Profit Versus Play: Business and Gaming in MMOs

Eric Jiang

`erjiang at indiana edu`

4 March 2010

A 2001 *Wired* article described the life of Troy Stolle, a seemingly typical construction worker. By day, he toiled in the dust and noise of an Indianapolis construction site: pouring cement, cutting metal, carting bricks. By night, he toiled in Britannia as a blacksmith under the name Nils Hansen: crafting shields and swords. The newsworthy dichotomy, of course, was that Britannia was completely fictitious. Unlike the rebar and concrete Stolle handled daily, there was nothing tangible or "real" to the armor and weapons he crafted in Britannia. All of the items, the character of Nils Hansen, and the entire world of Britannia existed as no more than a few database records on computer servers owned by Electronic Arts. This was the virtual world of *Ultima Online*, a pioneer of the genre known as "massively-multiplayer online games," commonly referred to as "MMOs" and today an extremely-lucrative multi-billion-dollar market.

But what is more interesting to us is the way Stolle treated his online persona. Unlike his real-world construction-worker self, Stolle put sweat and tears into bettering Nils' life by toiling and saving up money for months to buy a better house.

> Asked how this job compares to the work of building a virtual tower in Britannia two years ago, he answers like it's obvious: "That was a lot more stressful." [. . .]
>
> The number of homeless was rising, and the prices of existing houses were rising even faster. At last, EA announced a solution that could work only in a make-believe world - a whole new continent was being added to the map.
>
> Stolle started preparing for the inevitable land rush months before it happened. He scrimped and saved, sold his house for 180,000 gold, and finally had enough to buy a deed for the third-largest class of house in the game, the so-called Large Tower.
>
> On the night the new continent's housing market was set to open, Stolle showed up early at a spot he had scouted out previously, and found 12 players already there. No one knew exactly when the zero hour was, so Stolle and the others just kept clicking on the site, each hoping to be the first to hit it when the time came. [. . .]
>
> Just like that. In a single clock cycle and a double mouseclick, Stolle had built himself a real nice spread.

But of course there was more to it than that. In addition to the four hours of clicking, Stolle had had to come up with the money for the deed. To get the money, he had to sell his old house. To get that house in the first place, he had to spend hours crafting virtual swords and plate mail to sell to a steady clientele of about three dozen fellow players. To attract and keep that clientele, he had to bring Nils Hansen's blacksmithing skills up to Grandmaster. To reach that level, Stolle spent six months doing nothing but smithing: He clicked on hillsides to mine ore, headed to a forge to click the ore into ingots, clicked again to turn the ingots into weapons and armor, and then headed back to the hills to start all over again, each time raising Nils' skill level some tiny fraction of a percentage point, inching him closer to the distant goal of 100 points and the illustrious title of Grandmaster Blacksmith.

Take a moment now to pause, step back, and consider just what was going on here: Every day, month after month, a man was coming home from a full day of bone-jarringly repetitive work with hammer and nails to put in a full night of finger-numbingly repetitive work with "hammer" and "anvil"—and paying $9.95 per month for the privilege. Ask Stolle to make sense of this, and he has a ready answer: "Well, it's not work if you enjoy it." Which, of course, begs the question: Why would anyone enjoy it?[1]

The idea that Stolle dedicated more effort into his virtual self than his real self may strike some as a strange perversion and reification of what should be just a game. And, even to those acquainted with MMOs, the drudgery that he endured sounds exactly like work, and tedious, boring work at that. Yet, whenever we discuss *Ultima Online* and other MMOs, we universally refer to it as a "game." *Ultima Online* is a "game" and the people who subscribe to it are "players playing the game." We never say that these players are "working" when they are logged on, and it's obvious to the common man why they are not doing work—they are not producing any product nor earning any money. Despite it being *obvious* that these players are simply spending time unproductively, Indiana University social scientist Edward Castronova went ahead and crunched the numbers. In his 2001 report about the now-obsolete MMO *EverQuest*, he calculated that the hourly wage of the average Norrath—the world of *EverQuest*—worker was 3.42 USD.[2] 3.42 USD per hour is enough to survive on in many parts of the world and simply considering these numbers may be troubling to play purists.

The initial response to this research is usually to ask if this research is true (it is) and then to ask whether these people are truly "playing" games. Yet, answering this question requires digging deep into the motives behind the companies who create MMOs and the people who play them and even into the definition and meaning of play itself. But more eminently, Castronova's research is, if not completely scientifically precise, at least reasonable and believable to those who have done even a cursory analysis of MMOs and, since the universal nomenclature is that *Ultima Online* and *EverQuest* are "games" populated by "players," the burden of showing that these MMOs are *not* games rests on the detractors.

David Golumbia, who is incidentally among such detractors, could not examine this issue without first defining the French word *jeu* in the context of Jacques Derrida's deconstruction of "play." Fundamentally, Golumbia establishes *jeu* as both "play" and "games" (and not contrivances like "freeplay") and this paper will assume the same: that "games" and "play" are merely different parts of speech referring to the same concept without carrying any intrinsic differences. And, as we'll see, MMOs like *Ultima Online* and *EverQuest* are certainly games in the traditional sense as they fit like clockwork into Roger Caillois' categorization of games.

Extending Johan Huizinga's *Homo Ludens*, Caillois outlines four basic categories of play: *agôn*, *alea*, *mimicry*, and *ilinx*.[3] *Agôn* is easy to see in most MMOs, since they almost universally pressure players to compete with each other, whether indirectly, in the form of leveling up, showing off rare weapons, or scoring specific achievements; or directly in the form of player-versus-player combat (PvP). There is prestige associated with—and consequently a desire for—becoming the first to slay a certain boss or pulling the biggest stunt or being the most powerful player in a game world just as there are trophies and record books in sports.

Next is *alea*, the type of play associated with chance and gambling, and it happens to be the trait least expressed in MMOs. There is no denying that there is chance and randomness in an MMO and, in fact, a strong, unpredictable random number generator is a critical cog in the workings of any computer game, but there is rarely the sense of risking something important. When the player's character dies, he need only to wait a certain amount of time before his character respawns and he can continue where he left off. In-game quests have clear goals to complete in exchange for a certain award, and although players occassionaly get lucky and find "epic drops" in the carcass of a slain monster, there is never the "lose everything" mentality that gamblers find in casinos. Note that this is only saying that MMOs are not low-*alea* games that can still be analyzed very effectively in Cail-

---

[1] Dibbell 2003
[2] Castronova 2001, 1

---

[3] Caillois 2001, 40–41

lois' framework.

Ilinx is primarily associated with physical play that causes physical vertigo, but it extends to simulated stimulations as well. A virtual racing game with speeding cars and engine noise stimulates the player on the same principles as racing in a real car does, for example. In today's MMOs, *ilinx* is found in the game's artistic assets. As the player battles, weapons both real and magical flash on-screen and explode in the speakers in an inherently entertaining experience. Dan Dixon, in his analysis of computer games, splits "gaming" and "play" apart, with "play" and "gaming" as Nietzsche's "Dionysian" and "Apollonian" aesthetics, respectively. Although Dixon cast Caillois' theories on play as irrelevant in today's world of computer gaming, writing that "because Caillois' approach is essentialist, it is of little use and that giving the aesthetic experience pre-eminence is more useful for understanding the terms play and games," his Dionysian aesthetic nonetheless corresponds to Caillois' *ilinx*:

> Movement is an important aspect of the Dionysian aesthetic. The primary transmission of this is the body's response to music; the embodied physical rhythm of dance. We lose our identity in dance, lose our individuality, we are intoxicated by its affect. [...] A multiplayer, online, Shooter like Quake 3 becomes an on-screen symphony, the player responding to the visual music in a dance of play, their individuality lost in the Dionysian, almost one with the machine and the other players, completely absorbed in the aesthetic experience of playing.[4]

The play of mimicry is perhaps the most interesting category to analyze MMOs within; since most MMOs are correctly referred to as "massively-multiplayer online *role-playing* games (MMORPGs)," it's clear that mimicry must play a role here. In this respect, it helps to examine the history of online games and the ancestors of today's MMOs. Castronova charts the "development of avatar games" from the Royal Game of Ur (2500 BCE) through the contemporary game of *Dungeons and Dragons* (1974–),[5] but the closest direct ancestors of MMOs

are text-based online environments. Back when computers were barely becoming graphical and communications was mostly over phone-line modems, text was the only viable option for communications and correspondence was done over email, message boards, and primitive chat rooms. These chat rooms fit most definitions of an MMO except that they weren't intrinsically games. Players could, like children's *paidia*, invent their own types of play. Not surprisingly, given the overlap between early computer nerds and *Dungeons and Dragons* fans, role-playing became an established niche. Sophisticated "multi-user dungeons" (MUDs) and more generally, "multi-user chat kingdoms" (MUCKs) sprung up, capturing the essence of a paper-and-pen *D&D* game on the text-based 'net even before the Internet proper.

The 'net transcended time, space, and more importantly, identity. "On the Internet, nobody knows you're a dog," says a tech-savvy canine in an often-quoted New Yorker cartoon. With little *agôn* in the sense of strong, pre-defined rules and competition, no *alea* since the only thing lost was time, and a lack of *ilinx* in the text-based medium, role-playing thrived. Anybody could pretend to be a legendary paladin or a voluptuous elven archer without consequence to their real-world selves. But as graphical, mainstream MMOs emerged and grew to encompass more than just mimicry, the role of role-playing itself has decreased. Even though 90% of MMOs are technically RPGs, many of which have fantasy settings, avid role-players accounted for only 5% of the userbase of *EverQuest II*, according to a rare research collaboration between academic researchers and Sony Entertainment, the proprietors of the *EverQuest* series.[6] Still, the whole idea of playing as a virtual character online is a prime example of Caillois' mimicry.

More salient to the question of whether MMOs are really games are Caillois' six requirements for a game, that they be "(1) free, (2) separate, (3) uncertain, (4) unproductive, (5) regulated, and (6) fictive," and, as with the four categories, MMOs can easily be shown to satisfy these requirements. MMOs are free because the players choose to play or not play them as they wish. They are separate according to Caillois' idea that games take place in a well-define space and time and do not spill over into a player's real life. The space of MMOs is very rigidly

---

[4]Dixon 2009, 6–10

[5]Castronova 2001, 8

[6]Williams, Kennedy, and Moore 2010, 4–16

constrained to the MMO servers hosting the virtual world and the player's computer as an interface into said world. In addition, all players start out with characters equal in rank and power and when the player quits (if ever), his or her character is nothing more than a memory stored away in a distant server. MMOs are uncertain as they, like any other game, depend on the player's actions, skills, luck, and choices based on unpredictable events.

MMO players are also unproductive, despite Castronova establishing *EverQuest* as the 79th wealthiest nation in the world in 2001.[7][8] We cannot forget that these (American) players were paying a subscription fee of at least $10 a month for the privilege of making less than minimum wage, and that even if they did produce $3.42 per hour, that virtual wealth was rarely converted into real-world wealth. MMOs are disjoint enough from the real world and unproductive, but the trend since then has only been in the opposite direction. While I believe that MMOs qualify as being unproductive and satisfy Caillois' view of games, it will be increasingly evident that real-world money continues to haunt the debate over the purity of MMOs as a form of play.

To "regulated" and "fictive" Caillois added the clause "it being understood that the last two characteristics tend to exclude one another."[9] Despite this, MMOs nonetheless contain both regulated and fictive elements that are able to and must coexist in a successful MMO. Castronova took particular note of what he terms "constraints" in MMOs.

> Put succinctly, in a normal market the demanders are willing to pay money to have constraints removed, but in a games market they will pay money to have constraints imposed. Think of a market for puzzles. [...] A puzzle that is too hard imposes constraints that are too severe and is no fun; relaxing the difficulty constraint should therefore raise utility and hence willingness to pay. However, a puzzle that is too easy is also no fun—who would pay money for a puzzle with only two pieces? If the puzzle went from two pieces to, say, 100 pieces, however, it would become more difficult but also more entertaining, and would therefore com-

mand a greater willingness to pay. The puzzle of puzzles is that the demand for a good can rise when a constraint becomes tighter.[10]

Castronova's "constraints" are the rules imposed upon a virtual world by its creators, and these rules cause the game to be regulated. The simple constraint that the player must work to earn money to buy items has the dual effects of satisfying the player and creating an economy. On the other hand, as has been tangentially stated above, MMOs are fictive in a way that simpler games like jigsaw puzzles or Tetris are not. As RPGs, the player assumes, to varying degrees, the identity of his in-game character in a fantasy world, a fusion of the imagination of the player and that of the game creators. As virtual worlds, freedom is given to the player to wander around and explore the land, be it Britannia or Norrath or Azeroth, and complete quests or slay monsters as the player pleases.

It was straightforward to show how MMOs are games according to Caillois, but it is equally straightforward to show how they are corrupted almost exactly as Caillois described.

> The rule of instinct again becoming absolute, the tendency to interfere with the isolated, sheltered, and neutralized kind of play spreads to daily life and tends to subordinate it to its own needs, as much as possible. What used to be a pleasure becomes an obsession. What was an escape becomes an obligation, and what was a pastime is now a passion, compulsion, and source of anxiety.

> The principle of play has become corrupted. It is now necessary to take precautions against cheats and professional players, a unique product of the contagion of reality.[11]

I once read the above passage to a friend who both played *WoW* and had an interest in the psychology behind designing successful, engaging games. He first remarked that it was "cool" that we were reading a book on MMOs for class, at which point he was surprised to learn that *Man, Play and Games* was originally written in 1959, when computer games were virtually unheard of. His mistake

---

[7]Castronova 2001, 1

[8]Dibbell 2003

[9]Caillois 2001, 43

[10]Castronova 2002, 16

[11]Caillois 2001, 45

was a testament to both the accuracy with which Caillois described the corruption of games and the way computer games, despite new mediums and technologies, continue to be games in the traditional sense.

This "contagion of reality" that plagues MMOs has been and will continue to be money. "The minute you hardwire constraints into a virtual world, an economy emerges," explained Castronova to *Wired*. "One-trillionth of a second later, that economy starts interacting with ours."[12] If Castronova is correct, then creating an MMO with constraints creates an economy which immediately interacts with the real world, breaking Caillois' second rule and the fourth wall of computer gaming. Even though wealth exchange between the virtual world of *World of Warcraft*, today's most popular MMO, and the real world is expressly forbidden by *WoW*'s parent company Blizzard, a thriving gray market exists to buy and sell virtual items and currency.

The most reliable symptom of this for-profit corruption of gaming is the professional gamer—the person who makes a living off of the game. Journalist Julian Dibbell, in a famous article in *The New York Times Magazine*, described the life of the average Chinese gold farmer. These Chinese gold farmers are lower-class Chinese teenagers who work twelve-hour shifts six days a week doing nothing more than repetitively slaying monsters in *World of Warcraft* for the coins they drop. The "gold" that they collect is then sold to comparatively real-world-wealthy players for US dollars, British sterling, euros, or any other real-world currency.[13]

While these professionals seem to break Caillois' first requirement that games be "free," it's easy to see that they in fact are working. A casual statement might be that "their work is playing *WoW*," but the word "play" is merely there to gloss over the details of the job. "Their work is harvesting gold in *WoW*," makes it clear that this is tedious labor. We cannot blame them for profiting from *WoW* any more than we can blame baseball manufacturers for profiting from the sport of baseball, but the effect of gold farming on the game is potentially devastating.

The ability to buy *WoW* gold shakes the foundation of isolation and fairness that Caillois posits as integral to play. The sense that players begin equal is destroyed when

one player can simply pay a *WoW* dealer a hundred dollars and buy the upper hand. The idea that I could buy myself an extra knight in chess is absolutely preposterous but in MMOs, buying an advantage was only ever frowned upon and is in fact becoming more and more of a standard—players will have to get used to the idea of real money trading (RMT), whose main driving force nowadays are the game companies themselves.

There are two main camps in the business world when it comes to RMT. Blizzard, the proprietors of *WoW*, are publicly against any type of RMT; all players pay $15 a month in subscription fees, but beyond that the game should be purely a result of the player's in-game actions. On the opposite end of the spectrum are the progressives who see their virtual world as a literal world. One such virtual world, MindArk's *Entropia Universe*, again set the record for the most expensive virtual purchase, this time a 330,000 USD space station. These are the companies who like to refer to their users as "citizens" and lobby for legal rights for virtual property owners. In addition, they officially condone RMT and offer an official currency exchange for what would otherwise be an unregulated gray-market enterprise.

More and more common now are the "free-to-play" MMOs that allow players to play for free but entice them into buying premium items. A free account would work just fine, but certain special items that save the player time, give him an advantage, or simply act as a status symbol can be bought with real money. Like the availability of gray-market *WoW* gold, the addition of premium items corrupts the free spirit of games and destroys the natural equality by creating a gap between spenders and non-spenders. In a sense, these MMO operators are exploiting the corruption of the game to be able to provide the game itself and profit from it.

Yet, these corruptions only show that MMOs are at worst a partially corrupted form of Caillois' play. Two scholars, David Golumbia and Dan Dixon, approached MMOs and video games in general from the writings of Nietzsche, in the process portraying computer games as shallow entertainment lacking the richness and purity of more traditional games and even other forms of entertainment. Perhaps, according to them, computer games are games in name only, the play element replaced instead by an addictive drug-like element. In David Golumbia's paper "Games Without Play," he takes a strong look at

---

[12]Dibbell 2003
[13]Dibbell 2007

5

the general objective and spirit of *World of Warcraft*, noting that the game seems to revolve around the combined motivations of *leveling up* and *accumulation*.[14] Golumbia accurately interprets this as an exploitation of the innate human desire to get *more*: more points, more money, more property, more power.

This desire for more is an addictive quality that game designers intentionally design towards. At the 2010 D.I.C.E. Summit for game designers, Carnegie Mellon University professor Jesse Schell explained several psychological tricks that have been used in surprise successes in the last few years. Competitive drive, the desire to prove one's superiority, is usually expressed as mostly pure *agôn* in games such as sports but can be profitably harvested in more social MMOs such as Zynga's *Mafia Wars*: "It's not just a virtual world anymore. It's your real friends. [. . .] But then, hey, my real friend's better than me. How can I remedy that? I can play a long time, or I can just put twenty bucks in and—aha!—and it's even better if the twenty bucks I put in validates something that I know is true, that I am greater than my college roommate Steve from back in the day and that I can verify that." Another example that Schell gave was human rationalization, which can cause players to spend money by thinking, "Oh, this must be worthwhile. Why? Because I've spent time on it. And therefore it must be worth me kicking in 20 bucks, because look at the time I've spent on it. And now that I've kicked in 20 bucks, it must be valuable, because only an idiot would kick in 20 bucks if it wasn't!"[15]

But the most concerning strategy that Schell outlined was the increasing use of numerical "points" as a system of motivating people to do certain things by accumulating points with instant gratification. In so many games, both traditional and computerized, points are to be fought for, accumulated, and then used or compared, whether it's passing "GO" for paper money in *Monopoly* or grinding for experience points in *WoW*. Frequent flyer miles, My-CokeRewards points, and in-game currency in any MMO are all working on the same principle: these numbers mean and represent something desirable to the player, are easily kept track of, and *motivate the consumer to do something*. Bodybuilders like to compare how many pounds they can bench, hobbyist collectors compare how many items or the monetary value of their collection, and runners compare their best-record times. Indiana University professor Lee Sheldon, in his game design classes, awards experience points instead of assignment grades and students "level up" as they go through his class—it's a rather self-parodying system, but boosted student work ethic and participation.[16]

It's this type of accumulating points system that Golumbia described as an exploitation of *Machtelgust*, or the "lust for power" from Nietzsche's writings. Golumbia colored computer games in general as being deceptively simplistic and degenerate. A single-player first-person shooter (FPS) like the classic sci-fi game *Half-life*, while appearing to offer freedom and a story to the player, is really a very rigid, pre-scripted experience of just shooting anything that moves with a superficial and shallow plot tacked on. Likewise, he wrote, MMORPGs are mostly single-player experiences, despite the name, filled with repetitive quests in a "surprisingly rigid, uncompromising, and even authoritarian" world.[17]

"Little in comptemporary culture better bears out Nietzsche's insights about the generality and attractiveness of the operative lust for power than do video games of all sorts and FPSs and RPGs in particular," Golumbia went on to write. He cites the repetitive "accrual of more and more power to a central, perceiving subject," which is the player and his character, and the one-sidedness of the killer [the player] and the killed [in-game monsters].

> Unlike the player, enemies are generally following no quest and experiencing no gain of power themselves. [. . .] There can be little doubt that this objectivfying view of the world connects directly with the lust for power enacted by the main game player—that not only must I be leveling-up as a demonstration of my mastery over the world, but at the same time, the "bulk" or cyber-biomass of the world must *not* be recognizing the same goal. There must be haves and have-nots. There must be colonizers and colonized, predators and prey, rulers and ruled; the thought of a world without hierarchy is, in computer game terms, the ultimate nightmare.[18]

---

[14] Golumbia 2009, 188
[15] Schell 2010
[16] Schell 2010
[17] Golumbia 2009, 187–188
[18] Golumbia 2009, 189

If Schell and Golumbia are right, game developers can develop profitable "games" that merely exploit social pressure, human rationalization, the desire of accrual, and the lust for power without actually providing any form of traditional, pure play as Caillois' would have known it to be. It's almost as if game companies are strapping the star of Shel Silverstein's *The Missing Piece* to a cash-generating treadmill. If your confidence in computer games was not shaken enough already, Golumbia went on to compare software like *WoW*, *Halo*, and *Half-Life* to software like Microsoft Excel, Microsoft Word, and Adobe Photoshop. To him, both categories involve simulations of activities impossible in the real-world, "absorptive, repetitive, hierarchical tasks," and a sense of accomplishment and gain when a task is completed, be it a quest or spreadsheet.[19] These parallels point to a simple human pleasure of doing activities and gaining with their completion that is not exclusive to only play or only work.

As more and more effort is put into researching how to get people to do things, especially to buy, the strategies of traditionally "retail" and traditionally "gaming" companies are converging. The latter half of Schell's talk was an excited prediction of a future in which people get points for brushing their teeth from the toothpaste company, compete with friends to see who can accumulate the most Frosted Flakes points, and receive rewards from city governments for accumulating bus-ride points. Schell sees dollar signs, we see corruption. But is the joy of leveling up in an MMO distinct from the joy of an office worker being promoted? Does a *WoW* player experience a different type of satisfaction from looting a slain monster than a salesman sealing a deal and receiving commission?

I believe that games do not occupy some sort of separate, rigidly-defined world where play is pure and unbridled, but instead they share the same world as life and work. Instead of boxing *agôn*, *alea*, and the others categories into the universe of play, these ideas coexist with *Machtgelust* and other assorted human desires that the so-called real-world may fail to satisfy. And so casual statements about the similarity between MMOs and work cut much deeper that one might expect. "[The similarity between work and computer gaming], one suspects, is a reason few truly powerful capitalists play games like *WoW* or *Half-Life* in their leisure time, for they must often receive

exactly the pleasure it provides at its height from their actual work activity," wrote Golumbia,[20] but for people like Troy Stolle, an MMO can provide what a construction job cannot for only a few dollars a month. The gaming industry is only now starting to mature, but don't be surprised if you wake up one day and realize that so many of your motivations in life are artificial constructs of big business.

---

[19]Golumbia 2009, 191

[20]Golumbia 2009, 194

References

Caillois, Roger. *Man, Play and Games*. Translated by Meyer Barash. University of Illinois Press, 2001.

Castronova, Edward. "Virtual Worlds: A First-Hand Account of Market and Society on the Cyberian Frontier." *CESifo* , 618: 1617-9595. `http://papers.ssrn.com/abstract=294828`.

———. "On Virtual Economies." *CESifo* , 752. `http://ssrn.com/abstract_id=338500`.

Dibbell, Julian. "The Unreal Estate Boom." *Wired* 11.01. `http://www.wired.com/wired/archive/11.01/gaming_pr.html`.

———. "The Life of the Chinese Gold Farmer." *The New York Times Magazine* `http://www.nytimes.com/2007/06/17/magazine/17lootfarmers-t.html`.

Dixon, Dan. "Nietzsche contra Callois: Beyond Play and Games." In *Proceedings of The Philosophy of Computer Games Conference 2009*, edited by John Richard Sageng. University of Oslo, Department of Philosophy, Classics, History of Art and Ideas, 2009. `http://proceedings2009.gamephilosophy.org`.

Golumbia, David. "Games Without Play." *New Literary History* 40, 1: (2009) 179–204. `http://muse.jhu.edu/journals/new_literary_history/summary/v040/40.1.golumbia.html`.

Schell, Jesse. "Design Outside the Box." Presentation at the 2010 D.I.C.E. Summit, 2010. `http://g4tv.com/videos/44277/DICE-2010-Design-Outside-the-Box-Presentation/`.

Williams, Dmitri, Tracy L.M. Kennedy, and Bob Moore. "Behind the Avatar: The Patterns, Practices and Functions of Role Playing in MMOs." *Games & Culture* pre-press. `http://terranova.blogs.com/terra_nova/2010/02/role-player-study-released.html`.