment of video games are affected in part by social reality and, in turn, social reality is being affected by the experience and enjoyment of video games. Arriving at this point by first theorizing the video game apparatus, however, highlights matters of video game design more so than issues of audience or textual analysis. To illustrate this perspective, we conclude by defining three ways to analyze video games in terms of "realism," proposing three types of video game realism: representational, simulative, and inverse.

Huizinga and the Screened Circle

Jesper Juul (2008, p.64) characterizes contemporary critiques of Huizinga as being concerned with dispelling the myth of the magic circle as a "perfect separation between the game and that which is outside the game." That is, game studies typically stress how the magic circle can be understood as contiguous with, not set apart from, the everyday. However, though the myth of separation may be a poor conception of many types of play, and may be a narrow view of Huizinga's position, it nonetheless provides an apt description of video game play.

The most significant historical and material factor distinguishing video games from others is that they are screen games, which is not to say that they are primarily video screen based, but that they screen the player from the field of play. What this means for *homo ludens*, in short, is that the player is displaced from where the game takes place. By engaging the screen game apparatus, players complete a magic circle that both incorporates and alienates the play of players. As Juul (2007) points out, the limits imposed by video games are not unique. Rules, alone, for any game, have the same limiting function. If there were no rules to limit the way players play, Juul explains, there would be no game.

For example, soccer is only a game by virtue of rules limiting the use of hands, prescribing a certain number of players and positions, constraining the action to a specified field, and so on. Limiting the play of players, then, must not be thought of as a problem for video games. The limiting qualities of screen games are the primary conditions of possibility for screen-play as such. More so than any other type of play, screen-play derives from limiting players' input. Screen games are interactive by virtue of the mediation of the magic circle, which sets in motion a play of "here" and "there" not typical of unmediated games.

Screening play not only limits input, it also limits feedback by alienating the player's body from the game and, in so doing, focusing attention on the game world "behind" the apparatus where the in-game action takes place. This is what any notion of video games as "virtual reality" hinge upon, a mechanism whereby a person inhabits two places at once, with one being more or less real than the other. Similarly, the concept of "presence" in video games and other virtual environments (Lombard and Ditton 1997; Riva, et al. 2003) is only justifiable if there is a fundamental problem of separation to be overcome. This is what the idea of "cyberspace," more generally, is built upon—the extension of real bodies into virtual spaces. So, again, to insist on the role of the screen is not to insist on the centrality of graphic representation on video screens but on the means and effects of screening, or of simultaneously separating and mediating between the player and the played as part of the constitution a game. From this standpoint, video screens are not necessary components of screen-play (nor, for that matter, are computers).

Most video game histories begin with *Spacewar!* (Russell 1962), one of the first computer games. Such historiography stresses the newness of video games by supposing that the computerized aspects of the game are the hallmark of this kind of play. In fact, many video game studies use the term "computer" games instead, arguing that this emphasis on the computer rather than the video aspects of the game more accurately represents the object of study. However, the genealogy most

relevant to video games as a type of screen-play begins prior to cathode ray tubes and microprocessors.

In this genealogy, video games are the descendents of gaming apparatuses such as bagatelle, roulette, pinball, foosball, and pachinko. In all of these, the design of the apparatus and the rules of the game keep players physically outside the field of play and channel their control through limited inputs. That is, prior to video screens upon which one plays, there were glass screens through which one played, and prior to that there was *de facto* screening by rules limiting direct intervention into the world defined by the gaming apparatus. So, on the point of limiting input and feedback, rules as such can, and should, be thought of in these terms. Reiterating Huizinga's position, to play a game is, in all cases, to play with regard to certain limits, or rules, that make game-playing more, or differently, pleasurable than free-play. It is the rules, for example, that make it meaningful when someone moves a ball from one place to another using certain methods and/or tools. Yet screen games also concretize and condense these methods and tools in the design of the apparatus.

For screen games, the key is for a player to learn to interact with the limiting apparatus in order to produce an outcome with value within the world of the game. What makes video screen games different even from non-video screen games is that the rules for video games are mostly hard-wired into the screening apparatus. The rules for playing non-video screen games rest largely on a social contract. Although multiplayer and online video gaming, which will be addressed later, may introduce more social, less wired rules, the players of video screen games cannot so easily play by improvising new means of interaction. Lifting a pinball machine, for example, produces in-game effects, whereas lifting a computer screen does nothing in-game (though it may, on some systems, affect the feel of interfaces using monitor-mounted motion-detecting receivers).

Yet Huizinga's theory, while clear about this kind of separation as a defining aspect of the magic circle, needs to be articulated with a perspective more capable of accounting for mediate subjectivity if it is to be applied to video games. Video game players, who become such when alienated from the game world, share this alienation with other media subjects—like film and television viewers—and may be theorized similarly. One of the most well worn theories of mediate subjectivity comes from psychoanalytically influenced cinema studies—so called "Screen theory"–a tradition concerned with understanding how the cinematic apparatus manages to involve spectators in the imaginary world of a film despite, and because of, the screen's material separation of spectators from the world of cinematic representation.

Lacan and the Magic Knot

In *Seminar XX* (1999, p111), Lacan introduces the model of the Borromean knot (Figure 1) in order to illustrate the logic of symptoms stemming from discourses which, in effect, ask the subject to refuse what is offered because "that's not it." The model is meant to explain the topology of sexual desire, fantasy, and enjoyment as they take place well outside what one could comfortably call "reality," though it may just as well describe the erotics of screen games which, as a categorical distinction, always offer alternate realities founded on such a move. Screen-players cannot be

inaugurated into the magic circle of video games without first engaging and disavowing the screening apparatus as the locus of play. The interactivity of video games comes from the apparatus' capacity to, in effect, convince players that what they are offered—controller, disc, console, monitor, speakers—is not "it," that the field of play lies elsewhere. Without this opening rejection, one does not enter the magic circle of screen-play.
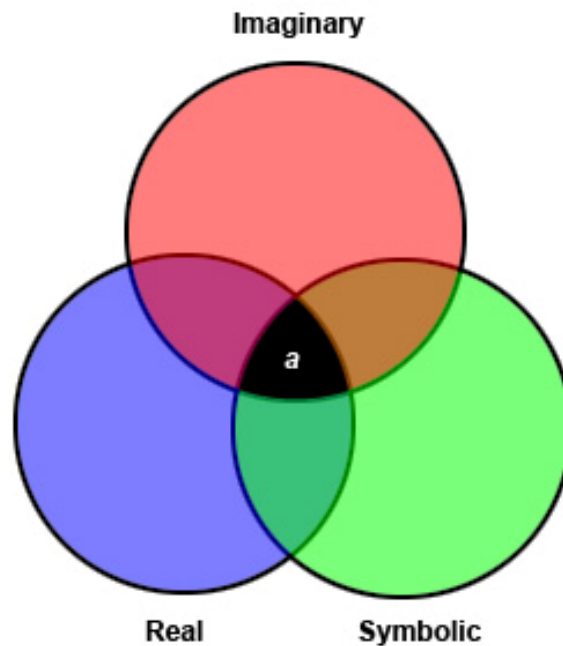

Figure 1: Lacan's Borromean knot

As Andrew Cutrofello (2002) explains, Lacan relies upon figures such as this knot precisely because he is theorizing a space of subjectivity where the Real and reality do not coincide necessarily. It is where the subject cannot be pinned to a point in physical space but, instead, exists in a liminal dimension of shared language, meanings, and inter-corporeality found in the spheres of Imaginary and Symbolic existence: "it literally requires us to assume that all of phenomenal 'reality' has the character of a dream whose hidden ground—the real—can only 'appear' as a problematic x, as a signifier, as a stain within *aisthesis*" (Cutrofello 2002, p.163). This "stain" is situated at the center of the knot. The *a*, standing for *autre* (other), marks failures to sustain a sense of reality, virtual, or otherwise. The point of illustrating Real, Symbolic, and Imaginary as three overlapping circles is to show the way each is separate from the other yet necessary for the operation of the whole. However, to grasp how this diagram illustrates a knot, and is not a simple Venn diagram, and to better understand why such a thing would matter, it is necessary to understand how each circle depicts an element integral to the screening of video game play.

For Lacan, human desire, and therefore social reality, is founded and sustained by the links and breaks between these three registers of subjectivity—Real, Imaginary, and Symbolic—derived from Sigmund Freud's conceptions of the Id, Ego, and Superego. Though each may be considered distinct for analytic purposes, they are actually three aspects of the same basic mechanism of desire, which, despite its apparent simplicity, supports almost inconceivable variation. However, this is so only if these three elements exist simultaneously. If one link is removed, the knot unravels and, in terms of play, the magic of the circle(s) vanishes.

According to Lacan, the Symbolic is aligned with influences such as language and law—or rules, basically—preceding and exceeding the Imaginary, which, for video games, should be understood as the realm of representation. The Real, which is related to but not reducible to empirical reality, is the realm of the apparatus in real life, outside the game, consisting of the requisite "wares" (hardware, software, and bodied human player) that support the other two registers but are separate from them because they are the "not it" of the in-game experience. Simply put, for video games, the magic knot consists of three components: rules, wares, and representations. Together, these constitute the apparatus of incorporation and alienation, or screening, characteristic of video game play (Figure 2).
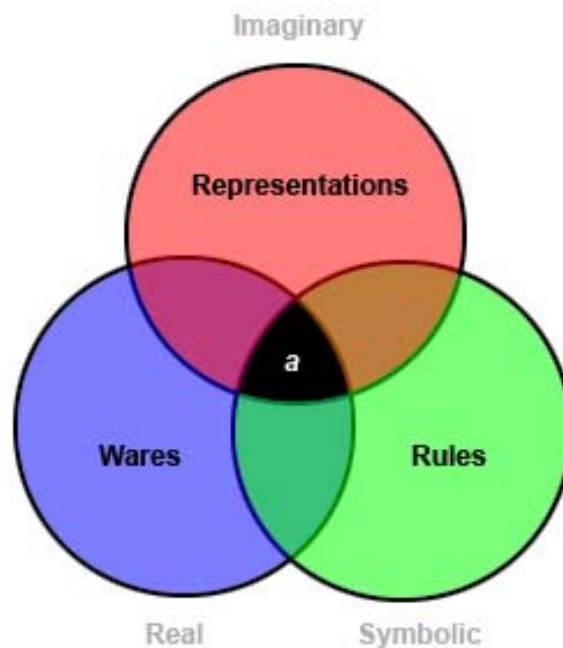

Figure 2: Video game knot

Missing from Lacanian theory, however, is a coherent account of play. On this, it is significant that Lacan's theory of the object is derived from Freud (1989), whose

theory of objects was illustrated as a matter of pre-subjective play in his analysis of the *fort/da* game. As Lacan (1998, p.63) explains,

> It is the repetition of the mother's departure as cause of a *Spaltung* [split] in the subject—overcome by the alternating game, *fort-da*, which is a here or there, and whose aim, in its alternation, is simply that of being the *fort* of a *da*, and the *da* of a *fort*. It is aimed at what, essentially, is not there, *qua* represented.

Video gamers are also described as "split" between narrative and play (Ryan 2005) and as subject to "engaged disengagement" with hardware/software components (Ihde 1990; Nielson 2010). With video games, players are both split (or disengaged) and reconsolidated (or engaged) as subjects of the game via images, sounds, narratives, rules, feedback, platforms, controllers, and codes cooperating to construct the magic circle in a world apart. Of special interest for understanding screen-play is Lacan's clarification, that this play between places is aimed at something "not there" in the representation. In order to motivate screen-play, something has to go missing. For video games, the missing element, which does not appear in the game as represented, is the Real, that is, the wares, which can only go missing when knotted with the Imaginary and the Symbolic.

Wares are the Real dimension of video games, the hardware, software, and human player in real life, which are outside the world of the game yet essential to it. Because of their causal connection, however, these rejected elements are never absent; they remain at the heart of the matter, absorbed into the player's experience of the game. Audio and video (and sometimes haptic output) make up the Imaginary dimension, or what film theorists would call the "diegesis," the representational aspects of the virtual game world. Lastly, the Symbolic dimension is where rules come into play, lending meaning to the audio-visual representations of the Imaginary and providing feedback on the interaction between wares. These are not only analytic categories but also the three key components without which a video game cannot be. Without wares, there is no one and nothing to play. Without representations, there may be a game to play but it is not a video game. Without rules, it may be play but it is not a game.

Together, these domains support considerable diversity. Hardware controllers can be touchpads, trackballs, analog sticks, motion controllers, balance boards, and so on. Speakers can be mono, stereo, or surround. Visual monitors can be CRT, LCD, LED, or 3D, handheld, boxed, or projected. Software can be programmed using various computer languages and delivered using myriad media. Even the domain of representation is open to wide variations, not just in aesthetic style but also in emphasis, such as video games for the blind (e.g., *Rail Racer* [Martin 2007])*,* which rely wholly on audio avatars, cues, and feedback. The lesson of the Borromean knot, therefore, is that, through these three, knotted components screening player from played, the whole of video gaming experience is possible and, if one component is not there, there is no video gaming. So, with these basics in mind, we move on to explain what this means for video game studies.

The Loci of Video Game Play

In general, video game studies have much to say about Imaginary matters—graphic art, virtual bodies, presence effects, narratives and their meanings—elements which new media studies derived from filmic and televisual analyses. However, these features of game play are ancillary and partly independent from the Symbolic and Real spheres, which are equally (if not more) definitive of what it is to play a game rather than merely watch or "read" it.

The Imaginary, as the realm of representation, only offers points of interest for screen-players when they overlap with the Real to produce play entities (e.g., where apparatus and representation coincide in an avatar) or with the Symbolic to produce meaningful action (e.g., audio-visual information revealing the game world's affordances or narrative). There are also essential gaming features, such as conditions for winning and losing (including scoring and leveling), that have next to nothing to do with the Imaginary but everything to do with the Symbolic and Real. These are found where rules and wares intersect. These inner lobes of the knot (Figure 3) represent the field of play, while the remainder represents what is given by design. In other words, these are the loci of different types of interactivity distinguishing video games from other, more passive media entertainments.
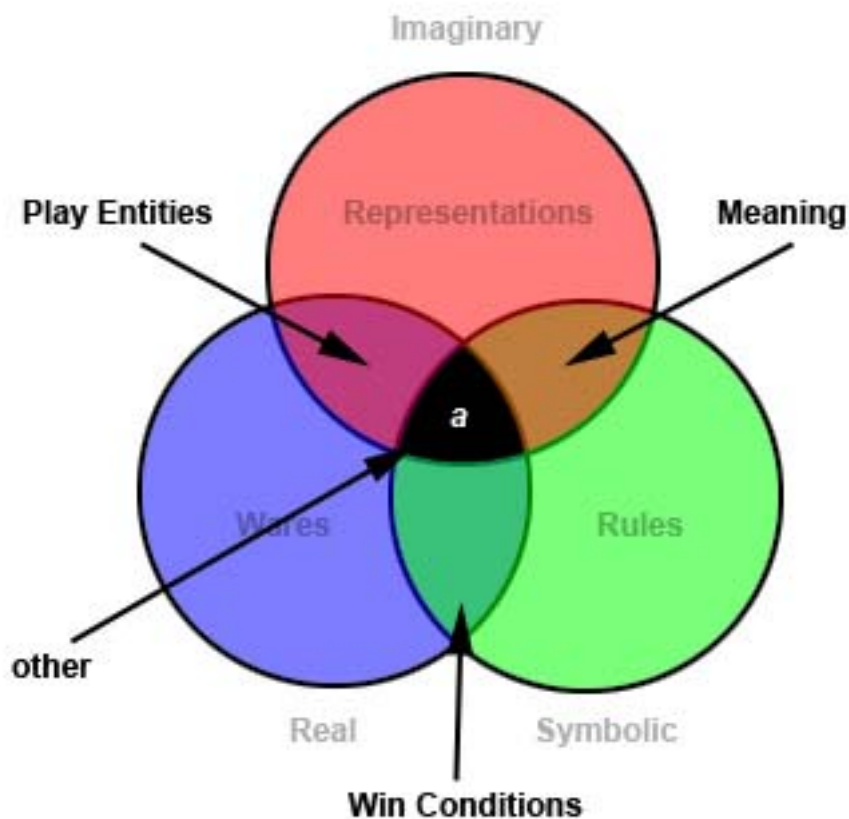

Figure 3: Loci of play

Espen Aarseth's (2005) analysis of doors, for instance, illustrates the relationship indicated by the Imaginary and the effect of the Real upon it. Aarseth ponders how few doors found in video games serve a purpose other than graphic "texture"; they are only part of the decor of a room's interior or of a city street and cannot be played with. A functioning door, however, is what the player might call a "real" door because it is part of the Imaginary that is in-play. For games with a strong exploratory component, discovering which elements of the Imaginary game environment may be affected by inputs from the Real can be a major focus of game play, especially for novices. Learning, for instance, which doors coincide with the Real and which are purely Imaginary are crucial first steps in becoming a competent player of the game.

Juul's (2007) concept of "abstraction," by contrast, falls into the category of Imaginary aspects informed by the Symbolic. For Juul, abstraction is a form of limitation/affordance found where video game rules meet video game "fiction," or representation. It is "the *level on which the player can act*: the actions available to the player" (Juul 2007, p.511). Using restaurant games as an example, Juul compares *Cooking Mama* (Majesco Games 2006) to *Diner Dash* (Gamelab 2004) in order to show that even though each is part of the same type of representational world, the rules afford only certain actions to the player, which makes the games very different. That is, video games may represent the same type of game world, such as a restaurant, but playing in that world has everything to do with the way rules call for certain actions (e.g., cooking) and not others (e.g., serving customers).

The reflection of rules through representation can also be conveyed through narratives cluing players how to interpret and act within the representation. How does a player recognize the difference between allies and enemies? Which direction should the player travel? What is the goal for this level? Certainly, not all games rely on narrative for this sort of information—which can equally be conveyed by an instruction manual—but narratives, when part of a game's design, lend an additional layer of meaning to the game by explicating connections between what players see/hear/feel and what that means in terms of the game's rules. More generally, the intersection of rules and representations is, borrowing from Claudia Gorbman's (1987) work on narrative film, "metadiegetic." As Gorbman explains, metadiegetic material is not part of the diegesis though, for the audience, it is explicitly connected with it, such as a motif that plays whenever a key character appears (e.g., Darth Vader and the "Imperial March" [Williams 1980]). Motifs are common in video games, identifying key characters, places, and events, and thus helping players to interpret the meaning of their play. Non-musical, motif-like sound effects are also part of the Imaginary's Symbolic attributes. Sound effects generated by play acts deemed significant by the rules (e.g., scoring points, picking up an item, or taking damage) also count as metadiegetic cues as to the meaning of play.

Although, for film, there is no clear visual analog to metadiegetic sound, metadiegetic graphics are common in video games. When a player's avatar has an icon over its head in order to disambiguate it from other objects in the Imaginary (e.g., the green diamond from *The Sims*, ID tags in MMOs), or when an object flashes to indicate damage, players encounter visual elements that are not truly part of the game world. These objects serve less to enhance a sense of virtual reality and serve more to visually indicate what the rules deem to be meaningful interaction with Imaginary objects. Another way to think of metadiegetic cues is that they are not seen/heard by

characters within the diegesis. They do not reside within the game world, only in a level of meta-representation intended to provide feedback to the player. In this regard, the most common metadiegetic visual cue is the player's score, which can be visually indicated as points, a health meter, gold pieces, a leaderboard, or another metric.

However, the Imaginary dimension of the Symbolic includes only those aspects of the rules that are communicated to the player. Where the Symbolic meets the Real, one finds conditions that may or may not be reflected in the Imaginary. This is where rules are most like pure software code—algorithms for processing player inputs—and where the game takes place outside the representations of the Imaginary.

If the Imaginary's intersections with the Real and Symbolic are where a game's virtual reality is encountered, then the Real dimension of the Symbolic, which stands wholly apart from the Imaginary, is where the reality of the game is not virtual at all. As Aarseth (2005) argues, although video game players may play in virtual worlds, the winning and losing of those games is real. While not all games are clearly won or lost, the conditions for advancing the game, or simply the criteria by which the game evaluates the quality of player's play, is registered by the Real components of the Symbolic. This includes conditions for scoring points, earning experience, leveling-up, and unlocking content. Some video games have an almost one-to-one correlation between these types of statistics and Imaginary feedback, such as in *Red Dead Redemption* (Rockstar San Diego 2010), which shows cumulative player stats for everything from number of enemies killed, to the types of weapons used to make those kills, to the amount of in-game distance traveled by foot, horse, or coach.

With this rich coordination of Imaginary, Symbolic, and Real, games such as *Red Dead Redemption* are not simply won or lost. They may be played with any number of aims, such as to kill as many enemies as possible using only a double-barreled shotgun while riding on a stagecoach. Again, at this level of analysis, these are not only Imaginary, in-game achievements, but things the player has achieved. This is not to say that the player has actually killed anyone, but rather that the player has truly accomplished certain game goals, such as terminating virtual foes. Many of these real achievements are now tracked through out-of-game services such as Xbox Live, PlayStation Network, and the Rockstar Social Club, where video gamers can access metadata about their play statistics and compare themselves to friends and other players around the world.

On the other hand, there need not be such clear and copious feedback. Consider the less action-oriented, more narrative-centered *Heavy Rain* (Quantic Dream 2010). This game is more of an interactive story that does not clearly indicate a score or even the player's health meter, though player characters can take damage, die, and, unlike fighting games, not re-spawn, creating dramatic turns in the story. In fact, in *Heavy Rain* the only Imaginary indication of what is happening at the Real level of the Symbolic is indicated through changes in the narrative. Whereas dense statistical feedback may motivate players of *Red Dead Redemption*, it is the ambiguity between narrative progress and input that makes *Heavy Rain* compellingly innovative.

The *Other* Locus of Play

The last part of the knot to be addressed is the center, *a*, or, as it has been explained, the "stain" leftover by the screening apparatus. Because disavowal of the apparatus is an absolute requirement for entering the magic circle of screen games, the trace of this fundamental rejection cannot be regarded as exterior to the game world. Failure to reconcile (or fully knot) wares, rules, and representations manifests in encounters with the object *a*, or, in more Freudian terms, returns of the repressed.

The repressed objects of video game screening may be witnessed in glitches and unintended outcomes experienced when bad game design, lack of skill, or faulty controls turn the erotics of video gaming, founded in the denial of the apparatus, into frustration when the player is unavoidably confronted with the game's mediation. While these returns may upset a player's sense of immediate presence, identification, or being "there" in a virtual world, they are indispensable to certain types of "bad" screen-play. First, players themselves can be bad at a game, lacking overall skill or knowledge of the specific play logics. Alternately, play can be technically bad, resulting from problems such as glitchy graphics or poor controller mapping. Play can also be ethically bad, such as cheating. This is not to say that glitches, cheats, and learning to play cannot be fun or are not part of the game. Rather, they are *other* to playing the game as such. This is not an absolute alterity, as real life outside the game may be, but an other internal to the game, a little, other object (*objet petit autre*) forged within the game through the knotting of particular rules, wares, and representations.

Lacanian theory, applied to media, typically casts this other object as a rupture in the Imaginary, a point within the representation where the mediation of the representation becomes apparent (e.g., dirt on the lens of a camera or a boom mic dropping into the frame). Such glitchy events momentarily break the illusion of virtual reality. Yet representations, due to their mediation, always contain a modicum of otherness that, when successfully repressed, "lures" audiences to the text, gives them room to be active, and makes them, in effect, part of the representation (Lacan 1980). Though explained through terms such as "break," "rupture," "failure," and "lack," this concept describes something that is present, necessary, and desirable for engaging audiences and players alike. Huizinga posits something similar in his consideration of rule-breaking.

Huizinga emphasizes that games must have rules in order to be played and, once the rules are broken, the magic circle is dissolved. There are two ways, in his theory, to break the rules and destroy the circle. One is to quit prematurely, to walk out on the game, or to otherwise be a "spoil sport" (1955, p.11). The other way is to cheat. Interestingly, Huizinga finds that society has a more lenient attitude toward cheaters than toward quitters. The reason, he explains, is that cheating "still acknowledges the magic circle" (p.11). Yet when rules are but one of three key domains for play, and when they are hard-wired into the apparatus, the idea of cheating takes on new dimensions.

Given the extent to which rules are programmed into video games, it may seem as if the only way to cheat is to hack the game's hardware or software, which may not be cheating so much as creating another game. In many video games, however, no

hacking is necessary: cheats are routinely incorporated into the official options for a game, creating a curious situation in which there is the intended game, and then there are versions of the game for cheaters. Clearly, there should be a distinction made between official cheats that are built-in to a game's standard options—in which case they are not truly "cheats" but different permutations of the rules—and unofficial cheats, including hacks and "exploits," or using glitches to gain advantages unintended by the game's designers. For single-player games, however, it is hard to say who is cheating whom. Arguably, there has to be someone else in order for a player to cheat. In multiplayer environments, however, cheats take on another, more ethical tone, and therefore seem more like real cheating. In a multiplayer context, these cheats cannot be seen as simply creating a different game, they are creating a situation where one player—the cheater—is playing the same game with an unfair advantage.

A new vocabulary of cheating has emerged among multiplayer, online gamers. Such cheats include "lagging"—hacking network hardware to slow down the cheater's data output over the network—and "wallhacks"—hacking software to provide cheaters with the ability to see through walls. These are relatively cut-and-dried instances of gaining an unethical advantage. Not only are these cheaters not playing with the same hardware and software as their opponent, other players often have no way to tell that these hacks have been applied.

Most online video game cheats are, however, more social than technical, and therefore more ethically murky. That is, they tend to obey the letter but not the spirit of the law. These include "boosting," or enlisting the help of other players to gain experience and level-up quickly (e.g, agreeing to take turns killing one another until both players level), and "camping," which is when players in online shooters hide in a easily defended but highly trafficked area (usually near where opposing players re-spawn after dying) to prey upon opponents in a defenseless moment of (re)entry. There is also "griefing," or playing for no purpose other than to ruin other players' fun. Though this may not truly be cheating, as it is unconcerned with creating a winning advantage, it may be unethical, as it makes a game of interfering with other players' ability to play the game as they choose.

None of these actions are prohibited by the rules of the game, but this vocabulary of cheating has evolved as players attempt to voice the emergent ethics of play in online gaming communities. If the three loci of play represent players' interaction with the game as designed, the middle—the gap that separates and joins all three—is where *other* types of play take place. The extent to which the game apparatus is negotiable beyond its programmed limits is found here, in a locus within the game yet outside the purview of its makers.

Screen-players traverse the loci of play, sometimes skirting, sometimes falling into, and sometimes drawing from the gap, or internal limit, left over from the primary repression of the gaming apparatus. Effects such as seamless identification between player and avatar, the alternation between aggravation and amazement when learning to play an unfamiliar game, the boredom of "grinding," outrage at cheaters, and, of course, the jubilation of winning, are experienced through this structuring of the apparatus. In order to demonstrate how the above may be applied and to suggest

areas for future study, we move on to untangling some of the issues of realism pertaining to video game studies.

Three Realisms: Representational, Simulative, and Inverse

Drawing from Huizinga, Raph Koster (2005, p.38) explains the need to inform video game design with elements of the real world in order to make more compelling games: "To make games more long-lasting, they [developers] need to integrate more variables (and less predictable ones) such as human psychology, physics, and so on. These are elements that arise from outside the game's rules and the 'magic circle'." Koster stresses the idea that game design, when done well, works upon references (either direct or abstract) to the world outside, which are absolutely necessary to lend meaning to the play. Further, while it is true that Huizinga puts much stock in the magic circle as an exceptional, other space, he also supports the notion of homo ludens by insisting on the value of play beyond fun, as an edifying, world-making experience. With this in mind, we will now show what our Huizingian re-conceptualization of a Lacanian architectonic suggests about the connections between video games and the world outside. We will describe three approaches to studying video games in terms of realism, two supporting Koster's design principles and one supporting a more recent vision of design from Jesse Schell.

The first is *representational* realism, or realism of the Imaginary. In the most basic sense, this pertains to realistic sounds and graphics. However, if realism is part and parcel of designing good games, then the history of video games is inexplicable if one supposes that this is where compelling games come from. For example, without supposing an ignorant or unsophisticated player, it is nearly impossible to explain how 8-bit games, incapable of audio-visual verisimilitude, could ever be popular. Further, beyond the marketing hype, even today's best video game graphics fail to achieve true, photographic realism.

Still, this is a weak understanding of realism and a diminished application of what the Imaginary perspective on games may involve. A stronger understanding of Imaginary realism is found in what T. L. Taylor (2006) terms "persistent environments." Taylor contends that the persistence of online, multiplayer video games such as *Everquest* (Sony Online Entertainment 1999-2009) and *World of Warcraft* (Blizzard 1994-2010) are alluring in large part due to their persistence through time. In other words, representational realism is not solely about graphics and sounds but how a game constructs a sense of place and time. Even an offline game such as *Animal Crossing* (Nintendo EAD 2001), though representationally primitive even in its day, can achieve a high degree of realism by using time-sensitive processes to create the experience of a persistent world. *Animal Crossing* made good on its tag-line, "The real-life game that's playing even when you're not," by utilizing the console's internal clock and calendar to create an illusion that the game's non-player characters were still "there," playing without the player, even when the console was turned off. In these cases, realism comes from the sense that the magic circle is not broken when a player leaves; as in real life, absence does not mean the end of the world.

The second type of realism, *simulative* realism, derives from the Symbolic. What matters for simulative realism is the way rules model real life systems. A realistic

game, from a simulative standpoint, would be one with rules abstracted from real life systems (e.g., driving a car on a race track, multi-national military conflicts). For these to pass as realistic, the measure is not the accuracy of their representations but the accuracy of the rules for play.

As Katrin Becker and J.R. Parker (2006) argue, "all games are simulations, but not all simulations are games." So, all games have simulative aspects, but there may be significant differences between simulative games and what may be thought of as "pure" simulators. Learning to ride horses in *Gallop Racer* (Tecmo 2000-2006) hardly counts as preparation or training for actual horseracing (though it offers a fine education in gambling). This is unlike non-game horse simulators, such as those from the Racewood company, which look a lot like arcade games. They feature a life-size model of a horse in front of a large video screen, but offer no virtual betting and no scoring *per se* as they are designed for the sole purpose of training and exercising professional jockeys. More to the point, using a Racewood simulator is likely more arduous and less fun than the more abstract, yet simulatively realistic, *Gallop Racer*.

Rather than thinking of simulative realism in terms of correspondence between playing a game and doing the real thing, Frasca (2003) offers another approach to simulative games, focusing on how they can convey ideologies through rules alone. Following this approach, the most ideologically disturbing aspect of a game such as *Grand Theft Auto IV* (Rockstar North 2010) is not the way it depicts any particular race, gender, or sexuality—these are mostly Imaginary issues—but the way the rules defining lose conditions are structured: it is always better to force the police to kill you (because your avatar will re-spawn with all the equipment it acquired) than it is to let them arrest you (because you will lose that equipment). Understanding simulative realism is about more than new avenues for ideology critique, however. It also squares with Brian Sutton-Smith's (1997) theory of play as education/development, and does so in a way that does not confuse simulative games with pure, non-game simulators.

Simulative realism is a requirement for "serious" games ranging from classics such as *Math Blaster* (Davidson 1987), a game designed to teach basic arithmetic, to more contemporary efforts such as *PeaceMaker* (ImpactGames 2007), which challenges players to resolve the conflict between Palestine and Israel. Of course, there are non-game math simulators—calculators—and there are non-game simulators to predict the outcome of military conflicts, and these are better suited to real world applications. The lessons of simulative games tend to be more conceptual than pragmatic. Simulative games, because they are made for play and not for work, tend to be better suited for producing conceptual, not pragmatic, outcomes. Yet this is not to say the two may not be linked. Simulative realism, as an educative and ideological force, is behind unintended pragmatic outcomes, such as the influence the *Madden NFL* series (EA Tiburon 1989-2010) has had on actual NFL football. Not only is this simulative football series used to predict the outcome of real lineups, it is also, as Chris Suellentrop (2010) reports, changing the way NFL players come to understand, and therefore play, real football. Most notably, Suellentrop identifies unusual clock management techniques, such as running circuitously toward the end zone to strategically waste time. Such outcomes of simulative realism speak to the potential for real world outcomes not through practical training but through new forms of consciousness inspired by simulative game play.

There is another type of realism that shows a different way the world outside of video games may be affected by screen-play. This last type, *inverse* realism, pertains to the Real. Inverse realism is found in reversals of ordinary screen-play experience. The most basic example of inverse realism can be linked to apparatuses that allow motion control and visual recognition, such as Nintendo's Wii or Microsoft's Kinect, which make the separation of player from played dissipate somewhat. More radical is Jane McGonigal's (2008) vision of how video game designers can contribute to designing a better society.

> [R]eality is fundamentally broken, and we have a responsibility as game designers to fix it, with better algorithms and better missions and better feedback and better stories and better community and everything else we know how to make. We have a responsibility as the smartest people in the world, the people who understand how to make systems that make people feel engaged, successful, happy, and completely alive, and we have the knowledge and the power to invent systems that make reality work better.

This is echoed by Schell (2010). Observing the kind of micro-transactional game commerce popular on social networking sites, Schell argues that these principles, pioneered by the new game industry, will affect everyday life: "We're, before too long, going to get to the point where every soda can, every cereal box is going to have a CPU, a screen and a camera on board it, and a wi-fi connector so that it can be connected to the internet. And what will that world be like?" Living in that world, in short, will be like playing video games across many micro-apparatuses. The inconspicuous cloud-gaming will inform day-to-day, non-game activities, and the experience will be like George Orwell's *1984* but more fun, with hegemonic consent generated through leaderboards and unlockable achievement bonuses. Schell's vision includes:

> [E]ye sensors that can tell when you're watching the ads, certain ads, especially, because you're going to get points for them. And your remote has a little screen on it and a little camera so you can be on live chat with other people you know are watching this show and play these games and get all these points while you watch television. That will be a very natural thing to do. Then, finally ... oh, the day is over. You're going to bed. You sit down with your new Kindle 3.0, which, of course, has the eye-tracking sensor in it that can tell what you've read and how much you've read of the book. And it is important to read the whole book because, then, if you leave a review on Amazon, you'll get super bonus points if it knows you read the whole book through.

This is the inverse of Koster's principle for good, realistic game design. Here, in Schell's account, it is reality that derives significance from video games. This should not be misunderstood as a simulacrum because it is not about the influence of the Imaginary, rather it is about the Symbolic.

Moreover, although McGonigal and Schell sound as if they are forecasting a distant future, consider that inverse realism is already a trend in the music industry. TheSixtyOne.com is like MySpace Music with a video game component: users are issued "missions," such as listening to a song from a genre they do not usually listen to or playing the same song three times in a row. Completing missions on TheSixtyOne earns points, so users can level-up to increase their standing and

influence within the music network, and unlock content hosted on the site. A more mainstream-oriented, avatar-driven, and child-friendly version of this inverted realism may be found in *Music Pets*, a Facebook application that similarly awards points for socializing about music online. These are just two of the new media strategies seeking to rejuvenate music promotion and consumption by using screen-play as a new marketing paradigm. Other industries are following suit. Foursquare, a geosocial networking application for mobile communication platforms, uses GPS to track users or, rather, enables users to track themselves and report on their location and activities through social networking sites such as Facebook and Twitter. Users are awarded points and virtual badges, with the ultimate goal of becoming a "Superuser" and unlocking new application functions. The real purpose of *Foursquare*, however, is for brick-and-mortar business to offer incentives to potential customers and entice them into promoting goods and services through their personal networks.

Through the lens of inverse realism, it is plain to see that play-screening is fast becoming a common cultural interface. In studying video games from this angle, however, it would be wise to ask why video games are appearing as a key innovation in consumer culture writ large. To be sure, games have proven useful promotional tools in cross-media synergies (e.g., the *Spider-Man* franchise spanning comics, television, film, and video games) and advergames (e.g., Burger King's series of Xbox titles [Blitz Games 2006], John Deere's *American Farmer* [Gabriel Entertainment 2004]). However, inverting the process is quite different, making consumption itself a kind of game.

Inverse realism, in the commercial vision, creates another, Symbolic layer to social reality, and bolsters Imaginary self-representations by consolidating potentially invisible purchases and consumer preferences with more visible social media. But is this the only possible use? Consider how different, yet more vague, McGonigal's vision is from Schell's. Exactly what is "broken" in reality? For Schell, it is promotions and marketing. But is there a way to "make people feel engaged, successful, happy, and completely alive" that does not involve reconsolidating consumerism around new media? If unlockable achievements, leaderboards, leveling, and experience points are commercially portable aspects of video games, are they equally portable for pro-social purposes? What other, more socially than commercially positive cultural change could inverse realism service?

Conclusion

The limit of our analysis, particularly for investigating inverse realism, comes from focusing on the apparatus of screening without examining video game culture more broadly. Games do not rise and fall on the merits of their individual design alone. They are created and played within historical and material contexts that could well supersede the experience of the game as played. Nonetheless, a perspective on inverse realism goes to show ways that game design can be part and parcel of social engineering projects.

Beginning with Huizinga's idea of the magic circle as a world apart from the everyday, we have argued that video games are best understood as a contemporary version of games founded on the screening of player from played. Noting that players

are both alienated from and incorporated into screen games, we drew from Lacan to articulate the interactive dimensions of this distinctly mediated play. Central to this articulation is the reciprocal determination of rules, wares, and representations comprising the video game apparatus. Turning from a consideration of the apparatus as a world apart and toward an understanding of the apparatus as a world also contiguous with the outside, we suggested three ways to think about video game realism: representational, simulative, and inverse.

Of these three, only representational realism rests on a unidirectional influence of the non-game world upon the game. Simulative and inverse realism, on the other hand, point to two different ways the magic circle, or knot, affects and is affected by social reality. Whereas simulative realism is already the subject of game studies concerning education, training, and media effects more generally, inverse realism is still emerging and deserves closer attention.

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