

**The following is an excerpt from *Rules of Play: Game Design Fundamentals*, by Katie Salen and Eric Zimmerman (MIT Press, 2003). The text is taken from chapter 27, *The Play of Simulation*.**

### **The Value of Reality**

What is the relationship between the simulated content of a game and its real world or imagined referent? At the 1998 Game Developers Conference, game designer Steve Jackson shared a fascinating anecdote about creating a driving combat computer game based on his classic paper game *Car Wars*. Using real-world physics and car data, the development team created an unusually detailed driving simulation that incorporated minute details of driving physics and a detailed simulation of the car engine. They also created a track based precisely on the geometry of an existing speedway. But when they test-drove their simulated car, using a steering wheel and pedal interface, they weren't able to reach the top speeds of the car on which the simulation was based. One day a professional race car driver visited the company. He sat down at the game prototype and immediately drove the simulated car around the track at breakneck speed, completing it close to the real world speed record.

The simulation was so "accurate" that it required expert manipulation in order to resemble the real-world phenomena it had been designed to replicate. What's the lesson? Don't forget the player. The designers of the game had assumed that simulation design meant only formally recreating a mathematical model of the car and the track. In fact, a game simulation not only includes the formal mechanisms of the system, but also the ways that those mechanisms engender and permit player action. The rules never solely determine the play of a game. The rules are always set into motion within an experiential context that includes particular players with their own levels of desire, skill, and expectation. The *Car Wars* designers had created a certain space of possibility with their design, but it took the right kind of player to navigate that space in the way it was meant to be explored.

The *Car Wars* anecdote reminds us that questions regarding the "reality" of a representation are never as simple as they seem on the surface. Was the car simulation "accurate"? Or was it only accurate in the hands of a professional race car driver? Is sitting in front of a computer monitor anything like driving a car? Would the race car driver have been able to reach top speeds playing with a standard console controller? Does the fact that the experience was "only a game" impact the answers to these questions?

When players interact with a simulation, they are never playing with the real thing. If they were, it couldn't be called a "simulation." At the same time, a simulation does reference its depicted subject through images, sound, and procedures. But how do these representations relate to their referents? In language, we know that the letters C-O-W don't resemble a cow in any way. But a photograph of a cow does bear some similarity to

our own perception of a cow in the real world. How do games relate to their depicted subject matter? To answer these important questions, we will examine a number of related concepts, beginning with the idea of metacommunication.

## Framing the Simulation

*Children know that they are manipulating their thoughts about reality, not reality itself; and they know that their play self is not the same as their everyday self.—*

**Brian Sutton-Smith**, *The Ambiguity of Play*

In “A Theory of Play and Fantasy,” Gregory Bateson introduces the concept of metacommunication, the unique form of communication that takes place in the context of play. To use Bateson’s own example, when a dog nips another dog, the nip signals two things. On the one hand, the nip signifies a bite; it is a stand-in for the action of a real bite. On the other hand, the nip signifies just the opposite of a bite: it signals the fact that the two dogs are playing and not actually fighting. This kind of metacommunication—communication about communication—is present not just in informal play but in games as well. It is a significant part of the complex mechanisms games use to construct meanings for their players.

Metacommunication makes it clear that to play a game is to take part in a kind of double-consciousness. Game actions refer to actions in the real world, but because they are taking place in a game, they are simultaneously quite separate and distinct from the real world actions they reference. A kiss in *Spin the Bottle* or a frag in a *Quake* deathmatch refer to kissing and killing, but at the same time are actions that communicate *I’m not kissing or killing you. I’m just playing*. The magic circle is the space within which such paradoxical signals become meaningful.

In “A Theory of Play and Fantasy,” Bateson uses the following diagram to illustrate the paradoxical state of mind embodied in play:<sup>15</sup>

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| All statements within this frame are untrue. |  
| I love you. |  
| I hate you. |
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This schematic is a riff on Epimenides’ Paradox, also known as the Liar Paradox. The Liar Paradox is the philosophical problem of someone asserting “I am lying.” If the speaker is a liar, then he is telling the truth, and vice versa: the liar’s statement is a logical paradox. In the diagram, the first sentence, All statements within this frame are untrue, echoes this classical logic problem. But significantly, it locates the statement within a frame, a limited context within which the paradoxical sentence asserts its meaning.

For Bateson the frame is a psychological and philosophical construct that delimits the peculiar space of play. For game designers, Bateson's frame offers another way of understanding the magic circle of a game. It is a boundary that makes the paradoxical meanings of play possible. At the same time, the frame is only sustained by virtue of the continued metacommunicative assertions of play. In Bateson's illustration, the frame enables the statement's meaning, even as the frame's own meaning comes directly from the statement itself.

The magic circle is both a prerequisite and an effect of play. It is a robust context for the exhilarating experiences of game play. But it is similarly fragile, and vanishes quickly when a game ends. Bateson's diagram is a schematic of the cognitive frame of play, a visual retelling of the state of mind of a player in the midst of a play context. As a way of understanding what happens when a player enters into the magic circle and plays with a game simulation, it is a subtle and powerful illustration.

What about the other two statements, I love you and I hate you? These statements are also part of the paradoxical meanings captured within the frame. The two sentences address a larger point Bateson makes about set theory, and whether some or all of the statements within the frame could be considered true or untrue. For our present purposes, we will sidestep his larger argument to make a point of our own. Bateson could have included any two contradictory sentences in the frame. But he chose emotional statements about love and hate, statements seemingly addressed to someone else outside the frame.

These two little sentences, signals of pure emotion, remind us that the questions of play and meaning, of metacommunication and paradox, are not just abstract philosophical chatter. In understanding how games construct meaning, we are addressing the deeply felt ways that players engage with games and the emotional and social realities games reflect and construct. The metacommunicative state of mind is deeply intertwined with the unique pleasures and experiences of play.

### **The Immersive Fallacy**

*All forms of entertainment strive to create **suspension of disbelief**, a state in which the player's mind forgets that it is being subjected to entertainment and instead accepts what it perceives as reality.— François Dominic Laramée, "Immersion"*

We will return to Bateson's ideas about metacommunication and meaning in just a moment. But for now, let's bring the discussion back to the play of simulation, specifically the relationship between a game and the "reality" upon which it is based. The preceding quote is from a book on game design, appearing in an essay on "Immersion." Game designer and programmer François Dominic Laramée argues for a particular relationship between a game player and a game, between the player's state of mind and

the perceived reality of the experience. He asserts that a game should strive to create an experience in which the player forgets that he or she is experiencing designed entertainment and instead believes that playing the game is experiencing reality firsthand. In fact, Laramée states that “all forms of entertainment” function in this way. This is a point of view very much at odds with our own.

We don't mean to unfairly single out Laramée. His ideas about how a player experiences the “reality” of a game are extremely common in the digital game industry, the game press, and even in the public at large. Game designer Frank Lantz has called these kinds of ideas about immersion “widely held but seldom examined” beliefs.<sup>16</sup> We wholeheartedly agree, and in the next few pages we refute these beliefs, referring to them as the *immersive fallacy*. The immersive fallacy is the idea that the pleasure of a media experience lies in its ability to sensually transport the participant into an illusory, simulated reality. According to the immersive fallacy, this reality is so complete that ideally the frame falls away so that the player truly believes that he or she is part of an imaginary world.

Although the immersive fallacy has taken hold in many fields, it is particularly prevalent in the digital game industry. Common within the discourse of the immersive fallacy is the idea that entertainment technology is inevitably leading to the development of more and more powerful systems of simulation. These technologies will be able to create fully illusionistic experiences that are indistinguishable from the real world. In an online discussion about the future of gaming, game designer Warren Spector speculated on this topic:

Is the Star Trek Holodeck an inevitable end result of games as simulacra? The history of media (mass and otherwise) seems pretty clearly a march toward ever more faithful approximations of reality—from the development of the illusion of perspective in paintings to photography to moving pictures to color moving pictures with sound to color moving pictures with sound beamed directly into your home via television to today's immersive reality games like Quake and System Shock. Is this progression inevitable and will it continue or have we reached the end of the line, realism-wise?<sup>17</sup>

To be fair, Spector self-consciously exaggerated his views in order to spark discussion. But in the debate that followed, it was clear that many participants take for granted the propositions that Spector articulated.

Spector's selective history of entertainment technologies offers one reading of the development of media. But there are others. History rarely provides such a linear progression, and in regard to immersion, cultural developments tend to be cyclical. As theorist Marie-Laure Ryan puts it, “The history of Western art has seen the rise and fall of immersive ideals.”<sup>18</sup> According to Ryan, immersion as a representational goal has gone through a number of stylistic cycles over the centuries. In the last several decades, she asserts, immersion has in fact become less prominent and respected in fields like art

and literature. Ryan may be correct in regard to larger cultural movements, but within the digital game industry, belief in the immersive fallacy remains alive and well.

### **Metacommunicative Media**

The immersive fallacy is symptomatic of contradictory ideas about technology. On one hand, there is a technological fetishism that sees the evolutionary development of new technology as the saving grace of experience design. On the other hand, there is a desire to erase the technology, to make it invisible so that all frames around the experience fall away and disappear. Nowhere are these contradictory ideals more clearly expressed than in the concept of the holodeck, a fictional technology that first appeared in the television show *Star Trek: The Next Generation*. The holodeck is the dream of the immersive fallacy, a room in which matter and energy are manipulated to create a simulated environment of sight, sound, touch, smell, and taste that is a representation completely indistinguishable from lived reality.

What is wrong with this picture, and how does it relate to games? On one level, the immersive fallacy actually does make intuitive sense. When we play a game, we feel engaged and engrossed, and play seems to take on its own “reality.” This is all certainly true. But the way that a game achieves these effects does not happen in the manner the immersive fallacy implies. A game player does become engrossed in the game, yes. But it is an engagement that occurs *through play itself*. As we know, play is a process of metacommunication, a double-consciousness in which the player is well aware of the artificiality of the play situation. During the same online conversation in which Spector posted his intentionally provocative question, film studies scholar Elena Gorfinkel responded:

Immersion is not a property of a game or media text but is an effect that a text produces. What I mean is that immersion is an experience that happens between a game and its player, and is not something intrinsic to the aesthetics of a game. The confusion in this conversation has emerged because representational strategies are conflated with the effect of immersion. Immersion itself is not tied to a replication or mimesis of reality. For example, one can get immersed in Tetris. Therefore, immersion into game play seems at least as important as immersion into a game’s representational space. It seems that these components need to be separated to do justice and better understand how immersion, as a category of experience and perception, works.<sup>19</sup>

Gorfinkel makes a number of critical points. First, with her example of Tetris she points out that there are plenty of examples of games in which “immersion” is not tied to a sensory replication of reality. In fact, there are countless examples of art and entertainment media, from techno music to comic books to expressionist painting, which are clearly not premised on a simple suspension of disbelief. As Gorfinkel states, mistaken ideas about immersion can be framed as confusion between the intrinsic qualities of a media object and the effects that object produces. Gorfinkel argues that to

understand the subtleties of “immersion,” we need to look not just at the attributes of games (such as how detailed the graphics are), but at the way games function in relation to the experience of the player.

In the case of play, we know that metacommunication is always in operation. A teen kissing another teen in *Spin the Bottle* or a *Gran Turismo* player driving a virtual race car each understands that their play references other realities. But the very thing that makes their activity *play* is that they also know they are participating within a constructed reality, and are consciously taking on the artificial meanings of the magic circle. It is possible to say that the players of a game are “immersed”—immersed in *meaning*. To play a game is to take part in a complex interplay of meaning. But this kind of immersion is quite different from the sensory transport promised by the immersive fallacy.

### **Remediating Games**

In some sense, the layered, metacommunicative state of play is similar to our experience of all media. In their book *Remediation*, theorists Jay David Bolter and Richard Grusin analyze the mechanisms by which media function, arguing that media operate according to a double logic. On one hand, media participate in what Bolter and Grusin call *immediacy*, the ability to authentically reproduce the world and create an alternative reality. At the same time, media also remind their audiences that they are constructed and artificial, a characteristic that Bolter and Grusin call *hypermediacy*.

Like other media since the Renaissance—in particular, perspective painting, photography, film, and television—new digital media oscillate between immediacy and hypermediacy, between transparency and opacity. Although each medium promises to reform its predecessors by offering a more immediate or authentic experience, the promise of reform inevitably leads us to become aware of the medium as a medium. Thus, immediacy leads to hypermediacy.<sup>20</sup>

For example, as Bolter and Grusin point out, a web cam promises immediacy though authentic, real-time access to another part of the world. But the fact that users have to view the web cam on a computer, in an operating system, in a browser, on a web page, inside an interface, reminds them that they are not transparently experiencing the locale where the web cam exists, but are instead interacting with a highly artificial media construct. The main argument made by Bolter and Grusin is that all media combine these two processes into what they term *remediation*, an experience of media in which immediacy and hypermediacy co-exist.

We can also analyze games within this model. The double consciousness of play finds a strong parallel in the process of remediation, which mixes transparent immediacy with a hyper-mediated awareness of the constructed nature of play. In *Cops and Robbers*, players willingly take on the theatrical roles of criminals and police, even as they infuse those playful representations with meaning through their actions. In a first-person shooter such as *Halo*, part of the experience is the sensual vertigo of navigating a coherent,

imaginary 3D space. But playing the game also involves an awareness of the game interface, the strategic use of the frame-breaking options, the use of text-based chat, fluctuating server speeds, and the sharing of tips with friends in the larger social context of play. These frame-related aspects of the Halo experience remind the player that the game is a constructed, hypermediated experience.

The value of Bolter and Grusin's model is that it doesn't do away with illusionistic immersion, but includes it as one element within a more complex process. There is no doubt that the immediacy of sensory engagement is part of the pleasure of playing a game, particularly digital games with detailed representations that respond in real-time to player action. The immersive fallacy grossly overemphasizes these forms of pleasure, and in so doing, misrepresents the diverse palette of experiences games offer.

### **The Character of Character**

The danger of the immersive fallacy is that it misrepresents how play functions—and game design can suffer as a result. If game designers fail to recognize the way games create meaning for players—as something separate from, but connected to the real world—they will have difficulty creating truly meaningful play. To highlight these complexities, we now take a detailed look at just one aspect of a game's representation, *character*, to see how an understanding of metacommunication can impact the game design process.

Two key questions arise: How does the player relate to a character in a game? And how can this relationship be understood in terms of the “reality” of the represented world? Just to keep things focused, we will limit our analysis to protagonist characters that a player directly controls, such as Mario in Super Mario World or Pai Chan in Virtual Fighter 4.

The immersive fallacy would assert that a player has an “immersive” relationship with the character, that to play the character is to become the character. In the immersive fallacy's ideal game, the player would identify completely with the character, the game's frame would drop away, and the player would lose him or herself totally within the game character.

These ideas have some validity, but they represent only one element of a much larger and more complicated process. A player's relationship to a game character he or she directly controls is not a simple matter of direct identification. Instead, a player relates to a game character through the double-consciousness of play. A protagonist character is a persona through which a player exerts him or herself into an imaginary world; this relationship can be intense and emotionally “immersive.” However, at the very same time, the character is a tool, a puppet, an object for the player to manipulate according to the rules of the game. In this sense, the player is fully aware of the character as an artificial construct.

This double-consciousness is what makes character-based game play such a rich and multi-layered experience. In playing the role of Cloud in Final Fantasy VII, the player has a portal into the complex narrative world of the game. Through Cloud, the player encounters the settings, characters, and events of the game world; many players report a strong emotional attachment to their digital counterpart. At the same time, Final Fantasy VII is a complex role-playing game. The play experience occurs by watching cutscenes, navigating Cloud and his comrades through virtual spaces, managing a detailed inventory of weapons, items, and magic, taking part in constant strategic battles, and engaging with the game's intricate spreadsheet-like interface. Through these diverse activities, the performance of play acknowledges and celebrates its own hypermediated construction.

The psychologist Gary Alan Fine, in his excellent book *Shared Fantasies*, offers a model for understanding the complex relationship between player and character. *Shared Fantasies* is an ethnographic study of tabletop role-playing game communities. Borrowing from psychologist Erving Goffman's theories of Frame Analysis, Fine identifies three "levels of meaning" within which the player/character game experience takes place:

First, gaming, like all activity, is grounded in the "primary framework," the commonsense understandings that people have of the real world. This is action without laminations. It is a framework that does not depend on other frameworks but on the ultimate reality of events.

Second, players must deal with the game context; they are players whose actions are governed by a complicated set of rules and constraints. They manipulate their characters, having knowledge of the structure of the game, and having approximately the same knowledge that other players have.

Finally, this gaming world is keyed in that the players not only manipulate characters; they are characters. The character identity is separate from the player identity.<sup>21</sup>

This three-fold framing of player consciousness—as a *character* in a simulated world, as a *player* in a game, and as a *person* in a larger social setting—elegantly sketches out the experience of play. The *player* and *character* frames both take place within the magic circle, whereas the *person* frame gains its primary meaning from the cultural context outside the immediate space of play. Fine makes the important point that movement among these frames is fluid and constant, and that it is possible to switch between them several times in the course of a single verbal statement or game action.

In digital games, the same multi-layered phenomena occurs. Imagine a player, holding a joystick-like controller, looking at a glass screen. The player is deeply engrossed in a game activity, sweating and anxious, focused completely on the space in front of him, leaning his body in synch with the visceral rhythms of the game, smiling and grimacing as he battles opponents and his actions play out in the world on the other side of the glass. What game is he playing? Try on both of these answers for size:



*He is playing Tomb Raider.* Our hypothetical player is looking at a television screen and manipulating a console controller. In one sense, our player immerses himself in the game's narrative world, taking on the identity of Lara Croft with her requisite strengths and weaknesses (*I feel lost...I can't believe I survived that trap!*). Simultaneously, he views her exaggerated anatomy from behind, pushing buttons and manipulating her like a puppet on his quest to find power-ups, overcome obstacles, and unlock doors to reach the next level (*What was that cheat code again? This cutscene sucks.*). He is both character and player. In addition, the larger social and cultural context in which he plays constitutes Fine's category of the player as person. Maybe he is trying to impress a friend with his skillful play. Or perhaps he is taking mental notes for a lecture he is going to give at an academic conference. In any case, the player is always present as a person connected to and situated in the real world.

*He is competing in Comedy Central's BattleBots.* In this case, the player's character is a battling, remote-controlled robot moving about the real world, the pane of glass not a television screen but a large sheet of plexi that protects the players and audience from flying scraps of metal. The BattleBots player is immersed in his activity too, and like the Tomb Raider player he is always aware that his actions are governed by the rules of the game. During game play, he might switch between the character/player/person frames many times, moving between emotional identification with his robot character (*Ouch! I just got slammed!*) and his role as player in the game contest (*Let's see if I can get my bot out of the corner*). He might even break the frame of player to wave to a friend in the crowd or to offer a sound bite to the television host.

Fine's three-layer model is an extension of the double-consciousness of play. Players always know that they are playing, and in that knowledge are free to move among the roles of person, player, and character. Players of a game freely embrace the flexibility of this movement, coming in and out of moments of immersion, breaking the player and character frames, yet all the while maintaining the magic circle.

This model applies even when players are not directly controlling a game protagonist. In any game, players move constantly between cognitive frames, shifting from a deep immersion with the game's representation to a deep engagement with the game's strategic mechanisms to an acknowledgement of the space outside the magic circle. Devotees of the immersive fallacy tend to see this hybrid consciousness as a regrettable state of affairs that will only evolve to its true state of pure immersion when the technology arrives. Play tells us otherwise. The many-layered state of mind that occurs during play is something to be celebrated, not repressed—it is responsible for some of the unique pleasures that emerge from a game.

## **Hacking the Holodeck**

The questions surrounding games as simulations are always more complex than they first appear.<sup>22</sup> There is no simple relationship between player and character, or player and game, or game and outside world. This is one reason why the immersive fallacy continues to colonize most design thinking about the future of games and the role of technology in creating compelling experiences: it is simply an easier position to take.

But the immersive fallacy is more than an idea. It is also a stumbling block to advances in game design, as it represents an overly romantic and antiquated model for how media operate. As long as game designers are caught up in a desire for the technology of the holodeck, they lack the vision to appreciate the potential for game innovation today. What if game designers focused their efforts on actively playing with the double-consciousness of play, rather than pining for immersion? Imagine the kinds of games that could result: games that encourage players to constantly shift the frame of the game, questioning what is inside or outside the game; games that play with the lamination between player and character, pushing and pulling against the connection through inventive forms of narrative play; games that emphasize metagaming, or that connect the magic circle so closely with external contexts that the game appears synchronous with everyday life. Innovation is only bound by a failure to see the fundamental principles of play.

A common complaint among game developers is that games are not recognized as a significant form of culture, and that they lack a diverse mass audience. Instead, games seem to be relegated to the backwaters of culture. A sea change in cultural status will only occur when game designers acquire a more sophisticated understanding of how their media operates. Robust forms of contemporary pop culture are not premised on naïve ideas of immersion. Just take a look at the explicit self-consciousness of hip-hop, fashion, and Animé. These forms of popular culture have a deep understanding of the way media cultivates immersion while making explicit the mechanisms through which the representation is experienced.

This, of course, brings us back to simulation. Even though simulations are premised on the notion of fidelity to their referent, the very fact that they are dynamic systems means they allow for the exploration of alternate permutations. Simulations allow players to explore a space of representational possibility through the very act of play. Certainly there are a great many game designers driven by a desire to tell stories and provide narrative worlds for players. Framing games as simulations, as dynamic systems of procedural representation, unlocks the potential of games as a powerful representational and narrative medium. But games have only just scratched at the surface. Questions remain: What can games represent? How can games engage players through meaningful play? And how can games challenge, critique, and contribute to the world outside the magic circle?

#### Notes

15. Gregory Bateson, "A Theory of Play and Fantasy" in *Steps to an Ecology of Mind* (Chicago: University of Chicago Press, 1972), p. 184.

16. Frank Lantz, Hacking the Holodeck, unpublished manuscript.
17. RE:PLAY: Game Design + Game Culture. Online conference, 2000.
18. Marie-Laure Ryan, Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media (Baltimore: John Hopkins University Press, 2000), p. 2.
19. RE:PLAY: Game Design + Game Culture. Online conference, 2000.
20. Jay David Bolter and Richard Grusin, Remediation: Understanding New Media (Cambridge: MIT Press, 1999), p. 16.
21. Gary Alan Fine, Shared Fantasies (Chicago: University of Chicago Press, 1983), p. 186.
22. Frank Lantz, Hacking the Holodeck, unpublished manuscript.