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Digital Game Involvement

A Conceptual Model

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This article proposes a conceptual model for understanding game involvement and immersion on a variety of experiential dimensions corresponding to six broad categories of game features. The article ends with a proposal to replace the metaphor of immersion with one of incorporation. This reconceptualization seeks to replace the unidirectional plunge of player into game space implied by the term *immersion* with one of simultaneous assimilation of the digital environment and presence to others within it.

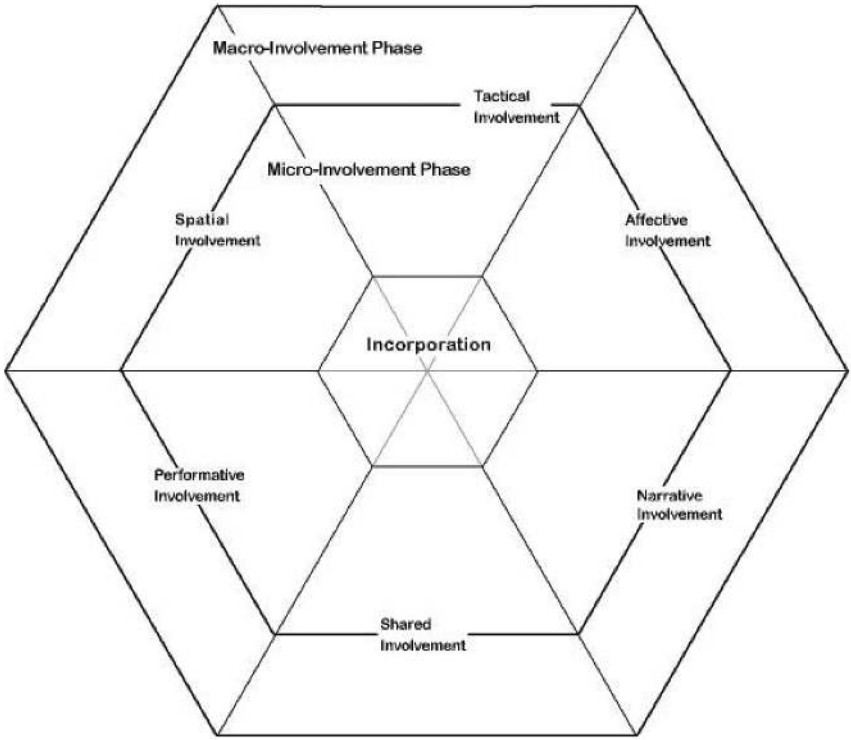
Keywords: *video games; MMOGs; immersion; involvement; incorporation*

This article proposes an analytical model for understanding the imminent instance of player involvement in digital games. The game studies literature archive is steadily increasing in volume, but there has so far been a marked shying away from a structured framework analyzing game involvement and immersion. The first step in establishing such a framework is the identification of a clear set of terms specific to the digital game experience. Using qualitative methods conducted in conjunction with the PhD project of which this article is a part, I have aimed to create a more detailed map of the phenomenon of game involvement, building a vocabulary that acknowledges its varied and complex nature and, in so doing, contributing to the existing body of literature on game experience. In the process of this explication, the model also affirms the importance of positing specific terms for addressing game involvement over other nonergodic media objects. The aim is thus to enact a framework that will enable game students, theorists, and designers to address issues of game involvement in more nuanced ways than the current conceptualizations allow.

The Model

The constituent parts of the model manifest themselves in the player's experience in a complected fashion, each influencing the others in such a way as to make it phenomenologically impossible to extricate one from the other. The experience also occurs with various degrees of intensity, with frequent fluid shifts in attention between one element and another. To represent this fluid intermingling of players' experiential intensities, I decided to adopt Goffman's (1974) metaphor of the

Figure 1
The Digital Game Experience Model



"frame," following Fine's (1983) appropriation of Goffman's concept in his research on tabletop role-playing game communities. Fine, in his book *Shared Fantasy*, used Goffman's *Frame Analysis* to identify three frames, which he also refers to as "worlds of meaning" (p. 181), in the context of tabletop role-playing games. Each frame represents a modality of meaning through which the role-playing experience is interpreted and performed. Players switch between frames rapidly and fluidly.

The Digital Game Experience Model (see Figure 1) includes six frames of involvement structured on two temporal phases: macro-involvement and micro-involvement. The macro phase explores motivational attractors to games that influence sustained engagement through the long-term (as opposed to momentary) aspects of each of the six frames. The micro phase of the model focuses on the moment-by-moment involvement of the game-playing instance. The six frames of involvement correspond to the

clusters of emphasis derived from analysis of the qualitative research conducted as part of the PhD thesis. These frames are not experienced in isolation but always in relation to each other; the separation here being made for the sake of analysis. These six frames will not apply with equal validity to each and every game; some will clearly be more relevant to certain games than others. The frames and temporal phases outlined in the model are meant to play a descriptive rather than prescriptive role. The aim here is to provide concepts that articulate the salient aspects of digital game involvement. Due to space restrictions, this article will focus on the micro-involvement phase. The macro-involvement phase will be addressed in a separate publication (Calleja, 2007).

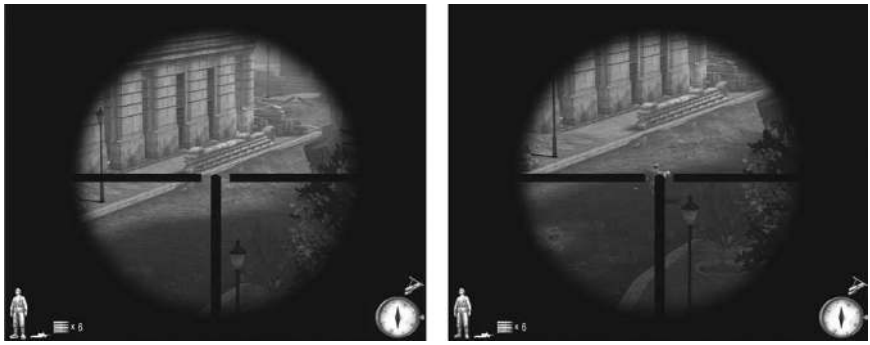
The investment of attention toward the relevant medium is a prerequisite to any form of media engagement. This in itself does not, however, tell us much about the experiential nature of the engagement. To this end, I will differentiate between general attention directed toward a medium, here referred to as *absorption*, and *ergodic involvement*, denoting a form of involvement that requires "non-trivial effort" (Aarseth, 1997, p. 1) on the part of the player to perform the game. Watching a movie will thus be discussed on a different frame of reference from game playing. Treating them as experiential equivalents ignores the specific qualities of each, which has at times been the case with game scholarship importing analytical frameworks from other disciplines without modification. The micro-involvement phase will describe forms of ergodic involvement. James Newman (2002) questions the validity of the concept of ergodicity in digital games:

> Quite simply, videogames are not interactive, or even ergodic. While they may contain interactive or ergodic elements, it is a mistake to consider that they present only one type of experience and foster only one type of engagement. Play sequences, from where the idea of the interactivity or ergodicity of videogames derives, are framed and punctuated by movie sequences, map screens, score or lap-time feedback screens and so on.

He argues for a separation between what he calls "on-line" and "off-line" engagement, where the former refers to direct player input and the latter denotes viewing of cut-scenes, prerace fly-throughs, score screens, and the like. He places these two types of engagement on two polar ends of an "ergodic continuum."

Newman's formulation has the benefit of acknowledging the multidimensional nature of game involvement. He rightly points out that segments like cut-scenes, background story text, and the like are important parts of the game. His critique of ergodicity is based on the existence of game segments that lack direct input from the player. Newman equates nontrivial effort with this form of input and, therefore, activities that do not involve direct input like checking in-game maps, formulating plans, or waiting for a particular event are not seen as forms of ergodic activity. But, the effort implicit in the ergodic is first and foremost a disposition and readiness to act, not simply the actual pressing of a button or pulling of a joystick. To take one example that exemplifies the problem with this line of argument, let us look at strategy

Figure 2
Covering a Street in RED ORCHESTRA



Source: Tripwire Interactive (2006).

games. These often tend to require periods of seeming inactivity as players plan their next moves and formulate long-term plans. During very involving games, these periods of seeming inactivity can be considerably long, but it would make little sense to label such periods of time as not being part of the game. These periods of strategizing with no outwardly visible performance are exactly what such games are all about.

This inconsistency is also applicable to action games. In a first-person shooter (FPS) game, for example, a player is lying on the third floor of a ruined building covering a street with a sniper rifle (see Figure 2). There are no enemies in sight, but the sniper expects them to emerge in the near future as the street leads to one of the main game objectives on the map. Long minutes of inactivity result from such a wait, yet the sniper's job is often defined by this sort of patient waiting. Now, following Newman's logic, these minutes spent waiting are not a form of ergodic involvement as they do not require input from the player, who is just watching the screen. This misses the obvious point that at any second, someone might emerge around that street corner, and the sniper must be ready to deal with them or the fruits of the player's labor will go to waste.

I would argue that in discussing game involvement, an indicator of game activity is not simply the direct input of the player or the display of such an action on the screen, but the potential and readiness to act.

Tactical Involvement

In the micro phase, tactical involvement represents engagement with all forms of decision making made within the context of the game. This includes interaction both

with the rules of the game (Juul, 2005) and with the broader game environment and other players. I am here expanding the notion of tactics beyond the scope of the rules outlined by the game because, as Malaby (2007) has pointed out, focusing only on game rules excludes contingencies that arise outside the defined game rules, which are still important aspects of game participation. The complexity of emergent situations that arise in multiplayer games, particularly the open worlds of massively multiplayer online games (MMOGs), cannot be subsumed under the scope of game rules. Tactical involvement in the macro phase includes all forms of plan formulation and on-the-spot decision making. Whether the decisions made relate to pricing items at the auction house in WORLD OF WARCRAFT (Blizzard Entertainment, 2004), planning the team's defensive strategy in a round of COUNTER-STRIKE (Valve Software, 1998), or deciding how many armies to devote to the siege of Aragon in MEDIEVAL TOTAL WAR 2 (Creative Assembly, 2006), tactical involvement accounts for the considerations made to assess actions in a landscape of possibilities.

Games tend to be designed in such a way as to have a specified opportunity cost to every meaningful action performed. If this is similar to everyday life, digital games emphasize the contrived nature of the contingencies players need to navigate to a more radical degree (Malaby, 2007). Using a game turn's gathered resources to build an army barracks excludes the possibility of building walls to protect my fledgling town or extending resource fields that yield more resources, and so on. Decisions tend to have clearly labeled costs and benefits that both facilitate and problematize the process of decision making. Knowledge of repercussions of specific actions serves to decrease uncertainty. But if uncertainty is limited enough and players realize they have the ability to plan far into the future, the situation is problematized by placing responsibility more squarely on the decision maker.

This knowledge of consequences can lead to complex cognitive operations that often entail making the most efficient use of the (usually limited) resources to secure a particular outcome (most common, winning the game). At times, players engage with game systems solely for the pleasure of understanding, decoding, and possibly thwarting them. The following quotations from research participants outline a number of tactical involvement concerns in their respective MMOGs:

> Oriel: I think about strategies. . . . When I get home, where do I want to run to get? . . . Then it's, "When I get home what items do I want?" Sometimes . . . I think about guild issues or ideas for improvements . . . like how do we handle the new guild bank[1] that we set up.
>
> Gordon: Which roles do you enjoy most and why?
>
> Kestra: Assault/support. It's more involved. Also it gets my mind going.
>
> Gordon: In what way is it more involved? How does it get your mind going?
>
> Kestra: You are more involved when you are actively trying to get into a base, pushing the enemy back, or trying to keep them penned in. You have to keep thinking.
>
> XOreo: Dropping out of aircraft is a quick way to get on top of structures [called bases or towers in PLANETSIDE] and get the advantage of being above the stairs. Being

upstairs means you can easily view using third-person view, down the stairs, and you only have one way enemies can easily come up on you. Alertness and surprise is a key factor in PLANETSIDE.

Gordon: What aspects of WoW [WORLD OF WARCRAFT] do you think about most actively?

Carlitos: I usually think of ways I can level faster and the most effective ways of grinding or farming.

As the above quotations demonstrate, there might be very different types of tactical involvement, but whether it's building a character up or taking over the planet, this experiential dimension is one of the most fundamental cornerstones of games. Tactical involvement is compelling due to the landscape of cognitive challenges that games are so apt at presenting. Without these cognitive challenges, player interest can quickly wane:

Inauro: On the whole, I think WoW's quests are pretty dull. Most of them involve either collecting so many of such and such an item, or killing x number of monster type y. And none of them really offer different ways of resolving them. It makes little difference whether you're a fighter or a mage; you just kill the mobs, and get on with it.

As opposed to the majority of tabletop games, strategic planning and action in digital games is more closely aligned, unless the game in question is a simulation of a tabletop game such as a computerized chess or other turn-based strategy game. In the case of the majority of digital games, the tactical frame is directly related to the performative frame: In the former, strategies are formed; in the latter, they are acted out. Acting on a strategy causes a change in the state of the game, which, in the case of digital games, usually involves an element of avatar or piece movement through player input. In SPACE INVADERS (Taito, 1978), the tactical and kinaesthetic options are very simple and tightly bound. The player needs to clear the oncoming waves of aliens by deciding to move left, move right, or stay in the same place and timing laser beam shots at them, while avoiding alien beams by dodging them or hiding behind three destructible barriers. These simple elements allow the possibility for a strategy that requires quick action to bring it into being. Similarly, the formation of a strategy in a multiplayer game of COUNTER-STRIKE requires rapid execution in order to take effect.

Performative Involvement

Performative involvement relates to all modes of avatar or game piece control in digital environments, ranging from learning controls to the fluency of internalized movement. This frame of involvement requires more conscious attention when the controls make themselves present, either because the player hasn't fully mastered them or because a situation demands a complex sequence of actions that are challenging

Figure 3
MAX PAYNE: Life in Bullet-Time

Source: Rockstar Toronto (2001).

to the player. Internalization of controls and the fluidity of movement lead to the phenomenon of incorporation, which I outline below.

Performative involvement is the actualization of tactical involvement representing the execution of established decisions. Planned motion is made manifest by the controlled agent(s) creating a potential for action defined by the movement affordances designed into the virtual environment or world. The spaceship representing the player in SPACE INVADERS is able to move left or right and shoot vertically. There is no further potential for motion. PACMAN moves in four directions on a two-dimensional plane. On the other hand, Max Payne can walk, crouch, sprint, and jump, often while aiming and shooting his assailants in normal speed or in "bullet-time" motion. Here, action is slowed down, giving the player more time to execute complex maneuvers to which time is rendered subservient. Fantasies of moving with Neo-like speed are partially assuaged by MAX PAYNE (Rockstar Toronto, 2001; see Figure 3), ENTER THE MATRIX (Shiny Entertainment, 2003), and F.E.A.R. (Monolith, 2005a), for above all, the facility to employ bullet-time is an invitation to reproduce on the screen the internally visualized imagery inspired by other media texts that have popularized the concept. Digital games have the more engaging quality of placing the responsibility and thus the satisfaction of those moves on the player.

In the case of FPS games where the avatar is transparent, hand and finger actions translate into the player's movement in the world, rather than the movement of a manipulated object or character. Thumbing the space key and pressing W in an FPS would be most often interpreted by the player as if he or she were jumping forward. The lack of an intervening avatar can induce deeper involvement than third-person manipulation because it anchors the player more directly in the world:

> Gordon: What perspective do you prefer playing in—first, third, or a mix of both?
> BunkerBoy86: A mix.
> Gordon: What do you use each for?
> BunkerBoy86: It depends on the game and what you are trying to do. Like for PLANETSIDE, third person helps you to get a good look at what is around you, but you have very little aim control, while first-person view gives you that soldier's-eye view so you can aim and you get a sense of actually being there . . . controlling that character.
> Gordon: What perspective do you prefer playing in—first, third, or a mix of both?
> Mokkan: A mix is nice, first has the best immersion, but sometimes I like to just look at what my character is doing too.

In third-person view, the field of vision is wider than in first person and can be widened further by zooming out from the avatar. The camera is located somewhere at the back of the avatar. In this mode, however, it is harder to estimate distance between the avatar and other entities, objects, or locations because the player is manipulating two objects in relation to each other, rather than his or her point of view and the relative object or terrain. Thus, it becomes harder to make finer and more accurate movements such as running to a corner and stopping precisely at the edge.

In the case of third-person point of view, the player occupies a double awareness: the player awareness of the surrounding environment portrayed by the camera outside the avatar (including its rear, which is the most vulnerable position in first-person games and, indeed, real life) and that awareness filtered through the avatar. In games that allow for switching between points of view, the player needs to keep in mind that if he or she is seeing around the corner, his or her avatar can't, and thus when switching back to first person, the player needs to move in order to look around the corner and shoot, for example.

An essential part of game-play is therefore movement. Movement is the key ingredient that enables acting on the environment and is thus the prerequisite for a sense of agency that is a crucial factor in the game experience. Theorists like Schott (2006) and Murray (1998) have argued that "it is the subjective experience of 'agency' that players seem to desire from their engagement with game-play: they need to feel they have exerted power or control over events" (Schott, 2006, p. 134). The exertion of agency is not the sole factor that makes games compelling, but it is a necessary component.[2]

But movement is not only a central component of digital game-play but also an enjoyable part of the experience, particularly when controls are mastered, enabling a

fluent engagement with the environment. Part of this pleasure is the ability to simulate experiences that are not possible in the physical world:

> Baal: Nothing I like more than hopping from building to building on my flight max. Now they got nerfed[3] so that sucks, but the cool thing is being able to do those big jumps, seeing buildings and people becoming smaller and then bigger again when you land on them especially if you're blazing your chain gun as you drop. Also love dropping from the air, don't know why, but it's a cool feeling. My favorite part of MATRIX [THE MATRIX ONLINE, see Figure 4] was doing those mega hyperjumps from [one] building to another. You have to calculate where to land from before and there's that excitement of barely making it . . . and then falling, or not, just like in the first *Matrix* [film].
> Bladerunner: Yeah. . . . Honestly, the best feeling I get is when I am in a TR BFR[4] with the anti-infantry chainguns . . . walking and shooting at the same time. . . . I get all giddy.
> Carlitos: While flying across towns, though, I like to switch it to first.
> Gordon: Why?
> Carlitos: Seems more interesting, as if you were really flying.
> Gordon: If you think back to your gaming sessions, would you say you ever enjoy the sensation of movement in the game?
> Evita: Yes, I do. I can get quite excited.
> Gordon: About the movement?
> Evita: What do you mean? Yes, sitting in a plane or car and speeding along is quite exciting for me.
> Gordon: If you think back to your gaming sessions, would you say you ever enjoy the sensation of movement in the game?
> Sunniva: Yes, very much. . . . It creates a certain flow in the game that I find important for keeping my attention in it—I think it affects the degree to which I stay immersed in the game.
> Gordon: What do you mean by flow?
> Sunniva: Um . . . like a wave—a continuous motion that keeps my attention on the game. . . . It's almost kinda peaceful—well, in the sense that it creates a certain steady, continuous focus. . . . Maybe it's kinda like surfing, hehe, although I've never done that.
> Lili: In MMOs . . . I have felt immersed while flying because it's a tactile/physical sensation.

All of the above participants speak about the sensation of movement as if they were experiencing it directly. The ability to fly in some MMOs is one of the main elements that gives Lili a sense of being part of the world. The in-game motion is assimilated to the mostly inert physical body sitting in front of the computer. The participants often mentioned making an effort to gain these sensations. Carlitos switches perspective to heighten the sense of "really flying," Danor actively imagines actually piloting his aircraft, and Evita is excited by the prospect of speeding along in a vehicle. Sunniva uses the term *flow* to describe how the sensation of movement inside the game world holds her attention and creates a sensation of "continuous focus," which she likens to surfing. All these examples point to the more internalized areas of performative involvement that are seen as precursors to incorporation, where the controls are internalized to a degree when there is a feeling of unmediated connection to the environment:

Figure 4
Acrobatic Stunts in THE MATRIX ONLINE

Source: Monolith (2005b).

> Bladerunner: The Quan can only take place when you feel your actions on the screen are taking place not because you're pushing keys on your keyboard and moving your mouse, but your mind is willing those actions. It's just you and the image on the monitor. You can't get that with a game that has third person because it breaks "the magic."

The sensation that Sunniva calls "flow" and Bladerunner calls "the Quan" will be discussed in further detail in the following section on incorporation with reference to Csíkszentmihályi's (1990) work on the psychology of optimal experience.

Performative involvement relates to all modes of avatar or game-piece control in digital environments, ranging from learning controls to the fluency of internalized movement. This frame of involvement requires more conscious attention when the controls make themselves present, either because the player hasn't fully mastered them or because a situation demands a complex sequence of actions that are challenging to the player. Players of varying skills and preferences will be engaged in different kinds of movement. Some love going as fast as possible down a racing track. Others get lost executing multiple barrel rolls in World War I biplanes. Some get involved in coordinating their actions with other players in frantically paced multiplayer FPSs, whereas others become most involved when sneaking patiently and silently in an area infested with enemies who are unaware of their presence. Still others enjoy the leisurely ride on their WORLD OF WARCRAFT mount, taking in the beautifully designed landscape. The important thing to consider is that in all cases, movement is a crucial part of the gaming experience, and the freedom of action allowed as well as the learning curve of controls involved will have a major influence on the players' ergodic involvement in the game environment, as most other aspects of involvement in games are dependent on at least a basic fluency of movement in the environment.

Affective Involvement

The practiced effort required to engage with games places particular emphasis on the need for them to be compelling enough to sustain this effort. But, players will tend to engage with games that they perceive to be more than just mildly compelling but satisfying, if not surpassing, the various cognitive and affective expectations they might have. The cognitive, emotional, and kinaesthetic feedback loop that is formed between the game process and the player makes games particularly powerful means of affecting players' moods and emotional states (Bryant & Davies, 2006; Grodal, 2000).[5]

For those suffering from a lack of excitement, games offer an immediate channel of emotional arousal. Conversely, for those whose work or personal lives are too hectic, the compelling nature of games makes them ideal for shifting one's attention to a performative domain that suits the players' needs: vent frustration through intense first-person action, get absorbed in the cognitive challenge of a strategy game, or stroll leisurely in aesthetically appealing landscapes. Within media psychology, these tendencies are addressed by the concept of "excitatory homeostasis" that refers to "the tendency of individuals to choose entertainment to achieve an optimal level of arousal" (Bryant & Davies, 2006, p. 183). If one's emotional state is considered to be negative, understimulated persons will tend to choose media content that is arousing whereas overstimulated persons tend to choose calmer media content. Games offer a variety of participatory means of affecting mood as well as allowing players to tweak game settings to bring about the desired affective change. If MMOGs are limited in

the players' ability to change difficulty levels and other game settings, they make up for this by providing a wide variety of activities that can often suit the needs of different emotional states:

> Gordon: What are the elements of WoW that keep you guys coming back?
> Snotplate: The fact that I can have completely different experiences depending on which toons I log. This toon was built for team play; he's absolutely useless without my quest-buddy, a priestess. I have a hunter for BG[6] and a mage for solo play when I don't feel like BG. So my mood and my surroundings determine what I experience when I log. The choices and variance keep me coming back.

Research participants like Snotplate commented on how they engage with different aspects of the MMOG depending on their current mood. Snotplate even created different characters to reflect these emotional preferences and articulates how this is one important aspect of WORLD OF WARCRAFT that keeps him coming back to it.

Game design, like other forms of textual production, is imbued with the rhetorical strategies of affect. But unlike other forms of text, this rhetorical power is emphasized by the conjunction of textual interpretation and the performed practice of gaming. The recursive input/output process inherent to virtual environment interaction has the potential to deliver an experience that extends affect beyond that allowed by other nonergodic media. Designers aim to capitalize on these affective qualities by selling a packaged experience that meets the expectations of buyers while engaging the emotions the game aims to arouse. A significant portion of this rhetorical power can be associated with the mode of representation of the particular medium. In the case of the moment-by-moment involvement with digital games, the main channels of rhetorical delivery are visual and aural, both of which tend to be heavily influenced by the physics built into the game environment. Game theorists and designers have rightly argued that graphical power is not what makes games compelling. Although it is true that the quality and beauty of visual representation does not, by itself, make a compelling game, it would be unwise to discount the evocative power of graphics and sound.

A number of participants have discussed the evocative, mood-changing powers of the aesthetic beauty of MMOGs. The dependence of these virtual worlds on extended participation of players in their vast geographical expanses means that their designers need to provide places that create positive emotions for their inhabitants. The creators of WORLD OF WARCRAFT were very aware of the effect that aesthetics have on players, creating appealing regions with varying palettes of tastefully blended colors and a design policy that aimed to appeal the masses. Eight million paying subscribers confirm the wisdom of Blizzard's design:

> Oriel: When I am alone . . . it's when I am relaxed and have the sounds on. I like to pretend I am actually there . . . like sunset time at Menethil Harbor while waiting for the boat to show up. Flying through Gadgetzan at night over the ocean and looking at the stars. Listening to the crunching snow under my feet in Winterspring. Hearing crickets chirp at

Figure 5
Twilight Grove in WORLD OF WARCRAFT

Source: Blizzard Entertainment (2004).

night when going through the forest. I wish I could remember if I hear the ocean at Azshara. . . . I love the beach by my memory . . . doesn't include that sound. Oh and the red and gold falling leaves in Azshara[7] . . . sooo pretty.

Gordon: Why do you try and consciously make yourself feel there? And could you try to describe how it makes you feel?

Oriel: Peaceful. I want to live there. I would rather live there than here cause it's beautiful there.

The majority of WORLD OF WARCRAFT participants echoed Oriel's sentiments, exemplifying how the graphical style and quality of a virtual environment can have a powerful effect on the moods and emotional states of their inhabitants (see Figure 5). There is a particular kind of attraction to traversing beautiful landscapes that goes beyond that of beholding attractive images. In the words of Oriel, "It's better than looking at a pretty picture . . . 'cause you can explore inside the picture."

But some players find other forms of affective arousal appealing. The action FPS F.E.A.R is designed to maximize excitement by combining the captivating, fast-paced

Figure 6
F.E.A.R.

Source: Monolith (2005a).

characteristics of FPSs with hair-raising instances that draw on the affective techniques of horror cinema. The game alternates between combat situations and paranormal horror scenes, which may require a specific reaction from the player to overcome, or less active sequences, which are meant to further the plot and often make players jump 3 feet off their seats. The combat sequences are intensified by the advanced (at least at the time of writing) artificial intelligence (AI) of the computer-controlled agents, who duck, take cover, and collaborate to preserve their lives and eliminate the player. In most FPS action games, once an area has been cleared of AI agents, players do not need to worry about their backs, focusing on clearing out new areas. AI agents do not normally try to sneak up from behind the player and knock him or her out with a good rifle-butting. These flanking attacks are not predetermined or triggered by traversal of an area but occur as a result of the AI reacting to the player's behavior. The possibility of being attacked from areas other than the location where the present combat situation was initiated makes players stay on their toes and watch their backs more carefully, involving them more intensely in the spatial and tactical micro-involvement frames of the game. Placing the horror sequences right after intense combat situations greatly increases their affective power. When the player is moving cautiously through a corridor and peaking around every corner to avoid being ambushed, hearing a noise behind him or her tends to be interpreted as an enemy approaching, causing the player to turn around (and often let off a few rounds of ammo in mid-air). Seeing objects flying off shelves conflicts with the

operative schema of interpretation required by a combat situation in an FPS, where survival depends on objects and entities behaving as expected. The lightbulbs start swaying and flickering, adding to the sense of eeriness, and when the player turns back to where he or she was initially headed, a little girl suddenly appears out of the shadows, giggling and scampering away on all fours. By first increasing arousal and encouraging the internalization of the game environment (what I will later call *incorporation*) and then abruptly estranging behavior within it, the game creates an intensified sense of shock and uncanniness (see Figure 6).

Players look for different sorts of experiences in games ranging from the pleasures of aesthetically beautiful and peaceful places, like those described by the WORLD OF WARCRAFT participants, to darker and more fast-paced action-horror games such as F.E.A.R. At times, players will sacrifice great game-play for the chance to have experiences in specific settings they find appealing. Salen and Zimmerman (2003) are among a number of game designers who deplore the trend toward improving representation at the cost of innovations in design. There is no doubt that these game designers are right from the perspective of creating interesting game systems. But we must not forget that digital games attract not only players looking for interesting and cleverly designed game systems but also armies of players whose interest is to live a specific, packaged experience: a Formula One car driver, a World War II sniper, the manager of a football team, or a murder victim on the Orient Express. Digital games are not only game systems, they are also digitally mediated experiences that aim to satisfy the desires generated by movies, literature, or free-ranging fantasy.

Shared Involvement

One characteristic that distinguishes engagement with digital games from other media objects like literature and film is their ability to place a player-controlled agent(s) within the represented environment. This presence is made more compelling when other agents respond to the player, whether these agents are human- or AI-controlled. This is particularly relevant in the case of games involving avatar control, as it anchors the player firmly to the location both spatially and socially. The shared involvement frame covers all aspects of communication with and relation to other agents in the game world. Due to the limitation of current AI technology, human-controlled agents allow an infinitely wider range of communication as well as responding in more unpredictable ways, making the shared involvement more intense when other humans are present in the environment, whether they are being interacted with directly or act as an audience to the player's actions.

In a single-player game, players are free to try different things out without being under the scrutiny of others. No judgment is passed on the player if he or she fails to meet a goal or makes mistakes. In the case of online games, particularly ones that

allow for "spectating," or the ability to look through other players' perspectives when not playing, one's actions become a performance watched and often commented on by others. Players of online multiplayer games tend to keep the same alias for identification purposes. They build reputations based on their actions, at times making certain players identifiable through their playing style. If a player wants to join a clan,[8] he or she is usually submitted to a test or "trial." During a trial, senior members assess the applicant's abilities by following the player's actions in spectator mode for a number of game rounds to assess performance.

In MMOGs, characters progress over an extended period of time and there is no option of changing a character's name or appearance aside from altering clothing and equipment. This means that characters accumulate a reputation, positive or negative, among other players on the same server. Some guilds or outfits keep "kill on site" lists for players whose actions are deemed to be unacceptable, such as "ninja-looting" (using unfair methods to take rare items off killed mobs and then leaving the group) or "ganking" (killing characters who have no chance of winning a fight because of a difference in levels, for no particular gain).

Another aspect of multiplayer gaming is the importance of collaboration to achieve common goals. This creates the potential for involving players through communication and teamwork. Grouping is a necessary aspect of most MMOGs, which are designed in such a way as to require more collaborative play as characters increase in levels. Participants have stated that the possibility of working with other, geographically distant people to reach a common goal is a strong involving factor in MMOGs:

> Gordon: What interests you about massive multiplayer online games?
> BunkerBoy86: Well for starters, the fact that there are actually other people playing with you . . . or against you, heheh. Not just some AI telling something what to do all the time. That, and there is just so much depth to them. It really just grabs you and takes you for a ride. The human element adds a lot of fun and surprises to a game. Makes it more challenging and realistic.
> Gordon: Do you have any memorable gaming session you could relate? Any particular day you played and got really into the game?
> Kestra: My favorite was fighting during the Monolith event. I just enjoyed playing as part of a large force. It was fun seeing all the roles.
> Gordon: Could you try and describe what intrigues you about the idea of an MMOG?
> Bladerunner: It's because it's massive—that sparks my interest. Hundreds of people "attempting" to work together for a common goal in a FPS. The idea of virtual armies that have a neverending battle really appeals to me. It's also the coordination of your specific allies to meet a certain goal. You get all warm and fuzzy when your team is kicking ass. And when it's on a massive scale, like it is in PLANETSIDE, that just megafized the feeling.

Shared involvement tends to become more intense, the more people are working together—what Bladerunner calls a "megafized" feeling. More things can go wrong,

Figure 7
PLANETSIDE Players Form Up for a Massed Attack

Source: Sony Online Entertainment (2003).

but when the collaboration works, the efforts are seen as being more than worthwhile. When participants were asked to relate memorable sessions, a large percentage, particularly among the PLANETSIDE (Sony Online Entertainment, 2003) players, described situations of successful mass collaboration in large battles (see Figure 7). Curious enough, even though WORLD OF WARCRAFT participants included players from PvE and PvP[9] servers, the instances of involvement through collaboration mentioned were all related to PvE situations, particularly in the case of higher level instances.

All but two participants stated that the main reason for their participation in MMOGs was the interaction with others, whether collaboratively or competitively (although the collaborative aspect was the one sited most frequently as the main motivator). The salient elements of this frame of involvement include general communication between players, collaboration and organization, the presence of others as audience for the player's actions, and the competitive, unpredictable, and challenging aspects of PvP, including the satisfaction of beating other human players. Shared involvement thus encompasses all aspects relating to the cohabitation of a

common environment, ranging from making collaborative battle strategies to discussing guild politics or simply being aware of the fact that actions in this online world are occurring in a social context.

Narrative Involvement

There have been numerous discussions within game studies about the role of narrative in digital games. The more vigorous, and at times heated, of these took place during the so-called narratology-ludology debate.[10] One of the main points of contention in this series of discussions related to the applicability of narrative theory to digital games. One side contended that digital games are new forms of storytelling (Douglas & Hargadon, 2001; Murray, 2003; Ryan, 2006), whereas the other camp argued that narrative was of secondary importance to games' defining trait: gameplay (Aarseth, 2003; Eskelinen, 2003; Juul, 2005). In today's literature on game studies, most theorists agree that conceptual models developed for use in other fields, including narrative theory, need to be adapted to the specific characteristics of digital games, if they are to be at all useful for their analysis. In the context of digital games, the term *narrative* has implications that are particular to the medium. As the long tradition of studying narrative attests, there are a number of approaches one can take to the analysis of narrative, each having different merits depending on the form of text discussed. Amending or creating an adequate narrative theory to be implemented in game analysis could well occupy a full monograph. Treatment of narrative will thus be kept within the scope of the current model: the role narrative plays in involving players with digital games.

For the scope of this analysis, two perspectives on narrative will be helpful. On one hand, we can look at narrative elements like a game world's history and background, or the back story of a current mission or quest. I will refer to this as the "designed narrative." On the other hand, we can take narrative to refer to the player's interpretation of the game-play experience. I will refer to this as "personal narrative." In my early WORLD OF WARCRAFT days, I decided to try to travel from the starting-night elf island of Teldrassil to the human capital of Stormwind at a tender 10th level. My memory of Muun's[11] perilous journey, the obstacles encountered, and people met is an example of a personal narrative (see Figure 8). The assault on Max Payne's family in the game by the same name occurs in a timeframe prior to the start of the game. This is an example of designed narrative. The designed narrative tends to influence and shape the formation of personal narrative, but this is not necessarily the case.

Players rarely have the same designed narrative expectations of games and MMOGs as they do of literary works or movies, for example. Games emphasize player performance, whereas literary works and movies create compelling media experiences through their assemblage of form and content. The designed narrative and personal narratives in literary works and movies are far more closely aligned than in digital games. The

Figure 8
Episodes in the Life of Muun

Source: Blizzard Entertainment (2004).

role of personal interpretation will always mean that there is a gap between the narrative intended by the writer or director and that formed by the reader or audience. The very act of doing creates a player-defined narrative that is influenced, but not determined, by the game system, its strategies of representation, and the virtual environment's physics. The role played by the designed narrative differs according to the game. One way of representing the role of the designed narrative is to consider a continuum of designed narratives ranging from those that are necessary to progress in the game to those that have no functional effect on progression at all. The need for involvement with the designed narrative is dependent on this scale. Games like SYBERIA (Microïds, 2002), THE LONGEST JOURNEY, or the more recent PHOENIX WRIGHT (Capcom, 2005) on the Nintendo DS require an engagement with their designed narrative for players to progress successfully in the game. The role of the designed narrative in DOOM (id Software, 1993) is negligible. The majority of games fall between these two extremes, where the designed narrative assists with progression in the game without requiring players to engage with it in its entirety. In the majority of MMOGs, the designed narrative can be largely ignored without limiting the ability of players to progress and interact with the world. In fact, players would often skip reading or watching story elements to jump straight into the action. Out of all the participants, only two stated that they gave any importance to prestructured narrative elements. Often, in fact, players would skip reading quest descriptions and backgrounds to get to its functional aspects:

Gordon: What role does the world history or background play for you?
Nombril: None whatsoever. I don't even read the quests . . . just look at what it takes to mark them as complete.
Gordon: What role do the game world history and background play in your gaming experience?
Oriel: None. I hate to read. Joe started a character the same time I did, so we quested to level 60 together. He read all the quests; I followed and clicked on things . . . and enjoyed the environment as we explored.
Gordon: What role does the background story of PLANETSIDE play for you?
Drystan: Absolutely none. I haven't actually read its background story. I just play the game.

But a lack of engagement with the designed narrative doesn't mean that no dimensions of narrative are being addressed. Personal narrative accounts for the creation of a narrative based on the situated actions of the player and the resultant outcomes. The lived experience of game-play is stored, like all other lived experience, in the player's memory, with certain episodes leaving a stronger imprint than others: spectacular goals in football games, overcoming seemingly impossible odds unexpectedly, comic instances in multiplayer games, and so on. The accumulation of a personal narrative can heighten the affective dimensions of the game. It gives meaning to the player's actions, both in terms of past events and future plans, as well as enhancing to different degrees depending on the structure of the game and the player's sense of agency. As discussed in the performative involvement frame, the more players feel freedom in choosing what to do in the world while affecting others and the environment, the more rewarding the engagement with the game becomes, feeding back into the creation of memorable personal narrative.

Although a number of participants commented on their lack of interest in the PLANETSIDE and WORLD OF WARCRAFT back stories, the generation of personal narrative was clearly an attractive aspect of these worlds, whether these narratives were created consciously or retold when describing memorable sessions:

Gordon: What role does the background story of PLANETSIDE play for you?
Sunniva: Not much really, especially not at the start. When I first started playing, what I enjoy most is being there in the action, but I think that the more I've played, the more conscious of and interested I have become in the overall patterns of what's going on . . . but since it's kinda a neverending thing . . . it isn't really that important for me.
Sunniva: Specifically, I like sniping, especially when we are two or more players sniping together. I also like doing little quests with a small group of people, whether that involves sniping or not—like, for example, going to take over a new tower, or trying to attack a small group of enemies, etc.
Gordon: So the little quests . . . those are self-created, right?
Sunniva: Yes.
Gordon: Do you find that the ability to create your own little quests involves you more in the game?
Sunniva: Yes. It allows you to control more of your own gaming experience and thinking out your own quests makes the game more engaging, I think, 'cause you need to plan

more and think more around what you're doing. I also like small quests better, following a "big" quest, for the same reason, as you have less control in bigger quests and play a less central role in the overall planning and execution of that quest.

Gordon: Do you find yourself creating a narrative to what happens in the game?

Sunniva: Narrative—maybe a little bit, but not much, I mean, being part of a gaming experience like the ones in PLANETSIDE automatically lead to some level of narrative as the story of the game keeps evolving, but I think personally it is more the moment-to-moment collective engagement with the game that creates my narrative for me.

Sunniva emphasizes her preference for the formation of personal narrative over engagement with the designed narrative. For her, self-created goals generate more interesting narratives than what she calls "big" quests or goals, specifically because it gives her a stronger sense of agency. It is also interesting that she views the creation of a personal narrative from the "moment-to-moment collective engagement with the game" as being a different issue from creating an overall narrative.

Narrative involvement deals with all aspects of engagement with the designed narrative and the flow of players' personal experiences in the game world. The former may enrich the latter, but it is not necessary for its formation. Of course, certain games and online worlds offer more interesting and appealing cues for the creation of personal narratives than others. The narrative hooks that exist in a game like Will Wright's THE SIMS (Maxis Software, 2000) are obviously more likely to lead to interesting stories than more abstract games like TETRIS (Pajitnov, 1985), but ultimately, it is up to the player to engage with these narrative hooks. For Sunniva, PLANETSIDE offers the potential for creating interesting personal narratives, whereas for other participants, PLANETSIDE is all about shooting human-controlled avatars.

The formation of an ongoing narrative is a crucial component of the way we make sense of the world (Dennett, 1991). If we follow philosophers of mind like Dennett, Edelman (1989), and others and view our lived experience as a collection of internally generated narratives, we need to account for the fact that in the contemporary world, an important part of our lived narratives occurs within digital environments like games and MMOGs. Narrative, as I am using it here, emphasizes this continuity of lived experience between the technologically mediated and the everyday, taking the interaction between personal and designed narratives as the locus of meaning making within designed environments.

Spatial Involvement

Spatial involvement is related to locating oneself within a wider game area than is visible on the screen. It can take the form of mental maps, directions from other players, or referral to in-game or out-of-game maps and covers aspects such as exploration and exploitation of the game space for strategic purposes.

Figure 9
Flashed in COUNTER-STRIKE SOURCE

Source: Valve Software (2004).

Digital games often require players to internalize their immediate location within the map (COUNTER-STRIKE), level (MEDAL OF HONOR), region (OBLIVION), or world (WORLD OF WARCRAFT). This mental mapping of traversable game space works on various scales ranging from locating oneself in the immediate visible area to identifying one's location vis-à-vis the larger geographic context. An example of the former can be portrayed by taking an example from COUNTER-STRIKE. I am playing on the Terrorist side on the de_dust2 map. As soon as the round starts, I run toward bombsite B through an internal area. I go through the doorway and turn left only to hear the sound of a flash grenade bounce into the room from the left doorway. The screen goes white and the sound is blocked out by a high-pitched screech. Knowing the map layout fairly well, I press the D key for a few seconds to move right and then the S and D keys simultaneously to make sure I'm moving along the back wall and going down the steps. I then move the mouse left and let go of the D key so that I'm facing up the steps when the flash grenade's effect wears off, as in all likelihood, the Counter-terrorist who threw the flash grenade will be running into the corridor looking for a dazed opponent (see Figure 9).

On a broader geographical scale (where one exists), spatial involvement relates to one's location within a larger world and the ways distances can be traversed. The size of the world gives players a greater sense of grandeur—the sensation that beyond those mountains, there are further lands to be explored, when the player feels inclined to do so. This creates a sense of grandeur that helps make the world a more believable, habitable place than simply a chain of environments linked together, as is the case in games like MEDAL OF HONOR, or disconnected locations, such as the maps in COUNTER-STRIKE.

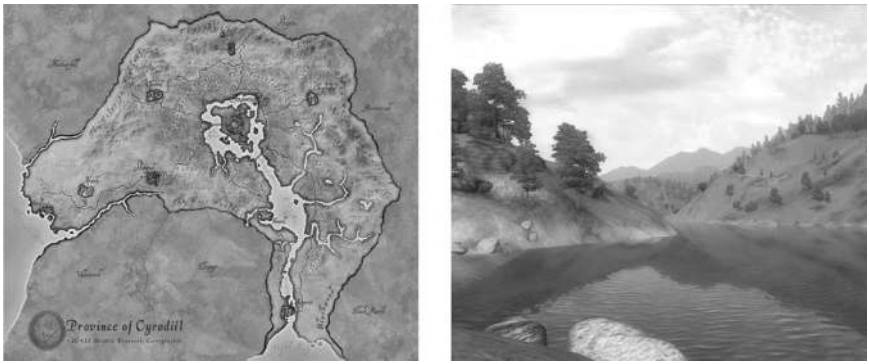
As new environments are mapped mentally, the player's spatial disposition to them diminishes in indexicality. Maps are consulted less often as the lay of the land is memorized, thus requiring less investment of conscious attention to orienting oneself.

The process of internalization involved in learning the layout of a map, region, or world gives a stronger sense of inhabiting the game space or, to put it differently, for the game space to feel as though it is part of the player's immediate surroundings:

Rheric: I am a pretty visual person. I drive by landmarks not by road names, so, I can visualize it pretty vividly. Though some of the in-between spaces are hazy 'cause I fly from Undercity to Tarren Mill now.
Gordon: Do you think real-life orientation spills onto virtual world navigation?
Rheric: For people like me, absolutely yes. It doesn't matter if it's the real world or digital, as I travel around, and learn new areas, I naturally seek certain kinds of landmarks to help me keep my bearings. A twist in the road here, a tree there. I find it comforting when I start to get the lay of the land in an MMO. For others, I have no idea.
Gordon: To what do you attribute the sense of comfort?
Rheric: Familiarity. It's not just comfort, but also a bit of pride.
Gordon: In what way?
Rheric: Well, I know where I am, I know where I want to go, and I know how to get there. My father can draw you a map to nearly anywhere in the eastern half of his state from memory. We're talking very rural areas, towns, and even a few major urban areas as well. That's impressive to me.
Gordon: It is!
Rheric: It's kinda the same thing for me in MMOs. I know the nooks and crannies.
Gordon: So would you say charting these areas in your mind involves you more in the game?
Rheric: Absolutely. 100%. Exploration is one of the things I enjoy the most, outside the stories. They help me to create my own stories.

Rheric associates exploration and knowledge of the land with a sense of comfort and pride. The internalization of spatial involvement creates a sense of being more part of the world. The knowledge of an area creates a sense of habitation and belonging to the region. This internalization process is crucial for the achievement of a sense of comfort and place, as Rheric stated, both in the physical and the digital worlds. You move to a new city in a country you've never visited. At first, one starts mapping the surrounding area, creating a mental image of where things are. In these initial phases, people tend to feel lost and disconnected from the place. Mental maps of the area start being built, and as these become internalized, a sense of comfort and belonging settles in, as one feels a sense of attachment to the new city. The speed and efficiency of this process of internalization is dependent on the individual but is strongly influenced by the design of areas in the world and how they can be traversed or manipulated. This becomes particularly important in large worlds that are often found in role-playing games or MMOG worlds like Azeroth or Norrath. World geographies that have easily distinguishable areas with clearly delineated boundaries make it easier for players to remember and internalize the world layout. The more easily and rapidly players assemble a mental map of the continent, world, or area, the easier it is for them to become, as Rheric points out, more involved in the world.

Figure 10
From Map to 3D Environment in THE ELDER SCROLLS IV: OBLIVION



Source: Bethesda Softworks LLC (2006).

There is often a transition between the indexical map and the 3D environment (see Figure 10) surrounding the player, a switch between inhabiting the environment and having a more detached disposition. The more internalized modes of spatial involvement are an important factor in attaining a state of incorporation.

Incorporation

Each of the frames described above demonstrates a spectrum of experience ranging from conscious attention to internalized knowledge. To take the performative frame as an example, when the movement controls are learned, the player devotes less attention to figuring out how to perform an action and simply does it. With time and confidence, this internalized kinaesthetic ability allows more complex and immediate performance. Players learn to run across narrow planks, throw themselves down to a prone position behind cover, raise the rifle to their avatars' eyes, lean behind cover and deliver an accurate headshot at a distance—all in a fluid and continuous motion. This process of internalization also implies an intensification in focus where players cease to view the virtual environment as separate from their immediate surroundings and start interacting with it in an instinctive way. This state of deep involvement results in a shortening or disappearance of distance between player and game environment.

When this shortening of distance occurs, however momentarily, players may interpret the actions of their avatars as being their own actions in the game world. The sense of being in the environment is what has been referred to as immersion. This conception places a hard division between represented environment on one side

of the screen and the human operator on the other, which gives rise to an equally problematic implication of the operator's plunge into the environment. I propose to replace the metaphor of immersion with that of incorporation. Incorporation turns the notion of a unidirectional plunge into the virtual environment represented with a conception that emphasizes the noetic nature of the phenomenon while accounting for the player/player's represented presence to other agents within the virtual environment. Incorporation operates on a double metaphor: incorporating (in the sense of assimilation or internalization) the environment while reincorporating (in the sense of corporeal embodiment) the player through the avatar in that environment. Both aspects of the metaphor need to be satisfied simultaneously. Incorporation makes the game world present to the player while simultaneously placing a representation of the player within it through the avatar. In the case of multiplayer games or virtual worlds, the player thus becomes part of the game world that is incorporated by others connected to it.[12]

Within the context of the Digital Game Experience Model, incorporation[13] results from a synthesis of internalized tactics (tactical involvement), designed and personally created narrative (narrative involvement), communication and the presence of other agents (shared involvement), and movement (performative involvement) within a habitable domain (spatial involvement).

The process of internalizing the various frames discussed in the model can be related to Csíkszentmihályi's (1990) concept of flow. Flow represents a state of deep, yet seemingly effortless, involvement with a particular task that is engaged with for its own sake (Jackson & Csíkszentmihályi, 1999):

> It is a state of consciousness where one becomes totally absorbed in what one is doing, to the exclusion of all other thoughts and emotions. So flow is about focus. More than just focus, however, flow is a harmonious experience where mind and body are working together effortlessly, leaving the person feeling that something special has just occurred. . . . Flow is a state with universal qualities that is experienced by people in a wide range of contexts. Elderly German gardeners describe the feeling of intense involvement they experience when tending their roses with similar words as Japanese teenagers use to describe how it feels to race their motorcycles. (p. 5)

Csíkszentmihályi identifies nine characteristics of flow: the balance of challenge and skill levels, the merging of action and awareness, the existence of clear goals, unambiguous feedback, concentration on the task at hand, a sense of control, the loss of self consciousness, a transformation of time, and a sense that the activity engaged with is *autotelic*, or intrinsically rewarding. As a number of game theorists have argued (Carr, 2006; Juul, 2005; King & Krzywinska, 2006), the concept of flow is particularly relevant to digital games as core aspects of their design, such as the ability to adjust challenges to player skill, the existence of clearly defined goals, and the provision of immediate feedback, make them ideal vehicles for experiencing flow.

A potential outcome of these designed characteristics is the process of internalization of involvement frames that entails the merging of action and awareness and loss of self-consciousness described by Csíkszentmihályi. When the skills of the doer meet the challenges of the task, the strenuous physical exertion and mental concentration feel effortless because the actions performed become spontaneous to the degree that the activity becomes part of the automatic actions and reaction of the doer, much like breathing or walking. This results in a loss of sense of self and thus a decline in preoccupation with inward scrutiny that can be a great burden on attentional and emotional resources. In collaborative activity, the loss of sense of self can result in a sensation of oneness of action; the group acts as one organism, reading each other's actions as intimately linked with their own. This loss of self-consciousness in the flow experience tends to result in a transformation of time engendered by the intensity of involvement directed at the task at hand.

The qualities described by the concept of flow are thus strongly related to the experiential intensities represented by frames relating to activities in the virtual environment. On the other hand, incorporation, like immersion before it, cannot be equated directly with flow. Writers like Carr (2006), Douglas and Hargadon (2001), and Giddings and Kennedy (2006) equate flow with immersion, focusing on deep involvement with the game-playing activity to the detriment of the spatial qualities of the phenomenon described by the term *immersion*. The conceptualization of incorporation outlined here emphasizes the internalization of a virtual environment's spatial qualities that flow does not account for, because it was developed to describe a *form of activity*, not the spatial qualities of the environment in which the activity takes place. The distinction between incorporation and flow is exemplified by Baal's articulation:

> Baal: Immersion is like when the world disappears from view and you are in the game. You forget that you are a player in this world and become your character in that world, the game one.

The loss of consciousness characteristic of flow is one aspect of the experience described. The other aspect is Baal's incorporation of the game world as a habitable domain in which he can act. Within the scope of the Digital Game Experience Model, incorporation becomes contingent on the internalization of the spatial frame over time. 3D environments are more readily assimilated into consciousness by virtue of their ease of transfer from everyday experience to in-game practice. The phenomenon of virtual environment habitation to which the terms *presence* and *immersion* refer requires a degree of internalization of the spatial frame of involvement. The experience of habitation depends on digital games that allow players to absorb the game world into their consciousness as a habitable place as opposed to controlling a detached agent (or set of pieces) in a game space.

The reduction of conscious effort devoted to each frame that occurs during their internalization also means that more dimensions of the game can be engaged with at any particular time. As pointed out at the start of the article, the boundaries drawn

between frames are intended for the sake of analysis. In reality, describing a particular instance of game-play will draw on a number of overlapping frames. Both their blending and the movement between them occur in a fluid manner, with some being emphasized at times more than others. This blending of frames occurs with more frequency as the process of internalization intensifies. With less conscious attention being required, more dimensions can be addressed in close temporal proximity, if not simultaneously. When this shortening of distance occurs, however momentarily, players tend to interpret the actions of their avatar as being their own.

The phenomenon I am using the term *incorporation* to refer to is a powerful aspect of players' digital game and online world experiences. As part of the interviews, I asked participants to retell memorable and important experiences in any game world they have engaged with. The responses all described situations where participants felt a strong sense of incorporation in the world and, often, they described how moving these incidents were. Here is an example:

> Rheric: I don't remember the name of the location, but there was a time when I was playing through GUILD WARS—it was in the war-torn parts of Ascalon—I was working through some ruins and I turned this corner, and came across this massive, ruined cathedral with this gorgeous stained glass window that was mostly intact. I just stopped, and stared at it. I worked my way around it as much as I could to see if from all angles and ended up on a rise a little above it, just watching it. I don't remember the time of day, that is, but it might have been like a sunset and I swore, I could practically feel the breeze on my face and hear the wildlife. If I could pay to experience that in real life, I would. And I would pay A LOT. It was a real moment for me, a real experience that I carry with me—not as great as, say, seeing the pyramids, but pretty damned great.

This account brings to the fore the potency of emotion felt in an intensely incorporating experience. Removing the fantasy names, it would be challenging to ascertain whether the experience Rheric describes occurred in a mediated environment or not. Rheric relates the event with strong connotations of inhabiting a place, emphasized by the first-person nature of the account ("I worked my way. . . . I just stopped and stared at it," as opposed to "my avatar/character worked . . ."') and the synaesthesiac addition of stimuli that were not part of the environment ("I could practically feel the breeze on my face and hear the wildlife"). Rheric's concluding sentence emphasizes the experiential significance of this event and the lack of separation between it and a nonmediated equivalent.

Weaving together the related threads discussed in this section, we can arrive at a clearer formulation of the term *incorporation* in the context of virtual environments, generally, and digital games, in particular: Incorporation is the subjective experience of inhabiting a virtual environment facilitated by the potential to act meaningfully within it while being present to others.

Metaphors are never neutral placeholders of signifieds; they actively shape our understanding of experiences and artifacts being studied. The aim of replacing the metaphor of immersion is not intended to split hairs or increase confusion but to

build a better understanding of the experiential phenomenon this term was coined to represent. With the increasing complexity of media objects that enable such experiences, and the sophistication of scholarship around them, more complete accounts of the interaction between players and virtual environments become possible. The aim of this model is just that: to take us a step further down the road of discovery of our relationship with the digital worlds we are creating.

Notes

1. The "guild bank" is usually a character or number of characters who carry a pool of guild items and money. Guild members post excess items and donations to the guild bank and ask for particular items or money when needed.

2. Issues of agency are discussed at length in the macro-involvement phase of the model (Calleja, 2007), particularly with reference to Giddens's (1984) work.

3. A particular aspect of the game (such as a character class, spell, weapon, vehicle, skill, etc.) becomes "nerfed" when the game designers alter the characteristics of that object to make it less powerful, normally because it is seen as being too powerful or balance tipping.

4. TR refers to the Terran Republic, one of the three player factions in PLANETSIDE. BFRs, or Battle Frame Robotics, are large, heavily armed humanoid shaped vehicles.

5. The macro-involvement phase discusses the broader implications of the affective qualities of games and relates them to issues such as addiction and escapism (Evans, 2001; Tuan, 1998; Yee, 2006).

6. In the context of WORLD OF WARCRAFT, BG refers to Battlegrounds. These are types of player-versus-player "instances." Instances are locations that exist in areas created specifically for the group and are running as pocket areas in the world, which no other players outside the group can enter. In the case of Battlegrounds, players sign up by talking to the appropriate non-playing character (NPC). When enough characters from each of the two factions, Horde and Alliance, have signed up, characters get teleported to the instance and the game starts. When the game ends, they get teleported to a designated area in the world. No other characters can wander in as a game is going on.

7. Menethil Harbor, Gadgetzan, Winterspring, and Azshara are areas in WORLD OF WARCRAFT.

8. A clan is a group of players who play together in tournaments, which can be organized online or at local area networks (LANs).

9. Some MMOGs exist on different servers. These may also operate on different game or social mechanics. For example, player-versus-player (PvP) servers in WORLD OF WARCRAFT allow characters of one faction to attack any character from other factions any time. On player-versus-environment (PvE) servers, characters may only be attacked if they have their PvP flag on, which can occur if they engage in combat with other flagged characters or if they attack a non-playing character (NPC) of the opposing faction. There are also role-playing servers, where there is more emphasis on speaking in character (reminiscent of MMOGs' pen-and-paper cousins).

10. For an overview of positions in this debate, see *First Person: New Media as Story* (Wardrip-Fruin & Harrigan, 2003).

11. Muun is the name of my character.

12. Incorporation should not be confused with Althusser's concept of *interpellation*. The latter does not account for the simultaneous two-way interaction between game text and player that is at the very heart of the concept of incorporation. In this way, interpellation, as a concept, reaffirms the single direction relationship that the concept of immersion implies, which is one of the main reasons for coining a fresh term without these implications. A lengthy discussion of the problems associated with the concept of immersion can be found in my doctoral thesis (Calleja, 2007).

13. I will use the notation *incorporation* to refer to the dual process of incorporation of the environment and reincorporation within the environment discussed in the previous paragraph.

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