Well Played

a journal on video games, value and meaning

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Preface

Drew Davidson

What makes a game good? or bad? or better?

The Well Played Journal is a forum for in-depth close readings of video games that parse out the various meanings to be found in the experience of playing a game. It is a reviewed journal open to submissions that will be released on a regular basis with high-quality essays.

Contributors are encouraged to analyze sequences in a game in detail in order to illustrate and interpret how the various components of a game can come together to create a fulfilling playing experience unique to this medium. Through contributors, the journal will provide a variety of perspectives on the value of games.

As with the three Well Played books, the term "well played" is being used in two senses. On the one hand, well played is to games as well read is to books. So, a person who reads books a lot is "well read" and a person who plays games a lot is "well played." On the other hand, well played as in well done. So, a hand of poker can be "well played" by a person, and a game can be "well played" by the development team.

Contributors are encouraged looking at video games through both senses of "well played." So, with well played as in well read, contributors are looking closely at the experience of playing a game. And with well played as in well done, contributors are looking at a game in terms of how well it is designed and developed.

The goal of the journal is to continue developing and defining a literacy of games as well as a sense of their value as an experience. Contributors are invited to also discuss games in general (ranging from tabletop, to big games and more) and how they are often designed for different fields (education, entertainment, etc) as we more fully develop a literacy around games and play. Contributors are encouraged to consider using screenshots and video of their gameplay in order to help illustrate

their ideas. And we're open to suggestions on themed issues around a specific game or a topic across games.

Video games are a complex medium that merits careful interpretation and insightful analysis. By inviting contributors to look closely at video games and the experience of playing them, we hope to expand the discussion, and show how games are well played in a variety of ways.

Well Played session tracks are also being held at academic and industry conferences. There was a track of sessions at Games, Learning and Society in 2011, a session at DiGRA in 2011, and at Indiecade 2011 with future events being planned.

The four essays in this inaugural issue are all from the sessions at GLS 7.0 in which presenters analyzed the games and played them live to help illustrate their points.

The Well Played Journal will be published regularly. We won't develop a set schedule until we have a good sense of the amount of quality submissions. Our goal is to publish as often as we have great essays. There won't be a subscription, although as with all ETC Press publications, all issues will be available for download for free, and we'll offer print versions for sale through Lulu.com.

Minecraft, Beyond Construction and Survival

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> "We'll keep releasing expansions and keep the game alive, but there needs to be some kind of final version that you can point at and say, 'I did this!'... I'm not sure why I feel a need to have something to call the final version if we're just going to keep updating it, but it just feels wrong to never have reached some kind of goal. Having the game constantly be under development also seems to confuse the press." - Markus "notch" Persson in *Game Developer,* Feb. 2011

Minecraft has been one of the most unusual success stories in gaming in recent memory — within less than two years, it went from being one of many small, independent games released and discussed in an online indie game development community (in this case, the TIGsource forums; Persson, 2011b) to becoming a world-wide phenomenon that has earned its creator accolades such as the Independent Game Festival *Seumas McNally Grand Prize* award in 2011 and, by some accounts, millions of dollars in revenue (Lynley, 2011).   *Minecraft* is a game that seems to have struck a chord with gamers in a relatively short period of time, yet is one that has changed significantly from release to release, as can be seen by the wry comment above by the game's primary designer, Markus "notch" Persson.

Minecraft is an alluringly moving target to try to pin down, and so in order to assess how it is "well-played" — well-designed and iteratively well-redesigned, in this particular case — we need to think more broadly about the approach Persson (and his company Mojang Specifications) have taken toward the development of the game in addition to its formal game mechanics. That is, we can't assess only the design of the game itself, but need to take into account the shifting goals of the game's designers, what players do with the game, and what the interactions between designer and players mean for the game's evolution. What makes *Minecraft* "work" is a fascinating mix of the game's aesthetic sensibility, its mechanics, its development history, and the creative activities of its players.

To get a better sense of the whole experience of *Minecraft*, let's delve into the approach taken with its design, the way the game plays, but also the novel uses that players (in some cases, other game designers) have put *Minecraft* toward. In this paper, I will begin by outlining the game, briefly tracking its development history through the Alpha and Beta development stages[1]. Then, I'll isolate the two key player activities within the game — *construction* and *survival* — and show how the game's success can be attributed to the interrelations and tensions between these two activities. Finally, I'll discus how *Minecraft*'s tensions between construction and survival have led it to be seen increasingly more as a gaming *platform*, one which is overtly afforded by the game's design and which has led to exciting experiments in games for learning, game play as an instructional space, and games as playgrounds for the exploration of artistic goals.

Many Minecraft(s)

Minecraft is developed in Java, and runs on Macs and Windows machines alike, with versions in the works for both Android and iOS devices. On the game's official website and sole distribution hub, http://minecraft.net, over 11,000,000 unique users have registered accounts, of which more than 25% (over

3,000,000) have purchased the game at the time of this paper's writing. One of the most popular and significant independent computer games of recent years, *Minecraft* has proven to be a compelling (and sometimes addictive) experience for many players.

Minecraft features several modes of play — a "*Minecraft* Classic," offered on minecraft.net for free (the original version of the game), a single-player mode, and a mode in which players have access to multi-player, shared *Minecraft* servers. For the bulk of this paper, I will discuss the game in its single-player (not "Classic," not multi-player) modes. The single-player game's design illustrates some of the key tensions in the game's mechanics, and, I argue, the game's successes are most clearly seen through the tension between the default survival mode and other activities within the game. Additionally, much of the game's development through the Alpha and Beta stages have focused on the single-player experience.

For either the single- or the multi-player game, the first step for the player is to create a world to inhabit. Before the game deposits the player in the game space, a three-dimensional world must be created by *Minecraft*, procedurally generated before the game is fired up for the first time (not dissimilar from one of Persson's inspirations, the complex simulation game *Dwarf Fortress).* After the intricate landscapes and biomes of one's *Minecraft* world are created before the first play, the player is deposited at a spawn point (often, it seems, at the edge of a beach). One of the first things that a player notices is the "primitive" default graphics set, presenting the world as a collection of meter-square blocks, from tree leaves to coal-infused stone to the clouds floating overhead. See Figure 1, below, for an example of the view from a starting spawn point in *Minecraft* — a pleasant morning on a sandy beach, with virtually no instruction as to what to do next.

Figure 1. A typical "opening scene" in *Minecraft*, with the player spawning on a beach in a newly-generated world.

Note that, in Figure 1, there are a number of easily-recognizable gaming interface elements at the bottom of the screen. There are hearts — usually indicative of health in first-person games and third-person adventure games (e.g., *The Legend of Zelda* series; Chess, in preparation). Below the hearts, there are a number of empty "slots" — in many first-person games, a location where one would pick and choose between a variety of weapons. The game's visual aesthetic extends to the game's representation of the player, with the block on the right side of the screen being an image of the player's right hand/arm.

Beyond simply appearing "blocky," the game's uniformity of meter-square elements is a visual allusion to LEGO™, and suggests a space in which the player is given free rein to create whatever he or she wishes from the pieces provided. And though this is technically true (the game affords a great deal of construction), doing so is certainly not evident nor feasible during one's first moments within the game. In these first experiences within a new *Minecraft* world, the player is simply …on a beach, with no clear idea of what he or she can do within the world, what the goal is for the player, what dangers might be present in the game, not to mention there is nothing in terms of instruction or guidance built into the game's interface. The game is enticingly

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quiet at this stage (both in terms of auditory and visual information), perhaps leading a timid player into confusion, an uninformed player into a sense of complacency, or an adventurous player into sense that this simulation of a blocky world is truly open for player exploration.

Unsurprising for gamers in the 2010s, *Minecraft* players rarely seem to have had much difficulty with the problem of "what to do next" after firing up the game. The game's open sandbox is as inviting to many players as it is intimidating to some, and the procedural generation of a world has drawn many players (such as myself) immediately into exploration mode, rooting around the world to explore the highest peaks and deepest caverns one can find. YouTube instructional videos, online tutorials, and collections of player knowledge in a collaborative Wiki (Minepedia; http://minecraftwiki.net) have also all served to guide novice players into the next steps, all of which help to form the basics of the game. Starting by literally punching trees (and other objects) with one's bare, blocky hand, the player then stockpiles wood, stone, and other building blocks of the world. These items, then, can be recombined using the game's crafting interface to first create a workbench — allowing a larger, more complex crafting interface — and then more complex items out of simple, basic components (see Figure 2, below).

Figure 2. The basic *Minecraft* crafting interface.   The player here creates
a wooden pickaxe from wood planks and sticks, using a crafting bench.

Thus, we see that the creativity (the "LEGO™ set" analogy) is not
just something afforded by the game's elements, but is
something integral for a player to proceed in creating *anything*
within the game.   And, more importantly, as one quickly
discovers when the game's square (see Figure 1) sun completes
its arc across the sky, the skillful recombination of items is a
necessary part of the basic game.   For *Minecraft* is not simply an
architectural simulator, but a game in which the player must make
protective structures against the number of monsters that arrive
out of the night — spiders, skeletons, zombies, and the famous
"Creeper" (see Figure 3 below) that has been emblematic of the
game in many ways.   Wood, sand, coal, stone, diamond, and so
on each serve a purpose, and as the player progresses, he or
she learns to create a stronger pickaxe, to lay miles of tracks and
minecarts to more efficiently move ore around the world, to make
torches to illuminate dark crevasses, and to recombine building

blocks (stone, iron, glass) into more complex pieces that may help build a fortress to protect against the monsters of the night.

Figure 3. The Creeper, *Minecraft's* **most feared and most damaging monster.**

The world of *Minecraft* is thus simultaneously a recombinatory, private virtual world for creative purposes and also for survival purposes — nothing in the game tells you that you need to create large, elaborate structures, but the game does quickly encourage you to make *something*. To avoid dying (and losing all of one's on-body possessions, starting over at the spawn point), the player needs to create structures and armor to survive the nightly onslaught. Admittedly, this is a relatively simple challenge; one could interpret the goal of the game as being simply "don't die" and to make a simple building to hide in for the length of the night (seven minutes in real time). But, as part of *Minecraft*'s brilliance is in the balance of these creative and survival elements, players rarely simply "wait out" the night, taking the opportunity to dig, uncover new materials, and craft increasingly complex objects.

So, then, it seems that the tension between construction and survival may help us to understand the unique appeal of this

game.   In thinking about how *Minecraft* is designed, one needs to first distinguish between several stages of *Minecraft*'s development — stages in which the survival elements were first not included and then later built into the game — and then tease out the significant differences between the game's designed mechanics and players' experiences.   With its continuous updating and revision, there have been many *Minecrafts*, more than the simple "Alpha" and "Beta" labels indicate, and we need to understand how the game has evolved to accommodate both creative construction activities and the survival elements that typify its default settings.

Construction vs. Survival

"Waterfall is dead, long live agile!" (Persson, 2011b).

Though the balance between construction and survival is one that characterizes the default single-player (and many multi-player) versions of the game, it was not always the case. In the earliest versions of the game, now labeled "*Minecraft* Classic" and playable for free via the game's official website, *Minecraft* emphasized creation without the survival elements of the game.   The earliest versions of the game were understandably its most rough, but were also released to the general public at a very early stage of development.

Persson rejects a "waterfall" model (e.g., Royce, 1970), in which relatively-rigid stages of software development follow one after another, without the flexibility to create an appropriate solution to a changing problem or changing needs of the software's users. Persson proudly exclaims "long live agile!", indicating his preference, instead, for *agile software development*, a model in which *customer collaboration* is an explicit element (Agile Alliance, 2001).   And, in this regard, "agile" is an understatement in describing the development of *Minecraft*, with its quick succession of updates, the use of players as live testers of the game, and the open conversations about the game's design that Persson himself has had with players.   *Minecraft* is a game in

which the players are not simply consumers, but are active in the development of the game as it has changed.

With over 9800 tweets, and over 290,000 followers on Twitter at the time of this paper's writing, Persson (or "@notch" on Twitter) has amassed a relatively large following for an independent game designer on just this one form of social media. Using Twitter (and his Tumblr, "The World of Notch"; http://notch.tumblr.com) to disseminate ideas about future features in the game (e.g., turbines, "adventure mode," etc.), Persson has attempted to involve the players of the game in its development. This has, of course, not come without difficulties — widely reported in October, 2010 was the distributed denial of service attack that brought down *Minecraft*'s multiplayer functionality. Upset because of a perceived lack of updates by Persson and Mojang, users on 4chan demanded that Persson start "providing ... customers with the updates that [Persson promised] them," taking down multi-player functionality (Crecente, 2010). Some angry players went well beyond most reasonable definitions of "customer collaboration", with a powerful and vocal minority of players expressing their concerns about the game's development through aggressive means. Though Persson has sometimes been unable to meet the demands of *Minecraft*'s player base, his disposition has been "agile" from the start, releasing the first game to the public only a week after he had begun development on it.

As a result, it should not be much of a surprise that many of the game's most distinctive elements were worked through with players quite early in the process. Quickly after developing a "sandbox," construction-based game (what's now *Minecraft* Classic) without a clear conflict present for the player to overcome, it was clear that more needed to be added. As a domain for creativity, *Minecraft* Classic was evocative and interesting, but it was lacking in impetus — there needed to be something more to drive the player's actions. As Persson himself stated on *Minecraft*'s "About the game" page:

"I strongly believe that all good stories have a conflict, and that all good games tell a good story regardless of if it's pre-written or emergent. Free building mode is fine and dandy, but for many people it will ultimately become boring once you've got it figured out. It's like playing a first person shooter in god mode, or giving yourself infinite funds in a strategy game.. a lack of challenge kills the fun." (Persson, 2011b).

Acknowledging that there needed to be some kind of conflict within the game, Persson worked to add something to spur on the player beyond just the construction of objects within a virtual space. The early, key development of "survival mode" provided players with the "challenge" that Persson was looking for, while also giving the players' construction activities increased consequence in terms of the goal structures of the game. Adding the survival mode turned the game from a simulation of a virtual space into a *game* with a set of short-term, designer-imposed goals, albeit some that do not remain compelling for most players after a degree of experience with the game.

To be clear, the survival mode of *Minecraft* is just a default setting and many advanced players disable it (playing on a "Peaceful" setting) in order to focus on construction alone. But, by including constraints that propelled players to mine, recombine elements of the game, and construct in order to avoid consequences, *Minecraft's* "sandbox" gained a compelling structure. It's a minimal structure, yes, and one that does not impose any specific form of construction on the player, but it serves as an impetus to explore more parts of the world, to dig deeper into the world's underbelly, and to make increasingly complex objects.

In a brief *Gamasutra* exploration of the game, Margaret Robertson identified one of the key ways that *Minecraft*

successfully ties construction to survival, and vice versa.   She stated:

> [*Minecraft* enforces] play imperatives which take you through the first few hours of play. It means that when the sandbox possibilities do start to open up — of building and exploring (I'm told it would take six years of real time to walk around a full *Minecraft* world) you are deeply embedded into the world. You have a skill-set, a sense of ownership and belonging, which fuel you through the challenge of free, creative play. And that's crucial, because free, creative play is actually quite a grueling prospect, full of the pain and effort of making and losing. (Robertston, 2010, pg. 3).

That is, the game uses survival mode as a way to push the player through the earliest stages of the game, and to build a sense of immersion within the world.   As the sun begins to set on the first night in a matter of minutes, the player is often scrambling to build a pickaxe, find coal (necessary to make torches), and either build a simple house or carve a sanctuary out of a rock face.   Unlike *Minecraft* Classic, the survival mode *pushes* the player to explore the space, learn to build, and then actually construct within the first few minutes of the game.

Robertson's point is well-taken in that the common misconception that *Minecraft* is purely about construction invites inaccurate comparisons to LEGO™ and ignores survival mode's most useful role in helping to guide the player's experience in the earliest stages.   In a game without overt tutorials or much in terms of in-game information at all (again, see Figure 1), it falls upon the design of the game's challenges to guide players into a deep immersion within the world.   Robertson effectively described *Minecraft* as a game in which "everything in the world was already made of LEGO™ and bits of it wanted you dead" (Robertson, 2010, pg. 1), with this fear of death — or, to be more accurate, fear of losing one's objects and respawning — helping

to give added practical significance to one's construction activities.

The use of the survival mode to accomplish this should not be understated — while there are alternative ways to drive immersion in the game, many of the obvious choices employed by other (often commercial) games would simply break *Minecraft*. For instance, though Persson and Mojang are currently designing an "adventure mode" for the game, I argue that immersion cannot be easily accomplished by simply inserting some kind of overarching narrative into the space — the world is, after all, procedurally generated and thus unique for each player, and much of the joy of the game derives from explorations of a truly unknown, unmapped space. Plus, the inclusion of in-game tutorials or instruction would be jarringly intrusive in a game so carefully designed to create a naturalistic experience (c.f., C418's minimalist and evocative soundtrack). In *Minecraft*, the key relationship to note is that survival is necessary to propel initial construction, but that construction also "pays off" by supporting survival.

Robertson successfully identified that the co-existence of construction and survival is what makes the game "work," but it's still a bit more than that, I suggest — one could easily argue that *neither* construction nor survival are particularly interesting game mechanics on their own. The construction-only of *Minecraft* Classic needed a survival element to drive it, but the survival activities of *Minecraft* (essentially, "hide whenever the sun is down") would make a dull game in and of itself. Construction and survival are interrelated, but also competing; player immersion in the game seems to balance the two, and much of the fun seems to involve avoiding the problems of focusing on one over the other.

Here, we might consider Csíkszentmihályi's (1975) widely cited notion of "flow." For Csíkszentmihályi', flow can be describe as the positive psychological notion of experiencing a heightened, optimal state during an activity, with flow states being balanced

between two competing states of "boredom" and "anxiety," resting in neither. Similarly, perhaps *Minecraft's* construction and survival modes map more-or-less onto these notions; the balance of survival mode keeps the game from drifting into boredom territory, while the creative construction of the game helps to keep anxiety from being the overriding experience of the game. The individual components of survival and construction need one another to drive players deeper into the game and to achieve a joyous, "flow"-like state of play.

Furthermore, we might be able to characterize the design path that *Minecraft* has taken as reflecting a bouncing between the boredom of construction and the anxiety of survival. Clearly the introduction of survival mode in the first place added consequence to the game that propelled play, but, if, according to Robertson, this is primarily useful in order to build immersion in the game, what is to keep players from being bored with construction later in the game? Perhaps this is what is driving Persson and Mojang Specifications' interest in adding an "adventure" system to the game, and may also account for the allure of playing on open multi-player servers (often plagued by "griefers" who may seek to destroy one's creative work).

Thus, in *Minecraft*, it seems that a form of *emergent gameplay* evolves out of the interaction of two, relatively simple and less compelling game mechanics and it is this that makes the game work so well, taking the edge off of the "grueling," time-consuming creative work that is part of complex, advanced play. And this brings us around to the topic of those intricate constructions, as well as how we might better understand the ways that the emergent gameplay of *Minecraft* has led players to think of it less like a "game," and more like a platform for their creative works. Focusing on two major themes — *Minecraft* as *instructional platform* and *Minecraft* as *experiential platform* — I want to show how players move "beyond *Minecraft*," taking the significance of the game beyond what Persson and Mojang Specifications may have ever originally intended.

Beyond Minecraft

Many have identified that *Minecraft* provides opportunities for creative construction well beyond the need for the survival mode of the game.   And, as Robertson implies, after a point there is really very little need for the survival mode: it serves to help embed the player in the world, but later might impede the construction goals of the player.   Banks & Potts (2010) outlined many of the ways that communities have formed around the game to build instructional websites, share creative constructions within the game, and otherwise employ social learning to further players' understanding of the game.   The variety of many of the well-publicized creative constructions implemented in *Minecraft* is certainly impressive, ranging from full-scale models of the USS Enterprise-D to a working arithmetic logic unit implemented architecturally.   And, clearly, the forms of social learning fostered by the game are a testament to how effectively one can use the building blocks of *Minecraft* to construct truly elaborate spaces within *Minecraft*.

But, while Banks and Potts (2010) focused on the co-constructive elements of play, there was little focus on the co-constructed elements of the game's design, nor the role that the survival mode played.   If the heightened state of complex construction in *Minecraft* emerges out of the interaction of construction and survival, I argue that a more complete understanding of the game necessitates thinking about both but also *beyond* them.   That is, thinking about how players may capitalize on these activities to build experiences with *Minecraft* that are not necessarily a core part of the game.   Mojang is not above continuing to iterate means toward creating player engagement within the game, and players have taken it upon themselves to use the game for similar aims.

With user-generated content such a key part of *Minecraft's* success, it's perhaps unsurprising that some have begun using *Minecraft* as a platform for the development of other games, virtual spaces, and experiential experiments.   Nothing from Persson or Mojang Specifications would seem to indicate that

this is outside of their view of appropriate uses of the game and, quite to the contrary, they seem to be receptive to new uses for their game. I'll present two types of uses here, one geared very specifically toward educational uses, and then a "super-set" case, in which larger artistic and experiential goals seem to be at play.

First, we should consider *Minecraft* as an *instructional platform*. In 2010, Joel Levin made a splash with *The Minecraft Teacher* (http://minecraftteacher.net/), a blog detailing his experiments using *Minecraft* as an educational environment for first- and second-graders (Levin, 2011). Levin's experiments have caught the attention of Mojang Specifications, and are one of the most prominent ways that *Minecraft* has moved from being simply a game for entertainment and has been adapted into other contexts. As the game becomes more and more entrenched in gaming culture and more educators have become exposed to it, others have found themselves drawn to using it within educational environments. For instance, *Massively Minecraft* has recently arisen as a community for teachers to explore ways that *Minecraft* can be used across the curriculum (Kay, Groom, and Stuckey, 2011).

Across a number of levels of instruction, there is the potential that *Minecraft* can be useful for as a platform for designing new learning environments that utilize and sit atop the commercial game. Using only the construction and survival elements built into the game, players can craft instructional environments using the elements presented within it and begin to develop virtual environments that rely on many but not all of Persson and Mojang's designed elements. Primarily focusing on construction, Levin has described modifying the game to make children players impervious to damage (Webster, 2011) — removing, in essence, exactly what Robertson saw as being one of the most compelling elements of the game, and what drove immersion. Reducing the game back to a construction set, Levin found that *Minecraft* might be utilized to foster creativity in young children.

Others have attempted to use the game to teach very specific content areas that evolve from the core elements of the game. For example, in 2010, three undergraduates at Miami University (Michael Kolich, Alexi Chow, and Tim Mason), created a game prototype entitled *Circuit Madness*, a game to teach logic, implemented within *Minecraft*. *Circuit Madness* was geared specifically toward teaching players how to differentiate logical operators, using the embodied experience of moving around in a *Minecraft* world to convey the learning content. The students implemented the game entirely within a single-player world of *Minecraft*, building all devices and environments in the game using standard items (from wooden signs to levers to redstone circuitry). Critical for this group of students was using *Minecraft* as a *design* environment, and layering a novel experience atop *Minecraft*'s familiar features, even if it ignored the game's survival mode.

Though just a simple prototype, the use of space in *Circuit Madness* was reminiscent of games such as Valve's *Portal* and *Portal 2*, in which adjoining rooms were presented as puzzles that players needed to solve before progressing to the next in the structure (see Figure 4, below). Each room in *Circuit Madness* used built-in *Minecraft* elements to craft a space in which players needed to first learn simple logical operators (AND, OR, XOR, and so on) and then enact the logical operators in the correct sequence to proceed on to the next room in the game. Similar in content to Warren Robinett's classic *Rocky's Boots*, this game prototype indicates that beyond simply teaching the content of logical operators, *Circuit Madness* utilized familiar elements of *Minecraft* to do unfamiliar things. That is, the experiment of this prototype helps us to think about *Minecraft* somewhat differently — as a space in which the player's goals are imposed by what's already built in the space before the player gets to it.

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Figure 4. A screenshot of *Circuit Madness,* a game implemented within *Minecraft* to teach players basic logical operators.

But, for *Circuit Madness*, we again fall back on the space being used as, more or less, a construction set to develop a new experience. Nowhere do the survival mode elements of the game have consequence, and, as an instructional environment, there are impediments that can hamper such a game's usability — for example, left-clicking on a switch will punch and destroy it, as is the norm for all *Minecraft* objects, meaning players are forced to right-click to progress through the game. Though the potential exists for both Levin's experiments and games such as *Circuit Madness* to create transformative learning experiences, they utilize *Minecraft* as a jumping-off point. Are there other experiences that can more fundamentally capture the survival/construction dynamic of *Minecraft* and still aim to do something different than the original game?

There have been game designers who have attempted to craft other experiences atop this designed game, using it for what I'm labeling here as an *experiential platform*. This is, admittedly, an awkward term, especially one to contrast with "instructional" (as, certainly, instruction is an experience). But I consider "instructional" to be a specific subset of "experiential" in this paper, intending to characterize the ways that *Minecraft* works to

provide players with experiences that are somehow "about" something other than game's presumed original intent. Instructional contexts crafted within *Minecraft* fit the bill, but, so far at least, seem to involve modifying the game itself (to better accommodate younger age players) or layering in a new game that has little to do with the original.

An excellent example of a success in going beyond basic *Minecraft* is Jason Rohrer's well-publicized "Chain World" experiment, originally developed as part of Eric Zimmerman's Game Developers' Challenge at the 2011 Game Developers Conference (for an excellent write-up on the history of this experiment and its subsequent controversies, please see Fagone, 2011). Tasked with creating a game that itself was a religion, Rohrer mused that to simulate a religion, one could simulate the history of a group of people, experiencing in sequence a common set of cultural artifacts, interpreting them, and reinterpreting them as time went on, until the long-ago past began to take on the hue of myth. The past would become something wondered about and (potentially) revered, with the veil of history clouding the intent of long-ago inhabitants of the space.

Like a spatial, ludic game of "telephone," *Chain World* is ultimately quite simple — it features one single-player *Minecraft* world, set on a non-"Peaceful" difficulty, initiated by Rohrer and stored on a flash drive. The player is tasked with doing whatever they'd like in the world: building monuments, exploring caverns, leaving their mark on the world in some fashion. Once the player dies (and for Rohrer, playing with his son, it was apparently an excruciatingly unexpected virtual death), the game must be stopped and then the flash drive passed on to the next player. Each successive player is left wondering who created what in the previous world, and what their intentions might have been.

Like with his earlier *memento mori* game, *Passage*, Rohrer seems to have been focused on in-game death with *Chain World*, elevating *Minecraft's* death/respawning to a greater significance

than it has in the basic game, where it is a temporary impediment and loss of objects.   Death and, by extension, survival can be more than just elements that can spur the player toward deeper immersion in the game — in *Chain World*, death is the end of a single player's experience, a state that is to be avoided at all costs, and one that you cannot speak with others about after it's happened.   Not so different from the real world, it seems, and a key difference between *Chain World* and the other attempts to move "beyond" *Minecraft* described in this paper.   For Rohrer has attempted to create an experience that speaks to a lofty goal (to make a "game that is itself a religion"), while also reinterpreting the essential elements of *Minecraft* in construction and survival.

In *Chain World,* construction and survival are just as important as they are for any single-player, non-"Peaceful" game of *Minecraft* — it's just that they *mean* something completely different. Survival is not just something one does to avoid losing objects and having to walk back from the respawn point, it's the literal end of one's gaming experience in this particular world. Construction is not just a tool to help one stay alive during the monster-filled nights, it's also a means of building on the work of previous "generations," and the legacy that the player leaves for future players.   Mechanically, *Chain World* is absolutely identical to any single-player game of *Minecraft*, but the social restructuring of the experience gives rise to new levels of meaning in the gameplay.

So, perhaps we can view use of *Minecraft* as an experiential platform that may be at its most powerful when the game's core relationship between survival and construction is kept central. The kinds of uses that, in particular, *Circuit Madness* and *Chain World* seem to exemplify are akin to what James Paul Gee and Elisabeth Hayes alternately call "soft modding" or "socio-technical modding" (Gee and Hayes, 2010): the social modification of a gaming experience without actually modifying any of the game's code.   *Chain World* in particular is an experience that sits atop another game, requiring no additional coding or hard

modifications to implement (though Rohrer did implement code to update the *Minecraft* installation on the flash drive). As such, retains much of the spirit of the original game, while shifting the meaning of the experience to something new. Ultimately, beyond the "anxiety" of survival mode and the "boredom" of consequence-free construction, there may continue to be a realm of possibility for *Minecraft* "soft mods," one that is afforded by few other games in quite the same way.

Final Thoughts

All in all, *Minecraft* continues to work due to the interaction of these many factors — construction and survival, certainly, but also social interaction and iterative design. While Markus Persson and Mojang Specifications rely upon an agile model of development to iterate and continually shape the game, we can already see that its evolution from a solely construction-based game to one in which a survival mode spurred on immersion in the game was critical for its success. And, as others have made clear — ranging from elementary school children to college students to game developers such as Jason Rohrer — there is an appealing flexibility in *Minecraft* to serve as more than just a play space, but also be a platform for new, meaningful experiences.

As *Minecraft* further develops and takes hold in other systems (such as iOS and Android devices), it will be interesting to see how Persson and Mojang Specifications continue to change the game, especially taking into account how players have co-constructed the game with them. I argue that the tension between survival and construction is key to the game's success, and even to the success of the experiences that use *Minecraft* for other aims (such as *Chain World*, that successfully reconcieves the core activities of survival and construction). If the game's long-term value is ultimately tied to how these dynamics play out not just with Mojang's intentions but also through the goals of *Minecraft*'s players, perhaps keys to the game's significance will end up lying somewhere within the experiments that players build atop the game as much as with the features that give rise to these experiments.

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Architecture as teambuilding in Left 4 Dead 2

Matt Haselton

In the fifteen years since my younger brother, David, and I first booted up *Wolfenstein 3D* on the family 486, we've become bona-fide first-person shooter experts.   This isn't to say that we're FPS players exclusively—I keep a copy of *Fallout 2* installed on my laptop, and David is perpetually on the lookout for a game "that's as good as *Age of Empires*." As a general rule, though, we spend most of our screen time peering over the barrel of a virtual gun.   Of course, half the fun of two siblings wielding a portable arsenal is the opportunity to discharge it alongside each other. Over the past decade we've honed our ability to lay down covering fire, set up ambushes, and act like rampaging buddy cops across battlefields ranging from bombed-out European villages to floating space castles.   Of course, wanton destruction is always more fun with a friend, but for us, it's also quality amily time.

And that's what makes Valve Software's *Left 4 Dead 2* our current game of choice.   In *Left 4 Dead 2* Valve has crafted an experience where constant communication is essential for success—the ability to convey information to one's teammates trumps being a crack shot or a brilliant strategist.   Through a deft combination of mechanics and level design, Valve created a game that encourages teamwork at literally every turn.   Even though my brother and I have grown up playing first-person shooters together, the intense level of coordination required by *Left 4 Dead 2* presents a unique challenge that is both more difficult and satisfying than any game we've previously played.

The narrative of *Left 4 Dead 2* is pure fluff – the zombie apocalypse has landed, and the few people who haven't been

infected by the "green flu" virus are doing everything they can to escape the drooling hordes. You play as one of these survivors and, along with three companions (the titular "4"), are tasked with fighting your way through post-outbreak cities, swamps, and the odd amusement park in an effort to find someplace where the zombies can't eat you. Sure, it's derivative, and a sequel, no less, but that's what makes it work so well. By evoking such familiar archetypes and scenarios, the game allows the players to confidently step into its fiction and understand their objectives. Unlike other horror games, there is no vast conspiracy to uncover, no deep-rooted psychological trauma to confront, no complicated social metaphor to deconstruct; the narrative of *Left 4 Dead 2* is simple enough to be immediately understood by anyone who's had the slightest brush with contemporary pop culture. The *Left for Dead* apocalypse is accessible, but that doesn't mean it's going to be easy.

Indeed, a single-player round of *Left 4 Dead 2* seems like a throwback to an earlier era. Playing the game with three computer-controlled companions against a horde of computer-controlled opponents is as simple and straightforward as a first-person shooter can be. Following the trend of contemporary single-player design, the levels of *Left 4 Dead 2* are puzzle-free processions from the starting areas to the endpoints (which, in a trope not seen since the days of *Doom*, are actually marked with a bright red "exit" door). Dead teammates can be resurrected later in the level after being discovered in survivor closets, and even the appearance of the game's "special infected" (monster classes with attacks ranging from the ability to pin a survivor to the ground to the capacity to spit massive quantities of highly-corrosive acid) are little match against the perfect aim of an AI bot.

And unlike humans, bots don't panic.

Bots don't start yelling that they've been blinded by Boomer bile and start unloading an automatic shotgun into the horde of zombies swarming them, despite the cries of pain and protest

from their nearby teammates. Bots don't get cocky and stay back to snipe a Smoker from a building ledge, only to find themselves dangling over the side after a surprise attack. Bots don't hold grudges when you save the last healthkit for yourself instead of using it on them.

On the other hand, bots can't listen.

Bots can't run up to a doorway and cut aside at the last second, hoping to bait an infected ambush. Bots can't patiently negotiate narrow catwalks, taking evasive action at the first sign of trouble. Bots can't kite around a Tank, using lamp posts for cover, or understand the most environmentally strategic location to create a wall of fire with a Molotov cocktail.

And most importantly, bots don't have ideas.

This is the fundamental difference between the single-player mode of *Left 4 Dead 2* and it's competitive, multiplayer counterpart, known as "Versus Mode." By replacing the AI teammates with four human players, and giving control of the super-powered "special infected" to an opposing team of four, *Left 4 Dead 2* transforms into a game that is as competitive as it is cooperative. In Versus, each team plays the map twice, once as survivors, and once as infected. Points are only awarded to the team playing as survivors; these points are based on the amount of distance each player travels. In order for a team to achieve the maximum score, each player must make it all the way to the finish line. The objective of the infected team is stopping the survivors as early as possible.

This asymmetrical gameplay—of the survivors attempting to travel across the map, and the infected attempting to stop them—is filled with enough nuances to fill thousands of divisive Steam Forum posts. Much of the game is randomized, created at the whim of a game-dictating artificial intelligence dubbed "The Director." Available weapons and health, placement of said weapons and health, types of special infected and the timing of hordes are decided anew with each round, making pre-planned

strategies impossible due to the infinite amount of permutations available. Only the environment itself—with its long hallways, open fields, narrow doorways, and high rooftops--remains unchanged. As the only constant in a game full of randomly-generated variables, a profound understanding of the environment is required for successful gameplay.

Earlier, I asserted that successful *Left 4 Dead 2* play hinged on the ability of a team to communicate effectively, and that teamwork was "literally" encouraged by every turn of the game. In terms of level design, this is a basic tenet: infected players can't spawn anywhere that can be seen by survivors, and, as a result, the visual obstructions of the environmental architecture (corners, rooftop edges) play a critical role in structuring the flow of the game. Abstractly speaking, the easiest map for the survivor team to win would be a wide open space with no visual obstructions at all, effectively denying the infected team any location to spawn from. Therefore, every piece of architecture, every twist in the map, represents an opportunity for the infected and an obstacle for the survivors. For both teams, however, a game of *Left 4 Dead 2* is about effectively coordinating with each team member to capitalize on the environment, and conversely, understanding how the environment itself enables the detailed level of communication that the game requires.

Essentially, the architecture of *Left 4 Dead 2's* level design facilitates teamwork and communication among players in a way that few other games do. The notion of employing architectural structures to encourage cooperation isn't a new one. For decades, ropes courses have been used as a means of "trust building" for everyone from high school students to company executives. In many ways, the collaborative mentality and open communication required to successfully navigate the post-apocalyptic world of *Left 4 Dead 2* is similar to that of a group of individuals assigned to traverse a ten-foot wall, or pass themselves through an elaborate rope spider web. But what specific environmental qualities encourage collaboration? What

makes the layout of *Left 4 Dead's* playspaces "more collaborative" than other first-person shooters?

Fundamentally, the rules of *Left 4 Dead 2* require teamwork to earn points. Unlike team deathmatch games, where a single player can effectively lead a team to victory with a series of killstreaks, in *Left 4 Dead 2*, each player carries an equal quarter of the team's score. The one player who dashes ahead across the map, abandoning his teammates and shooting everything in his path, is not a hero, but a liability. This gameplay mechanic is transformed into architecture by structuring the maps not as arenas, but as tracks, to use Michael Nitsche's terminology. In nearly every first-person shooter, multiplayer is an arena-based affair, with players competing against each other in a space that is defined primarily by its external perimeter, which provides "a canvas for performance."

The boundaries of an arena mark the edge of the playing area and everything inside is a free-for-all. To play a game in an arena is the equivalent of performing on a stage, an opportunity to show off individual prowess. Even in team-based arena games, such as *Counterstrike* or *TeamFortress 2*, the map is designed to maximize individual player choice, and de-emphasize the importance of team cohesion. For example, a typical team arena map includes two bases for each team, a common objective (be it a bomb about to explode, or a flag that needs to be defended) in the central area, and a wide smattering of opportunistic architecture throughout, ranging from sniper perches to underground passageways.

The intention of arena architecture is to improve the flow of the game by preventing any single path to the objective from becoming dominant. Rather than being able to focus on a single, optimal route, each team must divide their forces across a variety of gateways. This inability to fully anticipate where the next attack will come from contributes to the game's challenge level, keeping the play interesting. The order that a player experiences the map structure is completely up to them; do they

start in the sniper tower, and then run across the exposed battlefield, or attempt to take cover in the nearby warehouse? Do they crouch in the stairwell, and then ascend to the roof, or flank through the alley? These are the choices that drive arena-based shooters: split-second individual decisions that make or break a kill/death ratio. In these games, team coordination is kept to a minimum, because pausing for consensus or discussion is more a liability than an asset in a game where death and respawns are cheap.

In contrast to the extreme spatial liberties afforded by arena-based play, the construction of *Left 4 Dead's* track-based maps "affect the range of available choices, and restrict interactive access to a shadow of its potential." If an arena uses its boundaries to mark the limits of the playing area, a track's boundaries are the playing area. The worlds of *Left 4 Dead* are built as linear paths, expressly funneling the players from Point A to Point B with minimal ambiguity. In this way, the game's rules and player objectives are expressly established by the environment itself. The players want to reach the finish line, and the environment is set up to direct them there. Whereas arena levels attempt to maximize the number of possible paths, tracks work to pare possibilities down and giving players a shared sense of direction by universally establishing "forward" versus "backward."

Unlike the playground-esque construction of the arena, with its myriad of environmental possibilities, players in *Left 4 Dead 2* are seldom confronted with more than a single fork in their paths. This reduction of player choice serves to encourage player cooperation by making decision points obvious. Left or right? Inside or outside? Upstairs or downstairs? These choices are significant. Electing to go into a room to search for health could give the opposing team the time they need to coordinate an extra attack while rushing ahead may allow a team to gain distance at the expense of being healed for the next encounter. The level design of *Left 4 Dead 2* not only limits the number of choices that players may make, but also makes those choices readily

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apparent. This provides clear moments for discussion, and a better environment for coordination than the open-world arenas of other multiplayer shooters.

Even more crucial to cooperation than the environments is the way that players move through them. More than any other action game, *Left 4 Dead 2* creates a sense of rhythm through its spaces, a form of inherent coordination. Technically speaking, rhythm is movement regulated across time, and while static architecture itself has no time element, it plays a crucial role in regulating the movements of the players and the time it takes them to reach the saferoom. In the case of *Left 4 Dead* 2, architecture combines with infected respawn waves to set the pace of the game. After an infected player dies, they must wait roughly 20-seconds before they can spawn again. Taking advantage of these twenty-second windows is crucial for the players, as they represent pockets of time when they can move across the map without being attacked.

In David's words, "the key is to bait attacks in the easy areas, and then push through the hard areas." It's a sensible strategy, and one that gives high-level matches of *Left 4 Dead 2* the feel of a blood-drenched ballet. Players collaboratively dance around in open areas, attempting to lure the infected into attacking them in these easy to defend spaces, and then push through the hard areas, such as the previously mentioned three-story high catwalks or narrow, cramped hallways. By matching the countdown of the infected respawn timers against the architectural challenges of the environment, it's impossible to anticipate exactly when an opening will occur, but when it does, the entire team must be prepared to push forward, encouraging a kind of dynamic collaboration that's seldom seen outside of competitive sports. While other games may require players to have awareness of their teammates, *Left 4 Dead 2* pushes for synchronization.

The necessity of being able to move together not only requires open and constant communication, but the ability to succinctly

articulate a path through the game environment.   As previously mentioned, the world of *Left 4 Dead 2* is our own, left to rot in the aftermath of a global zombie attack.   As the players make their way through the level, they pass abandoned cars and mobile homes, fast-food joints and cheap motels.   In addition to embodying the game's narrative, however, these aesthetic choices serve as visual waypoints for players, providing easily understood spatial references.   For example, one player might instruct another to "go block spawns behind that van."   Because Valve's artists have worked to ensure that the in-game 3D-model is recognizable as a van, the second player is able to not only understand what object the first is referring to ("van"), but where to stand in relation to it ("behind").

What the visual design of *Left 4 Dead 2* provides is a common vocabulary for all the players to draw from, facilitating the effective communication that enables efficient navigation.   By setting the game in a world that emulates everyday reality, Valve ensures that even the most novice players will be able to orient themselves on the fly.   By contrast, if the gameplay of *Left 4 Dead 2* were to be transported into, say, the fantastic world of *Bioshock*, with its diesel-powered bathyspheres and similarly fantastic steampunk technology, the unfamiliar trappings of the world would make it much more difficult for players to articulate directions to each other.   After all, who can easily recognize the front end of a diesel-powered bathysphere?

By creating maps that 1) clearly signal objectives and direction to players, 2) encourage players to take synchronized movements, and 3) allow players to easily articulate their spatial position and direction to others, the design of *Left 4 Dead 2's* environments facilitates gameplay that is not simply multiplayer, but genuinely cooperative.   While other games may have rules that encourage cooperative behavior among players, no other game is able to transform those concepts into architectural structures as thoughtfully as Valve has.   In doing so, they've created a world that demands to be explored with a group of friends, or at the very least, a relatively talkative sibling.

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Afterland – From well theorized to well learned?

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Abstract: Afterland is a recursive learning game, based on a theoretical framework, and designed at the Singapore-MIT GAMBIT Game Lab as a research tool. The game uses subversive game design elements to challenge players' expectations and force them to rethink their conceptual framework. The following paper gives insights into the theoretical background and outlines the application of pedagogical theories to the game design process. Video games that shaped our understanding of subversive game design for recursive learning are discussed and discoveries made through developing the game are shared. It will be shown how a learning theory can be translated into game design patterns. In addition, to that the disparity between a well played, well designed and well learned game will be examined and exemplified. Hereby, we will highlight how diverse the players' experiences of playing and learning in and through Afterland have been and where educational design reaches its limit.

Introduction

Writing a "well played" article about a video game that you have been involved in developing is somehow a mission impossible. Why? If we understand "well played" as a form of "well read", then we have become too blinkered in our own work to value the experience of playing it. And even if we understand "well played" as "well done" – a form of reflection of the development process – it appears inappropriate to describe how "well" our game was designed. Therefore, this well-played mission impossible has to start with defining standards that we can use to evaluate the quality of our design.

Afterland is an atypical video game, because it is both research-based and grounded on a learning theoretical framework called "recursive learning". The development of the game involved four fundamental steps: (a) developing the theoretical framework, (b) applying the theory to game design, (c) developing a prototype and the final game with a team of students and (d) evaluating how well the game meets the theoretical standards. To elaborate on the theory behind the game would be repetitive (Mitgutsch & Weise, 2011), and simply describing the experiences of design would be too limiting to explain what *Afterland* is all about. Hence the following paper will focus on specific aspects, that – in our understanding – appear important to well played articles that focus on educational games. The claim made by many games studies scholars, that their learning experience in a game can be seen as "the" learning experience of playing the game in general is problematic. This might make sense for the "well played format" but if we are examining the learning outcomes or the educational impact, we need to reconsider the "well learned" experience of the players. The pivotal question this paper investigates is: How well does the designed game fulfill its theoretical basis and how well does it match the learners' experience? To answer these questions we will introduce a brief summary of the theoretical background, explain how we applied the theory to the game design and finally,

provide a unique example of a 9-year-old "well playing" the game, *Afterland*.

Well Theorized

The idea behind the theoretical concept of *Aftlerland* was inspired by a quote by the German Philosopher Hans-Georg Gadamer. In his book *Truth and Method* (1998) Gadamer argues that the "negativity of experience" has a certain "productive meaning" to the process of gaining experience (1998, p. 353). This statement appears mystifying at first glance, but it leads to one of the most essential insights into the process of experiencing and learning. Those experiences that affirm our existing experiences are not "productive" to our learning process – as they merely confirm what we already know – but the refutation of our expectations is the dynamic force that shapes our experiencing and learning. Failure, disappointment and disillusionment might feel displeasing, but from a learning theoretical point of perspective it forces us to develop a new understanding of others, the world, and ourselves. In short, recursive learning is an experience-based process of restructuring prior expectations by incorporating confrontational incidents into the body of experience (cf. Buck, 1998; Meyer-Drawe, 2009; Mitgutsch, 2011). The French phenomenologist Maurice Merleau-Ponty (2002, pp. 466) exemplifies this process by analyzing a boy's expectation that telling stories is related to the magical force of his grandmother's spectacles: One day in his grandmother's absence the small boy picks up her spectacles and wants to discover the stories on his own. When he realizes that all he can see is black and white his high expectations are disappointed. Things work different than he anticipated and he response to this insight with tears.

It appears easy to reduce the boy's expectation as childish and irrational, but more frequently than desired we all go through similar experiences. It is true that for the boy's grandmother her glasses were necessary to read the story, but the instrument did not enable him to access the narrative. Sometimes we all figuratively have experiences through these "spectacles" and are

disappointed at how our expectations and judgments are proved incorrect. In some cases we realize that our knowledge or information turned out to be wrong, in other instances our biases and prejudgments are unmasked or our illusions are demystified. In theory, failing helps us to restructure our expectations, to develop new and more appropriate expectations about the learning object and about our way of learning (Mezirow, 2003; Choi & Hannafin, 1995). This form of so-called recursive learning differs from educational and "institutionalized" approaches to learning that focus more on *informational* acquisition of ideas and knowledge. Hereby the learners are forced to "return" to their expectations and rethink or restructure them. Recursive learning, however, has a profound impact on the way humans learn in general, as it allows learners to revise old, and develop new, perspectives and change their modes of thinking (Bereiter, & Scardamalia, 1993). Thus, in comparison to a more "childish" – undogmatic – interpretation of our experiences, we tend to ignore the refutation and adhere to our erroneous beliefs, expectations and judgments. Returning to the example of the boy being disillusioned by the magical powers of his grandmother's glasses, we often blame others or the tools and instruments for not fulfilling our anticipations. In many cases, the reasons for disappointments and disillusions are therefore ignored and the recursive learning process is hindered. But why do learners avoid failing and disappointment if it is highly productive for our learning? The reasons for this phenomenon are complex, but one central reason for this avoidance of confrontational experiences can be found in the fear of social, emotional and sometimes dramatic consequences. If people have invested energy into the wrong beliefs, this fact can cause a dissonance they cannot face. But what if the context of the recursive learning is changed to a playful setting?

Games offer us an environment where failing can be engaging and challenging. In a playful environment we are more open to exploring our expectations and beliefs. We try on different identities, challenge our expectations and restructure our prior experiences without holding onto insufficient patterns (Gee,

2003; Mitgutsch, 2009). If our competencies and expectations are consistently met we might get bored. We are constantly searching for motivating surprises and confrontation. What if we could design a video game that fosters the players to learn recursively? Would this be feasible and how do learners experience this form of learning in games? With these questions in mind, we tried to translate the theoretical assumptions to the design and development of a digital game.

Well Designed

One of the greatest (though widely debated) pleasures in game design is playing tricks on players, lulling them into the sense that they know the game and then undermining that security to produce a shock or revelation. A number of games employ this tactic. Although, many use them as little more than 'parlor tricks', simultaneously fun and infuriating jokes or riddles that players usually remember long after the game is over. Those of us who grew up on the NES might remember once such instance in the game *Monster Party* (Bandai, 1989). *Monster Party* was a platformer remarkable mostly for its cheerfully morbid imagery, like dancing zombies. These zombies were presented to the player as a boss, preceded by text on-screen that said, "Watch our dance". Players who attacked the zombies could literally spend hours in frustration, since they always got up and continued dancing. The trick, of course, was to do what they told you to do. If you just didn't attack them for a certain amount of time – in other words, *watched their dance* – they eventually thanked you and died, allowing you to proceed. Though this may seem like a clever riddle, it was not unthinkable that some players would simply fail to realize the correct behavior or necessary action, simply because not committing acts of violence fell so far outside of the normal behavior of the game that it may not have occurred to them.

In the days before Internet FAQs, the only way for a player to finish *Monster Party* was to make that mental leap, to escape their current frame of reference and develop a new one. In that game it was intended simply for fun, as part of the developers'

sense of humor. But it's arguably the same principle at work in games like *September 12th* (2003, Water Cooler Games), the anti-war game that critiqued the War on Terror by suggesting your goal was to "kill terrorists" but made it impossible because collateral damage always creates more targets. *September 12th's* status as political rhetoric is built on the very idea that the player is familiar with certain patterns, and will resist the idea that a game's perceived foundation of game rules is, in fact, "wrong". The only way to minimize terrorism in *September 12th* is to not kill anyone. Like the computer didactically observes in the movie, *War Games*, the only winning move is not to play.

These examples and many others over the course of the last few decades of video games show that recursive learning is already a part of video game design. That is why when the question arose of how best to design a game explicitly to study recursive learning, there was already a strong tradition of games to draw from. We therefore got to work, seeking out these games and classifying them as much as possible. There were several examples beyond *Monster Party* and *September 12th* that were easy to find. *Metal Gear Solid* is famous for its fourth wall tricks and sadistic tomfoolery, the most pertinent to our goals being the sequence in MGS3 (2004, Konami) when all the dead soldiers the player has killed rise from the dead to take their revenge, with the intention of making the player realize that killing is actually counter-productive to achieving their goals. *Shadow of the Colossus* (2005, Sony Computer Entertainment) was another example, most notably the part where the roles are reversed when the colossus-slaying player becomes a colossus. Possibly the one we liked the most was *Fathom* (Adam Atomic, 2009) an online flash game where you are apparently playing a simple platformer, jumping over bottomless pits and eventually fighting a big nasty drill machine. In fact, the "real" game only began when you failed to destroy the drill machine – which is presented as if it were beatable (complete with a health bar) – and fell down into one of the pits and into a serene watery cave filled with colorful fish. If you kept playing, it became clear that the game is really

about swimming and befriending the fish, and having that epiphany is really what underpins the experience.

Based on these examples we developed a framework, which we felt was a good way to break down exactly what these games were doing with player expectations and conventions. In each of the games mentioned above, and including others like *Passage* (2007, Jason Rohrer), *Second Sight* (2004, Codemasters) and *Ulitsa Dimitrova* (2009, Lea Schönfelder/Gerard Delmàs), we identified the *common pattern*, the *uncommon pattern*, and the *overall lesson* each game seemed to teach about manipulating convention and expectation that could then be taken and used in a different game. Once we had each game broken down in this way, we thought the same structure might be useful for designing a game from the ground up, which is how we went about making the game that eventually became *Afterland*.

The Singapore-MIT GAMBIT Game Lab has an unusual training program. We take 60 students during the summer – approximately 40 from Singapore and 20 from local Boston area colleges such as RISD, Berklee, and MIT – and have them split into teams of 10. Each team is required to develop a game in 8 weeks, from the initial concept and brainstorming all the way to final product. This meant there were teams of students – from a variety of cultural backgrounds – whose job it was to make a game about recursive learning in 8 weeks *and* to make it fun *and* make it look *and* sound good *and* be bug free. This of course wasn't easy, but the process was supported by the framework, which we used with each team to begin the process of brainstorming game ideas. After a week of paper prototyping different ideas based on different sets of common patterns and uncommon patterns, the team settled on an idea that was initially a playful jab at anti-social, consumer-oriented 'nerdiness'.

Originally called "The House Game" by the team, the prototype involved a room that the player, an awkward person in a baggy coat, was furnishing with cool consumer products, like televisions, computers, video game consoles and other devices.

When this person left their house, venturing out into the city, they would run into other people, who, upon looking at the player, would send them into a panic attack at being scrutinized. It was a spin on the idea of stealth, except the need to be unseen was entirely due to the protagonist's fear of normal social interaction. The team liked this idea, and it also fit our theoretical framework well. The *common patterns* were collecting things and avoiding people, and the *uncommon patterns* – though they hadn't been fully fleshed out yet – would involve some sort of inversion of these things.

This idea found straightforward application over the course of development, while being modified by all the normal evolutions that happen during a game project. The team eventually came up with a more refined art style that they felt was less "on the nose" in terms of telegraphing the design intent to the player. Instead of a city set in the modern day, things turned into a surreal jungle, with all characters (including the protagonist) being black silhouettes distinguished only by masks. This was done partly to reduce our art resources, but we also wanted the player to have to work harder to decode our intended meaning, that you were socially isolated. We also wanted a stronger fictional reason for collecting objects lying around. The new fiction gently suggests a post-apocalyptic scenario, with modern consumer products lying in various states of brokenness around lush, beautiful greenery. The townspeople became people who lived in the woods, who simply ignore these remnants of past civilization, thinking they are junk. The player, in a sense, is the last consumer, hoarding electronic remnants, oblivious to the fact that none of it works.

These art choices even had an impact on the on-screen UI. We had several discussions about how "honest" the game should be with the player, in terms of communicating design intent through on-screen feedback. Do we want the game saying "Good job!" and having some sort of a score go up for things the player should not be doing? Most of the games we looked at didn't do that. They didn't actively deceive the player, but relied on the players' ability to deceive themselves. They preyed on

preconceived notions players might have, and then played to those notions through deliberate ambiguity, rather than lie to them in any sort of a direct fashion. It was with this in mind that the game evolved so that our on-screen UI represented the "mental state" of the protagonist – how he/she sees the world – and the game world itself represented the "reality" of people just wanting to be nice to you. We added a bar at the top of the screen that rapidly emptied when the player is looked at by others, but we didn't label it as "health" or "life". It's just a meter, but it looks so much like other game life meters that we expected players to assume it was. We also added a "#/total" item counter, showing the player how many items they had collected and how many were left in the world. To hint that these elements, and their corresponding gameplay goals, were a product of the protagonist's mania, we gave them the visual design of magazine rippings, which even appeared to be "taped" to the game screen with cello tape, as if they were scrap book elements. This was a reference to our opening cinematics in which the protagonist finds a magazine in the jungle with advertisements of all the items he wants to find.

During mid-development focus testing sessions, we found that these elements did much to shape the behavior of players. Many players refused to let their mystery meter fall too far, and the item counter seemed to have the almost Pavlovian effect of making even some casual players obsessed with finding absolutely everything. However, when these patterns were contradicted we made sure to have feedback that tried to communicate their status as "outside" the reality of the game world. When the player "dies" from being looked at (really they are just overwhelmed by anxiety and faints) or the player chooses to "throw away" the items they have collected in their house by accessing the waste paper basket, the UI elements that correspond with these game mechanics are "ripped up" and fall off the screen, leaving the player in a world with no item counter and no meter. In a sense, the perceived game – collecting things and avoiding people – is a mad lens the protagonist is seeing the world through (like the boy trying to make sense out of the signs in the book with his

grandmother's glasses), something which obscures a reality underneath. The real game, similar to *Fathom*, is to "realize" what the real game is, what its rules and goals are, by refusing the perceived game. The players reward for this is to see the perceived game "destroyed" in a sense, to watch it rip itself apart and leave the player unharmed by its obsessive-compulsive agenda.

Well-Played

From a theoretical point of view, we translated the recursive learning concept into a form of subversive game design combining common and uncommon patterns in games, forcing the players to restructure their expectations when playing *Afterland*. Considering the restrictions we had (8 weeks, educational setting, abstract concept) we – as the researcher and the game director of the game – were pleased with the outcome. In the next stage, we conducted a case study using different forms of evaluation to analyze the experiences players have while playing the game. From the results we found one specific aspect we would like to highlight, which relates to the difference between well theorized, well designed, well played and well learned. As the game was designed based on the theoretical framework, but not a specific topic or target group in mind, we tested with almost 100 players from ages 10 through 55 years old and explored how they interpreted the recursive learning process. In some cases, players experienced the game in the way we intended when we designed it: They got into the first common pattern, were surprised by the twist and finished the "real" game and were laughing or cogitating about how biased they were. But, empirically speaking these well-played play experiences were more exceptions than rules – we were quite surprised at how different the experiences of the players were, how some of them fell entirely outside our expectations or intentions but still resulted in learning experiences for players. We would like to discuss the experience of one particular player – Bella a 9-year-old girl from Boston – who we observed playing and later interviewed. One of the problems with educational/serious games is the assumption

that player experience can be control, or that all players draw the same response from a game. We don't believe this is true, and Bella, who had had experience with platformers and had never played or heard about *Afterland* before, was a good example of why. She made us learn recursively about our research and design approach:

Bella started the game after watching the intro (that she admits she can't recall when she is later interviewed) by leaving the house and collecting the first three items without any problems. On the way to item number 4 she was confronted by one of the "enemies" and tried to yield to it, but failed. Her "life bar" vanished and she cried out "I didn't know they could kill you!" When she realized that she did not actually die and the "enemy" befriended her character, she asked "So, is he now my friend?" and responded to this fact with "sweet!" After that incident she continued collecting items and friends and transported all the items to her house. For one of the harder jumps she invested over 3 minutes, without giving up. After bringing more objects to the house, she realized that her friends followed her but would not enter her home. She noted, "I think they want me to trash every thing… I got a lot of old stuff here!" She then entered the messy house and used the option "clean up my house". After erasing one item, she stopped cleaning and went back to the "friends" outside the house asking, "So what do you want? I still need to clean up?" When asked why they want her to clean she commented that they are "evil" and might just try to become her friends so they can steal her stuff and bring it to their dark "underlord". In consequence she went back to the forest and to collected items. Finally, she "finished" the game by going to bed in the cramped house, with all her friends waiting in front of it. After Bella finished the game, she was asked what happened in the game and she explains her interpretation of the play experience. She recalled leaving the empty house, jumping around the world and collecting friends when she met the first "freaky guy" who first "killed me but then got my friend". When asked why she was afraid she surprised us with her answer: "Because they have masks that I have never seen before and I

have seen very particular masks and the only scary masks I have seen is in movies. And I have never seen so colorful masks, because when I saw this movie "Spirited Away" everybody had these odd masks." She went on to explain in detail how the masks in the movie scared her and how they differ from the masks in *Afterland*. She recalled the situation of the confrontation with the "freaky guys" this way: "When you come near them, they put the beam on you and than you fall asleep or die. But then you wake up again and they realize what they have done and they have a question mark. And then they want to become your friend and they want you to trash their house and follow you." When being asked what *Afterland* reminds her off, she elucidated a recent dream she had:

> "I was in a really white hotel. Everything was so bright and white. I was walking over a bridge. Then there was a huge pool under the bridge and there were orca whales under the bridge and they were jumping over the bridge and they almost got me. And when I went back to my room in the hotel there was this red cube and it was big and then it ... got eyes and eyebrows and an angry face. And then there was his partner looking like an oval, and then they tried to kill me. Then I died and I woke up."

When being asked what in *Afterland* reminded her of that dream she stated, "the bridges do!" After the interview she asked about the idea behind the game and we explained to her what the game was about. She immediately played it again, collected all the items and friends, cleaned up the house and had the "good ending". But she still believes that the "friends" are evil because "why would they otherwise still wear masks". She furthermore commented, that she does not agree with the idea that you have to clean up the house just to get friends. She explains that she has a passion for chemistry and her friends don't really understand that. Thus, she will not give up chemistry just because of her friends.

Well-Learned?

The experience Bella described while playing *Afterland* differs from our theoretical concept and the idea behind the game. She read the game, its narrative and even the landscape through her own lenses and in relation to her prior media experiences, biographical events and through experiences she made in other video games. Even her dreams and certain movie characters were related to the game and shaped her experiences. She understood the two patterns, and even the twist, but contextualized it differently. One could easily downplay Bella's well played as "just" a kid's perspective on the game, but what Bella is speaking out loud is a pattern we found in many of the other interviews. Nobody played or construed Afterland the same way and they were highly related to the playing literacies and subjective interpretations of the players. While some players thought this game was about hoarding syndrome, about racism, about nostalgia or about World War II, others just collected all the items and ignored all the subversive elements. This showed us that the theoretical approach was well designed in the game play, but that it is ultimately up to the players to contextualize the game in their own subjective way. Furthermore, we found that many players still feel a lot of pressure to perform well in a game and that the freedom to fail was not as liberating as theories claim. It's not that risk and fear do not exist in games, but they exist in proportion to the playful context. Just because a player is not afraid of "dying" in any real sense doesn't mean they are not afraid of losing points, losing time, being humiliated, etc. (Really, this should be obvious to anyone even basically familiar with sports.) The "freedom" of playful learning is highly context dependent and relative, and it is indeed the ability for risk to be seen as "real" within the context of a game that even makes studying recursive learning possible with a video game.

Recursive learning is taking place in video games all the time and *Afterland* is intentionally designed as a recursive learning game subverting common design patterns. We think the game meets our theoretical standards, but the case study showed that a gap

exists between the theory, the game design and the players' experiences. This aspect turned out to be true for *Afterland*, but it helped us to understand that this might be the Achilles' heel of educational game design in general: You can offer a learning opportunity, but you cannot instrumentalize a learning obligation. Nevertheless, the playful setting opens the opportunity to explore recursive learning processes and (in some cases) develop different perspectives on games, learning and life.

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Acknowledgments

Little Big Planet and Metal Gear Solid 4: Being Old Sack Snake

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Abstract: Video games offer an unusual opportunity: to slide into being *someone else*, with *someone else's problems* and *someone else's life*. A chance to layer a different self and a different world upon your own, deciding between gentle creation, loud explosions, fabulously huge guns, and plastering a new world in jungle stickers. Sometimes that choice of *who to be* is particularly difficult, even when the choice is between such dramatically different characters and games as Sackperson in *Little Big Planet* and Old Snake in *Metal Gear Solid 4*.

In 2008, I bought my first game console ever. I'd been playing games on borrowed technology since *Diablo II* dropped in 2000, leaving unfinished barbarian adventurers, customized *Rock Band* avatars, and a level 59 vanilla *World of Warcraft* druid scattered in various places across the country. (And I don't even want to talk about how many *Portal* games I'd left stuck in Chamber 18.) I never seriously entertained the idea of spending $400 on a Play Station 3, particularly since I would have to beg, borrow, or steal a television to use it on, but my brother Isaiah called me in Indiana and said,

"If you don't get *Little Big Planet* I'll disown you..."

I gulped—he sounded pretty serious.   He followed the threat up by telling me about a Sony credit card deal that would get me two free games with my new system—

"...and Abraham [our younger brother] has a television from 2006 that he's trying desperately to get rid of."

"I'll bet he is," I weakly responded, wondering if it had the right plugs for a PS3—or merely a built-in VHS player.   But the idea of finally getting my own system was appealing—unfinished games would travel with me!   Characters wouldn't vanish into someone else's life and hard drive!   I could create my very own account with my very own credit card and buy all the zombie-related downloadable content (DLC) I wanted!

So I applied for the card, and soon after found myself wandering through the aisles of a Best Buy, *Little Big Planet* (LBP) gripped tightly in my hand, eyeing other games.   LBP looked suspiciously adorable—the game was described in various places online as "cute" and "playful" and "good clean fun," and I was worried that there wouldn't be enough guns or explosions to sate my gaming urges.   *Metal Gear Solid 4* (MGS4) on the other hand, looked full of dark and deadly intrigue—more than enough for therapeutic shooting after a long day.   I walked out with a 320GB PS3 and what would prove to be two very different but satisfying games.

A Brief Introduction: *Little Big Planet*

LBP is a multi-player game that—during gameplay—simul-taneously introduces you to the designed world and unveils the authoring tools needed to design further levels, which are subsequently shared with the LBP community at large.   Your initial foray into the game as a "sackperson" (see Figure 1) highlights the cuteness, friendliness, and exploratory nature of the LBP design, serving to illustrate the numerous building possibilities, and sharing the gameplay mechanics that shift from level to level as well as the mechanics that remain constant across LBP.   While your initial sense of community is limited

solely to the teasing but loving narrator, after a short period you have access to player-created levels and to the multi-player aspect of the game. Multi-player games in general tend to have both friendly and unfriendly fellow players and LBP is no exception, but in my experience, the population errs on the side of gleeful cooperation. (*Little Big Planet 2* has been recently released, and greatly advances the tools available to player-creators. However, the original LBP and LBP2 are quite similar, and my comments here are appropriate for both game editions.)

Figure 1:   A sackperson from LBP.
Image credits: Media Molecule, LBP Fansite Kit.

A Brief Introduction: *Metal Gear Solid 4*

MGS4 is a single-player first-person role-playing game, where the main character—Old Snake—is an aged assassin spy with a complex history. The game begins by depositing Old Snake (you) in the middle of a futuristic urban battlefield with no allies: both sides of the war will identify you immediately as "the enemy", and you have to learn urgently how to hide, sneak, and kill in order to survive. The only sense of friendly support comes from a technological support character who provides an anthropomorphized robot to help you out, and his own occasional assistance (primarily through information sharing and a safe house). As the game progresses, various parts of Old Snake's history come to light, filling in the details about who he is—and who you are. And while Old Snake meets old friends, they often die in his arms or betray him sorrowfully—and both old and new enemies are relentlessly killed, even as they poignantly reveal their humanity. The MGS series is famously known for its

extended cut scenes, particularly one near the conclusion that always brings me to tears (see Figure 2).

Figure 2:   The prologue graveyard scene in MGS4.
Image credits: Junior22G
(http://www.youtube.com/watch?v=MMk0eoySP9E)

The Strangeness

LBP and MGS4 are such very different games—why am I writing about them together?   MGS4 and LBP are similar in that they are both incredibly good games that position players from the start as Old Snake and a Sackperson, respectively, and immediately begin guiding the player in the direction of what it *means* to take on that identity.   When I sit down to play, I have to choose between two incredibly different worlds that have very different roles for me to assume.   I find it fascinatingly difficult to decide each time, as I have to explicitly choose my identity in a way that's unparalleled in other parts of life.   Deciding between playing a conflicted and dedicated human weapon in the midst of a futuristic world that is based on war and all that it brings, or playing as a fuzzy, adorable sackperson that communicates with deliciously astute and friendly other sackpeople through facial expressions and exploration of their creations—what a decision! What a *brutal* decision, deciding *who I want to be* for the next hours of life…

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Both games are well-designed according to Salen and Zimmerman's (2003) rules of play, as well as by the more subjective but still valuable reason that I enjoyed them. (I fully subscribe to the belief that games that appear perfectly good by any rubric, however carefully designed, can contribute only so-so playing experiences, thus I give weight to my personal opinion regarding the game design.) So who *are* these characters, these people that I can choose to be? And how can I figure them out, and consequently figure myself out, and myself-as-them? The virtual identity that develops comes to be through the interaction of group membership, social languages, and context, and both games use specific game structures to support certain types of identity development. My lens for analyzing the conflict that I felt every time I sat down in front of the PS3 is a lens for examining the games, and the intentionality of the game designers.

Theoretical Framework

The lens through which I examine identity, community, and ideology in MGS4 and LBP is a synthesis prompted by Gee's (2008) argument that "…the who we are and the what we are doing are really enacted through a three-way simultaneous interaction among (1) our social and cultural group membership…; (2) a particular social language or mixture of them…; and (3) a particular context, that is, set of other people, objects, and locations…" (p. 93). While Gee was not explicitly focusing on games in his work on big-D Discourses, a connection is readily achieved through his exploration of literacy in video games (2003). In the latter, Gee posits three identities at play when engaging in these "worlds in a box" (Squire, 2006, p. 19): real-world, projective, and virtual. Each of these identities can be seen to develop in that "three-way simultaneous interaction" (2008, p. 93) that Gee speaks of, which renders Gee's theoretical exploration all the more complex by shifting *where* our social and cultural group memberships are located, *how* our social language(s) develop, and *who* composes (or designs) our context(s).

A natural addition to Gee's work includes insights provided by Squire (2006), who highlights the nature of games as "ideological worlds":

> …games focus our attention and mold our experience of what is important in a world and what is to be ignored. The game designers' choices, particularly of what to strip away from a world, can be read as ideological… (p. 22)

Combining Gee (2003, 2008) and Squire (2006) in such a way reveals an unusual and incredibly important space, one that I felt myself tangled in every time I faced my MGS4 vs. LBP dilemma. My real-world identity remained ephemeral yet constant: every time I sat down, it was Caro in front of the television, Caro after a day of work and classes, Caro generally wishing for a sense of pure satisfaction and achievement after task after Sisyphean academic task.   My virtual identity, co-created with the game Discourse (language, salient values, community, successful strategies, ways of seeing the world), would vary wildly depending upon my choice, but I could depend upon a sense of satisfaction, pride, and achievement regardless.   My projective identity, on the other hand, had to be different, had to *stretch* differently to connect Caro-with-Old-Snake or Caro-with-LBP-happy-fun-sackperson.   This feeling of *stretching* is one that I struggle merely to identify, much less articulate...

The important point here is that this deceptively simple *choice* of what game to play led me to examine the two games beyond their obvious differences, in an attempt to reconcile the similarity in satisfaction that my real-life identity felt after gameplay and after *being* the very different virtual identities.   Gee's (2003, 2008) and Squire's (2006) work provide a framework that supports both a theoretical and pragmatic exploration of this dilemma, and the nature of this examination focuses on the explicit ways the designed experiences of MGS4 and LBP co-create identity with the player, specifically through their facilitation of community and their ideological structures.   Finally, although this lens is used to

gain insight, the process is not a linear one: my gameplay and game mechanism exploration serve to deepen the lens in return.

Playing Little Big Planet

LBP holds my own personal award for "Best Game to Watch Other People Play." And if you've ever been at a party where the focus of attention is Rock Band with only two guitars or Super Mario with two Wii-motes, you'll know: unless you're the type of ruffian who latches onto a controller and refuses to politely give it up, it can be more than a little boring. But LBP is adorable and amusing enough to merely watch, for hours—even without a beer/martini/cigarette/iPhone in hand! The sackpeople move fluidly, like perfect stuffed teddy bears come to life, and gesture clearly, and hop around as if gravity is just a little more fun over in their world, and smack each other around like bruises ain't no thing. When a microphone is added to the mix, their cutesy little mouths open and close around words until you swear you could lip-read their fuzzy little faces. In fact, the sackpeople and the LBP universe are *so* adorable that I frequently and unceasingly abuse the word "adorable" in the context of LBP discussions (e.g., see Williams, 2011).

And lest LBP sound too adorable to be actually fun for adults to play, let me explain: levels range from circular labyrinths riddled with evil henchmen, teleportors, one-way stairs, and a variety of mini-puzzles, to duplications of Portal (see Figure 3) and the first level from the Legend of Zelda (see Figure 4), to top-down racers. LBP is full of action and excitement and pulse-pounding edge-of-your-seat drama. And stickers—LBP is chock full of stickers! Stickers of monkeys, gigantic Kiss-esque lips, tigers, coffee rings, a "ghetto blaster," mustaches, gothic-style pianos, and masking tape. And objects like soccer balls, wrenches, tricycles, coat hangers, chili peppers, bones, sardine cans, and fiery red candles—not to mention all the fun little toys that explode on impact (that list needs its own article to do it justice—especially the confectionary *cakeinator* that fires pastry-shaped TNT and does goopy jelly damage to all the scenery). All of these stickers, all of these objects, are what
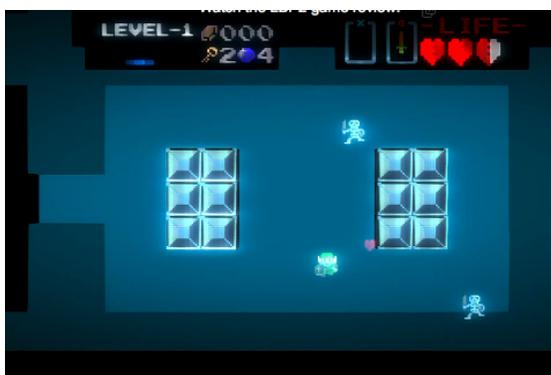
make up each little world in LBP, and are collectible or re-creatable so that each item—fabulous or not—can become part of each player's own authorship experiments.   I can use the stickers and objects to make a Spanish cantina, with a quartet mournfully   playing   in   the   background,   or   a rescue-the-monkey-princess *Mario*-inspired puzzle level, or a fiery pit where the player must avoid the pomegranate seeds to see the light of day.   I can do *anything* and *everything*, all at once.   (My first design, true to form, involved creating cannons and pirate ships.)

Figure 3:   Portal recreation built in LBP2 Beta.

**Image credits: EBjak
(http://www.youtube.com/watch?v=-QIXJZnyc9k).**

Figure 4:   Legend of Zelda recreation built in LBP2.   Image credits: IGNentertainment playing level built by Bluetonberry (http://www.youtube.com/watch?v=1gOx2U0tW-Q)

The question becomes: who am I in LBP?   And I answer: in LBP I am an all-powerful creator, a logical thinker, a designer of experiences, a crafter of explosions.   And sometimes I am just a player, an explorer, a frequently-skewered sackperson who gives up in frustration and hurls the controller across the room. Everything I see, do, or experience, I can re-create in my own space (my "moon"), and improve upon, modify, shift—and share with the millions of other adorable little sackpersons all over the world.   And while they frequently just tell me, "THIS LVL IS DUMB!111," I am still the god of their experience (and I can tsunami whenever I want to).

Playing Metal Gear Solid 4

Good games, like both MGS4 and LBP, play close attention to the introductory experience, quietly teaching you how to *be* in their new world, and furthermore, *be* someone you can be proud of and truly a part of.   MGS4 did this beautifully, so beautifully that I began developing my projective and virtual identities with the thought, as Old Snake first appeared on the screen, "I want to be *him*" (see Figure 5).   I, a young woman with a life that relies upon intellectual stimulation, wanted to be *him*, a grizzled old man with the daily task of directed physical violence.   And I wanted to *be him* so deeply that I shivered with the dire task of

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actually assuming control—I wanted to *be* him at the same time that I was terrified of failing him, with my poor playing skills and a lack of attunement to his world, as if somehow I would disappoint Snake and all that he had worked hard to become.   Having assassin training—an alternate Caro life that had been the stuff of childhood dreams—felt immediately necessary, and my lack of knowledge became a very personal liability.   It felt as if, somehow, Old Snake may have consented to me playing him without all of the information—as if he expected and desired and deserved a better handler than I.

Figure 5:   Old Snake in MGS4.   Image credits: MugenShinobido(http://www.youtube.com/watch?v=H7GQslg679Q).

Wonderful, too, that the designers cultivated a sense of Snake's exhaustion and cynicism so early on, with his smoky-voiced monologue in the introduction to war:

> War… has changed. It's no longer about nations, ideologies or ethnicity. It's an endless series of proxy battles, fought by mercenaries and machines. War, and its consumption of life, has become a well-oiled machine. War has changed. ID tagged soldiers carry ID tagged weapons, use ID tagged gear. Nanomachines inside their bodies enhance and regulate their abilities. Genetic control. Information control. Emotion

control. Battlefield control. Everything is
monitored, and kept under control. War has
changed. The age of deterrence has become the
age of control. All in the name of averting
catastrophe from weapons of mass destruction.
And he who controls the battlefield, controls
history. War has changed. When the battlefield is
under total control, war... becomes routine.

The monologue introduced me to the immediate context of the
gameplay and Snake's place in it, and avoided the larger context
that MGS4 forced me to slowly uncover, piece by piece. Placing
the player into a limited context, providing tools for survival and
success while obfuscating the variables that led the player there
in the first place—the experience was masterfully orchestrated.
Such a short beginning piece made me want to be Snake,
assume his role, and yet gave me so little to go on that I could
develop my character in a multitude of ways that did not conflict
with a more detailed and larger context.   My character was not
prescribed, but developed between myself, the game space, and
Snake—a perfect illustration of Gee's three identities (2003).   I
was allowed to develop my own customized connection to Snake,
while playing his (constrained) role and playing my own identity in
the virtual world.   If I really was Snake, would I kill as many
soldiers as possible to get to my objective?   Or would I sneak as
much as possible?   What would push me to kill?   Push me to
take risks with my own life?   At what cost was I willing to
succeed?

And playing MGS4 was *intense* for me, simultaneously
stimulating and exhausting.   Generally I would play in short
chunks of about an hour at a time, which I consider to be a really
small period of time for gameplay—in *World of Warcraft*, I could
handle endless gameplay sessions.   But with MGS4, the longer I
played, the more I could feel the sense of paranoia and
claustrophobia that characterizes Snake's life, surviving alone,
caught between two warring armies that both identify me as
"enemy", with no resting place beyond gutters amid echoing

gunfire. But every time I leave the game, it's as if Snake's narrative is a rising crescendo, and I am but breaking the music, the trajectory, in half. Betraying it, somehow, from its natural conclusion that only I can bring it to. And, really, who am I to stop the story?

Identities

As discussed in the theoretical framework, Gee (2008) views identity and the enactment of that identity as a complex mix between group membership, social languages, and context. Each of these three components is addressed in turn, in regards to MGS4 and LBP, and specific elements of each game is examined. As a final note, I will refer to the MGS4 virtual identity as "Old Snake," and the LBP virtual identity as "Sackperson."

Group Memberships

In MGS4, group membership is defined more by consistent indicators of exclusion than indicators of inclusion. While Old Snake arrives on the urban battlefield surrounded by soldiers that are not unfriendly, the game prevents a social connection by preventing interaction with them, and then quickly disassociates Old Snake further from that community by saying "You have no allies. This is not your battle" and ensuring that all sightings of Old Snake result in shouts of alarm. Any "human" (Non-Player Character or NPC) contact is dangerous and hints of imminent attempts to kill you, or is completely business-oriented, uneasy, and limited. In other words, there is no group membership: Old Snake is a lone soul surrounded by enemies, and interaction with others in the game world generally only interferes with progress. Throughout the game the player encounters various previous allies and friends, and the moments of community with them serve to remind you that Old Snake has loved ones, but ultimately must always leave them.

LBP, on the other hand, begins immediately with demonstrating desired elements of behavior, then requiring them for full participation with the game. During the initial tutorial, the

Sackperson is learning how to navigate through the game basics, as well as where to find the authorship tools, by standing in front of a stage with a walk-through demonstration video of another Sackperson. This NPC Sackperson is perky, cheerful, funny, and undeniably cute, and the juxtaposition of your new self with the more experienced Sackperson is a sly but effective way to model the friendly apprenticing of the new by the old.   As these videos decrease in frequency in the introductory levels, the player comes across areas that explicitly require other players to complete, so that in order to "win" completely, cooperating with other members is necessary.   Contrary to Old Snake's environment, LBP requires active participation with the overarching group in order to progress fully.   Another intriguing way the games encourages person-to-person interaction is by severely limiting the different types of NPCs that can exist or be built: the machine-based movement design and the limitations of the NPC dialogue boxes leave the space narratively sparse, and authentic interactions can only occur between players.   In other words, when the Sackperson is on a level by him- or herself, it is quite obvious that no other real-world identities are present.[i]   Getting a sense of community beyond the narrator, then, requires interpersonal interactions and the development of community.[ii]

Social Languages

In MGS4, social languages—like group membership—can best be seen when one looks at *what is not there* instead of *what is there*.   Old Snake engages in conversation very little during gameplay, only occasionally grunting and wincing in moments of inaction when the muscles begin to cool and he begins to feel the stress they're under.   During cut scenes, Old Snake engages in conversations with various characters in a generally consistent way: a distinct level of self-confidence and presence that appears to stem from his history of personal warfare skills, combined with a willingness to take advice from others in his areas of inexperience.   Old Snake is confident enough to question others when he wants to know something or doubts that

he is being treated appropriately, and to use his skills to support his right to question, but he makes no attempt to engage in the social languages of others. He is a skilled fighter and evader, and makes no attempt to speak as if it was otherwise. Others position him as one that is dangerous and knowledgeable in a very specific way, but are able to leverage his naïveté in certain areas to control or manipulate him.

In LBP, structures to support emergent but typical social languages exist through available audio capabilities and well-designed ways to communicate with others even as your Sackperson progresses through a variety of levels. Most interestingly, however, is that the LBP designers obviously considered the quandary of communicating between players when an audio connection is not possible, and built certain physical mannerisms into each Sackperson that distinctly convey the sorts of emotions players may need for in-game communication. Gee (2008) generally talks about social languages being the actual words and sounds, considered separately from what the physical contributes to the situated meaning, but he notes that such a distinction is not a clear one, nor a hard and fast one. In this situation, the physical (virtual) can serve to complement audio or to render it unnecessary for successful gameplay, and given that it can *replace* what Gee would be more likely to consider the social languages of LBP, I consider these emotional indicators to be social languages. In any case, each Sackperson is able to express sadness, meanness, happiness, and confusion to multiple degrees through facial expressions, and can express anger through a "slap" that knocks other Sackpeople over. While there is no gesture for "Come over here and help!" (a common request for levels that require exploration and cooperation), the ability of each Sackperson to frequently change their outfits has led to an emergent way of saying "Hey you!": if Jackperson wants to get Jillperson's attention, he just changes his outfit to look like hers. Thus the social languages of the LBP community are emergent but supported by the design structures.

Contexts

While I have already noted various elements of both MGS4 and LBP, and what the games look like, such an exploration of context is insufficient and must be further developed. Context, and the way that it contributes to co-creating identity, is important because of what actions are constrained and what actions are afforded. The important question is: given the tools in the context, what are you allowed to do, and what sort of identities are you allowed to perform? Merely a description of the physical (virtual) space is incomplete, without an explication of what within that space allows interaction, and what does not. Squire's (2006) idea of games as *ideological worlds* is particularly important here, as examining the context for what it includes and what it excludes allows a deeper understanding than merely examining what is visible.

In MGS4, the context is incredibly limiting,[iii] and I could spend pages listing what Old Snake is not allowed to do in the space. Instead, I will merely explore a few interesting aspects of the context, specifically how this action roleplaying game is unusual and unique for its genre. One specific element is that while Old Snake is surrounded by enemy soldiers[iv] and provided with many weapons, the game discourages fighting interactions by the simple mechanism of good communication between the enemy NPCs. Engaging one soldier in battle immediately notifies other soldiers, who do their best to swamp and then kill Old Snake. The game does not allow any attempts at communicating with the soldiers—their orders are to kill on sight, and thus the context precludes the development of any community. The space prevents the context from becoming socially richer and allowing access to different contexts (i.e., the soldiers' bivouac), forcing Old Snake to be a lone wolf that can only watch as others sit around the bonfire and talk in the languages of belonging. Another interesting aspect of the context is what becomes salient through gameplay: the player becomes attuned to the hiding places, underground tunnels, and wrecked buildings that provide cover. The necessity of avoiding soldiers forces Old Snake to

use these forgotten corners of the battleground, rejoicing in the discovery of a new one and, often, quaking in terror as soldiers' boots walk by.   The horror and sorrow of being alone sinks into your bones as the player, and any movement is akin to an eagle's shadow over a lone field mouse.

In LBP, the context is powerfully positioned from the beginning as something that the player can *act upon*.   Rather than being separate from the developing identity, an immovable physical (virtual) space that *shapes*, the context both *shapes* and *is shaped by* the Sackperson.   This tool of authorship creates a level of complexity that goes beyond most contexts: while Gee (2008) considers context to be a dialectic exchange (i.e., both *shaping* and *shaped*), LBP seems to take this to the next level. The context of LBP is explicitly about changing the context, to the point that in order to progress on the introductory levels, the player *must* edit the physical (virtual) context.   The fulfillment of the game's larger goals require the development of a unique context that other players can access, and that challenges other Sackpeople in their gameplay.   The feeling of playing in a space that will respond and can be written upon is a powerful feeling, as if the Sackperson's presence deeply and personally and permanently matters.

Comparison?

In the above sections, I generally talk about the games separately, leaving the compare-and-contrast primarily up to the juxtaposition in this text and the reader's mind.   The only common factors are myself and the lens through which the games are being examined.   But not long after I started playing both MGS4 and LBP, an amazing situation came to pass: LBP and MGS4 teamed up to create a series of MGS4 levels in LBP (see Figure 6).   In this DLC, playing was a strange and fabulous blend of the two games: simultaneously antisocial (with few friendly faces, in the style of MGS4) and social (with up to four players, the LBP method of doing things); with laminated (Goffman, 1981) social languages that range from spare (a la MGS4) to highly expressive (a la LBP); and linear but deeply

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dialectic. The designers worked together to meld two very different games in a fashion that did not contradict or betray either, but rather supported the nuances of both—an endeavor to be congratulated!

My previously complicated experience, choosing *who to be* when I sat down in front of the PS3, became simpler in some ways: now I could be both! But it also felt strange, as if I was playing a third game, a third character, one that both adored others and avoided them, one that lived in a world full of guns and death but celebrated beauty and friendship, one that could hold both guns and flowers. There became a sense in which I was tugged in three different directions, as I played the DLC: was I playing in a way that would impress or embarrass Old Snake or my Sackperson, or was there a third, an Old Sack Snake, who was the one I should strive to be faithful to? Whether the designers had considered this quandary during the design process, I cannot say, but the projective identity forming in conjunction with my real-world identity and my virtual (Old Sack Snake) identity became torn—playing the LBP MGS4 level without thinking about my Sackperson (dressed as she always was, with rainbow boots and a blue baseball helmet) or my obligations to Old Snake was impossible. Every choice that I made was layered with

complications, then, as I saw the world in triplicate, in terms of what Old Snake would do, in terms of what my Sackperson would do, and in terms of what Old Sack Snake might do. Striving not to betray any of the three became a mental and emotional minefield, one that I struggled to negotiate.

Conclusions

When I first began playing LBP and MGS4, and thinking about the ways in which my virtual and projective identities varied from playspace to playspace, I was intrigued by the oft indescribable differences in the way that I saw the two worlds, engaged with the two worlds, felt about the two worlds. Gee's (2003) identities framework gave me a language to talk about the sensations and the inner conflict, but failed to predict the fragmentation of being Old Sack Snake. The experience with the DLC reminded me that human beings do not play in a vacuum—that what you play plays you, and if what you play is deep and powerful enough, its play of you is also deep and powerful. *What game we choose to buy* is *what person do we want to be;* it is *who we let in* and *what memories we create.*

And in the end, I'm glad that Isaiah made me buy a PS3 and LBP—and I'm also glad that I picked up MGS4. Who I am now, after being Old Snake and being Sackperson, is different and new. I distinctly remember being an old assassin surrounded by enemies in an old desert city, and I distinctly remember climbing up an adorably rickety wooden dragon in a sticker jungle, and I distinctly remember the satisfaction of *being* more than I'd ever been before. I can never go back to Caro-before-Old-Snake or Caro-before-Sackperson or Caro-before-Old-Sack-Snake—and my world is the better because of it.

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[i] This has changed some in LBP2 as the tools for designing customized and responsive AIs were considerably improved. Nonetheless, the distinction between human co-players and non-player-characters is incredibly clear.

[ii] The affinity groups (Gee, 2004) formed online around LBP are numerous and active—and formed not only around *playing* the game, but around *building* the game further by designing new levels.   This is a powerful community experience I—when first playing LBP and MGS4—knew little about.

[iii] I want to emphasize that "limiting" carries no negative connotation here, and that I am not saying the MGS4 is poorly designed because it is limited.   Rather, MGS4 is an astonishingly good game *because* of limitations that are very well implemented and communicated to the player.   However, a relatively common complaint of MGS4 is that it's "on rails," that is, that succeeding always involves getting to the same place and killing the same people, for which the player is rewarded by the same cut scene.

[iv] I consider the soldiers to be part of a community (that Solid Snake is excluded from) as well as part of the context: this line is always blurry, but even more so now that the soldiers are NPCs and thus little more than designed "things."