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Engl 198T / Dr. Lee-Keller

Final paper – draft 10

The World of Warcraft: Good Business or Cyber Crack?

A few years ago, a friend of mine told me about “the most addictive game he’d ever played” called The World of Warcraft. He told me that I absolutely had to check it out because it was like “cyber crack” and that I didn’t know what I was missing. He joked that it was ruining his life. We laughed, and I agreed that I would check the game out when I got the chance, which I did. The game is fun, and I still enjoy an hour or two playing once or twice a week, but what really became interesting to me was this notion of the World of Warcraft as “cyber crack.”

The term “cyber crack” is common on the Internet.¹ The essence of the term refers to the drug crack cocaine, and it refers to anything that happens in cyberspace that is or seems addicting. On its own, the term is neither positive nor negative. The valuation of it as good or ill depends on the speaker or writer’s intent. Massively multiplayer online role playing games (MMORPGs) like the World of Warcraft are often spoken of as cyber crack in both positive and negative contexts—the “positive” side is intended to be tongue-in-cheek and plays on the idea that drugs like crack cocaine make a person feel good; the “negative” side is more practical and works with the notion that drugs are addictive and ruinous to people’s lives. At first, my friend meant “cyber crack” in a good way, fun, but later, when he had to quit playing because the time he spent on it was causing serious problems with his fiancé and his job, he invoked the term

¹ Google search on 11 Nov. 2006 yielded 12,500 references to the term “cyber crack” when entered in quotation marks. Yahoo search yielded 1,200, and Lycos yielded 643.

negatively. He ultimately stopped playing. So is the World of Warcraft cyber crack, and was my friend a victim? Or is his story merely a rare event? And who's dealing this stuff anyway?

MMORPGs get a good deal of press coverage for the addictive qualities they appear to have, and there is anecdotal evidence to support the idea that these games are in fact “cyber-crack” negatively. However, the bulk of the academic research seems to undermine the impressions given by the popular media and the anecdotal evidence like that given by my friend. Much of the research seems to suggest that MMORPGs like Blizzard Entertainment's the World of Warcraft are actually good for people, or can be.² This research suggests that the World of Warcraft provides a type of social capital³ that is good for people who find themselves in a judgmental world that is un-accepting of people who fall outside of “normal,” which can mean by reason of physical attributes (size, weight, or appearance), gender, race, sexual orientation or even personality traits like shyness and introversion. The research suggests that these games can take the place of real world social events and impart feelings of well being into players that they might not otherwise have ready access to, which is, at least in part, likely a positive consequence. But consumers need to be very wary of allowing corporations who also understand the value of research, who do their own research on the nature of human psychology and sociological tendencies—and who have profit at the center of their ideology—to have free and unmonitored license to distribute products that have the power to fulfill important psycho-social needs through artificial means. That is, after all, essentially what crack dealers do. Large companies are formed to make money, not to be nice and to care about people. It would be Utopian optimism to think that companies operate for the benefit of mankind. And, given that reality, there are

² Elizabeth Reid, “The Self and the Internet: Variations on the Illusion of one Self;” Dmitri Williams “Where Everyone Knows Your (Screen) Name: Online Games as ‘Third Places’” and “The Impact of Time Online: Social Capital and Cyberbalkanization;” and Mark Griffiths “Internet Addiction: Does It Really Exist?” as a few examples.

³ Feelings of emotional well being such as happiness, contentment, acceptance, joy, confidence and appreciation as well as elements of finding ones place in a social hierarchy that generate those types of feelings as well.

inherent dangers in allowing companies to produce products with psycho-social impact like MMORPGs without monitoring them, much as there are dangers associated with the dealing of crack cocaine.

The similarities between crack dealers and game developers are remarkable if viewed through the lens of how business functions. A variety of elements constitute this comparison, and, if the reader will indulge me for a moment to establish them, the relevance of the similarity becomes quite clear, and, frankly, startling. For one, businesses must determine and understand a need in a market to properly position themselves and their products for profit. They must understand who is buying what, or wants to buy what, and why. For the crack dealers, this story is simple. Pure cocaine is expensive.⁴ Therefore, understanding their market, crack dealers had to come up with a product to fill the low price niche. Furthermore, they even employ the same kind of devices in identifying niches that scientific and corporate researchers do, including labels. For example, cocaine is generally used in greater quantities by affluent people because they are what Peter Reuter calls “non-poor” in his article on drug culture (Reuter 6). Reuter coins this term “non-poor” to differentiate between the economic levels of various drug users and establish drug use patterns based on access to certain drugs according to price point.

Drug culture has its own less politically correct terms to discuss the varying types of users, ranking them by frequency of use or economic prospect as well. Poor users are referred to as “Carpet Patrol” in reference to their willingness to crawl on the floor searching for stray rocks of crack in the carpet fibers. New users are said to be on the “Honeymoon” and wealthy users who might not want people to know about their use are “Closet Basers” (California Rehab Facility). Clearly these terms indicate an understanding by drug dealers about who uses drugs

⁴ The US DEA gives cocaine an average value of \$1000 an ounce on the street and crack cocaine at only \$650 per ounce, 35% less than cocaine, making it economically more viable (Crack Cocaine.com).

and what distinctions are to be made between user types. This understanding is behind the success of crack cocaine, which is essentially the paring down of regular cocaine into a more affordable drug for users who can't or won't pay for the expensive variant. On top of all this, or underlying it, is the purpose of drugs. People who use drugs take drugs for varying reasons which are multifaceted and complex, but which do include such things as depression, pain, escapism and simple sensory enjoyment. The people creating and distributing these substances do so with a full and abiding understanding of those to whom and for whom they are marketing their products.

So, given this establishment of drug dealers knowing their customers and their market well, of knowing what the users need, why they need it, and understanding in subtle ways the differences between users to the point of coining terminology to distinguish between them, the parallel to the gaming industry's research based market approach can now be drawn. G. Christopher Klug and Jesse Schell wrote an article illuminating how game designers and the game industry work to design games. While their goal as stated was to "attempt to summarize over 30 years of game design experience" because game designers "rarely examine the psychology of our gaming audience" (91), the end result of this article seems to suggest that game designers can and do know exactly what they are doing when they design their games. They write to show how game designers have broken players down into specific psychological profiles with names like "*The Competitor, The Explorer, The Collector, The Achiever, The Joker, The Director, The Storyteller, The Performer, and The Craftsman*" (91). The authors define these terms simply at first, describing, for example, the *Competitor* as someone who "plays to be better than other players" or the *Performer* as someone who "plays for the show he can put on" (91-92). These surface definitions do not seem too threatening at first, but they do hark back to

the kind of scrutiny that the drug industry applies when it labels some users as “Carpet Patrol” and “Closet Baser.” But the analysis goes much deeper. Of the *Competitor* they write:

These people play games so they can feel good about themselves because they have won something. This proves in their mind that they are better than someone else, and often for these people, it is the only way they can feel good about themselves...these gamers [*The Competitor*] are sometimes the ones who are extremely maladjusted socially... Their success in games many times is a substitute for social acceptance and success in the real world. (95)

This analysis by game designers holds up to the social research being done by the academic researchers as well.⁵ There is consensus that this is a reason that some players play these types of games, as embodied by the “stereotype” that Klug and Schell describe as having been coined for the purpose of codifying this *Competitor* personality type. But the difference comes in the language used to describe the impact of this understanding. In recognizing a player type as “extremely maladjusted socially” and acknowledging the fact that the game is a “substitute for social acceptance” Klug and Schell illustrate how the gaming industry is quite aware of a very precise and specific psychological reality in some game players. The article contains similar analysis off each category of player, this clinical break down of personality types and how the characteristics of each manifest related to game playing. But regardless of how troublesome those symptoms might sound—extreme social maladjustment is not being identified as a positive circumstance in these studies—Klug and Schell do not report any sympathy or desire on the part of the game companies to find remedies for people who suffer from such malady and social isolation. They are simply studying their market.

⁵ Sherry Turkle, Mark Griffiths, Elizabeth Reid and Dmitri Williams as mentioned above.

Where the game designer's research becomes more troubling than simple seeming dispassion or unconcern, is evident in what Klug and Schell write about regarding how game designers develop their games to maximize the carefully categorized psychological player profiles so that they can "push more buttons and the reality of the virtual world starts to take on an even greater texture, which these [MMORPG] players enjoy even more" (95). "Pushing buttons" on the surface may seem a clever metaphor in keeping with the topic of playing computer games, as button pushing is indeed what goes on in the playing of them, but a more disturbing connotation can be taken as well. Button pushing is also a form of manipulation. Buttons are pushed to make mindless machines do human bidding. When the discussion is being made in the context of "socially maladjusted" people, suddenly the concept of button pushing seems ominous. The phrase "the game takes on an even greater texture, which these players enjoy even more," starts to sound euphemistic. This phrase might be translated in street slang to, "the drug gets them even higher, which these carpet patrolers enjoy even more."

It might be argued that this interpretation is too harsh and that game designers are just doing their jobs. To an extent, that is probably true.⁶ However, when products have the capacity to replace biological or psychological needs, at some point those who produce the products must be held accountable for, or at least have some responsibility toward, how the product is used and to what degree it becomes damaging to its customers. Most products don't have this problem; Wham-O and Samsonite have less to worry about than Jack Daniels or Marlboro do. But even companies in the fast food industry, like McDonalds, have come under pressure to take some responsibility for their ostensible contribution to the obesity issues that seem to plague the

⁶ It is not my intent to vilify every programmer and business person in the gaming industry.

United States.⁷ But what about companies like Blizzard Entertainment? If alcohol and tobacco companies are being regulated, and even the fast food companies are being watched by consumer focused media and health organizations, who's keeping an eye on Blizzard Entertainment and what they're feeding people? People are logging into MMORPGS in ever greater numbers, and yet there is no scrutiny at all. Even crack dealers get watched by the DEA, police and neighborhood watch programs. It seems fair to recognize that another group of corporate players has joined the realm of businesses whose products have more serious impact in people's lives than do Frisbees and luggage. Therefore, given that other companies whose products have implications for their users that go beyond harmlessness are being regulated, the same should be being done for companies like Blizzard Entertainment and games like the World of Warcraft.

The reason no one is regulating these games, however, seems to be a matter of perspective. Assuming anyone with the power to regulate the gaming industry is reading the research at all, they're likely finding that at best the researchers studying these games don't agree that there's a problem, and at worst, these games have potential social benefits going for them and, therefore, there is no need to worry. Much of what I read seemed to agree with the latter perspective. And the researchers that did suggest there was some danger in the games had to, in the name of candor, attenuate their arguments with caveats. For example, based on his research project on the addictive nature of the Internet, Mark Griffiths concludes, "Taking all the case study and survey evidence together, it can be argued that excessive usage in a majority of cases appears to be purely symptomatic but that for what appear to be an exceedingly tiny minority, the Internet may be addictive" (Griffiths, 71). What Griffiths found was that excessive Internet play was "symptomatic" of player enjoyment and desire to "counteract other deficiencies in the

⁷ Morgan Spurlock's 2004 film *Super Size Me* looks into this phenomenon and might well have been, at least in part, the reason behind McDonalds changing its policy of referring to increasing food content in its "value meals" as Super Sizing. McDonalds no longer uses this term. *Super Size Me* was nominated for an Academy Award.

person's life (e.g., relationships, lack of friends, physical appearance, disability, coping, etc.)” and not to be confused with actual addiction (71). Griffiths' essay was largely focused on defining the parameters of addiction, but in summation, he acknowledges that while many people have “excessive usage,” it is only for an “exceedingly tiny minority” that the Internet is addictive—or, for my purposes, cyber crack. Given this conclusion, to which many of the researchers have come, the reasoning behind why there is not any real monitoring of MMORPGs is at least suggested. If there is no clear cry of “danger” coming out of the studies, then nobody is going to hear the warning, particularly not profit centered game companies.

So who is going to heed the warning signs? They are there, despite the din of disparate opinions amongst the academics. The point can be made from Griffiths' research that the existence of an “excess” of use has been established, and it remains simply a matter of scale—economic and actual head count—before some regulatory agency decides to step in to make sure the game companies are playing nice with people's psycho-social buttons; and I assert that the scale is already huge. Not only is the size of this phenomenon huge, it's growing fast. In examining the economic scale, if one applies some simple arithmetic to the trend it is easy to see how fast it's growing, and even to see how the profits might become large enough to perhaps justify continued research into how best to push player buttons to continue the growth *ad infinitum*. Consider this: on its opening day in November 2004, Blizzard Entertainment sold 250,000 copies of the World of Warcraft (Yahoo). The most recent figures have that number having grown to over nine million (Blizzard.com, press). Nine million is a tremendously large number considering that no one was playing this game three years ago, and the profits to be gleaned from that number are equally staggering: think nine million subscribers times fifteen dollars a month, which comes out to one hundred and thirty five million dollars a month

($9,000,000 \times \$15 = \$135,000,000$); then add in the roughly forty dollars a game, with an expansion set⁸ introduced roughly two years later at about the same price, you get another seven hundred and twenty million dollars ($\$40 \times 2 \times 9,000,000 = \$720,000,000$). Blizzard also has another expansion set coming out sometime in the near future, although no date has been announced (Blizzard.com, faq). Since that's not out yet, I won't bother trying to tallying it all up. But the point is obvious: game designers are making a ton of money by "pushing buttons" that they have carefully researched to discover how to activate. Now, since my point is that monitoring of games like World of Warcraft and the "excess" usage that some players may "symptomatically" suffer hinges on the scale of the problem being recognizably large, I suggest the following: even a tiny percentage of nine million can still be a staggering number of people.

But the tiny percentage is not the focus of game designers; it's the staggering numbers element, the staggering profits. In Klug and Schell's article, game designers are quoted as approaching game design with the following understanding:

People play games for a variety of reasons, in the main related to their desire to escape from the mundane world and enter into some kind of special world. Alternatively, they play to achieve something in that game world that earmarks them as special or allows them to establish dominance over others in this world. So, how do we begin to design games to take this knowledge into account? (Klug and Schell 97)

By asking "how do we begin to design games to take this knowledge into account" it is obvious that game companies *are* taking it into account (and into their bank account too). In one regard, game companies are doing what most capitalist enterprises do, finding—or creating—a need or a desire and then filling it for a fee. But at what point does the line between say Frisbee or suitcase

⁸ Blizzard introduced an upgrade to its original game release called *The Burning Crusade* which added new character levels and character types to the existing version of its game. Players buy a new set of CDs that adds new things for them to do to continue to develop and "expand" the character started in the original game version.

manufacturers become something more along the lines of crack dealing? As with most complex issues, there will be some gray area for sure, but my point is simply this: these games are not without consequence. Gaming companies are intentionally creating products to meet human psycho-social needs, and with that should come some form of accountability.

And the accountability does not lie simply in the fact that people are deriving social capital from the games, other implications outside just individual dependency are at stake. While the clinical research seems to support the finding that psychologically and socially there are benefits to be had from finding a nice “third place”⁹ to hang out with and to explore the possibilities of a an individual’s potential for leadership outside of the physical realities and social implications of a truly physical world, there are larger implications in the mix. As the numbers of subscribers rise the potential for problems for everyone do as well. There is danger of a slippery slope at stake, even if it is only a “tiny” one now, as in this trend there lays the potential suggested by the movie *The Matrix*¹⁰ wherein intelligent machines farm humans for energy. The difference between the movie and the reality of the current gaming trends is that for now, the control is not in the hands of the machines but of game designers instead, and that it’s not energy being farmed, but cash. The game designers are creating the “matrix” of the MMORPGS and the players are willingly plugging themselves in. The players are actually even paying for this. But given the trend in corporate research, and the concerted efforts to continue to make the games more appealing, and given the exponential growth of the game subscribership, the trajectory has begun. The more profits these companies make, the more

⁹ Robert Putnam and Dmitri Williams use the idea of “third place” to identify social spaces like bars, coffee shops and bowling alleys as places where people can come together in a setting that is less structured and therefore less socially constraining than is the workplace, a school or other more hierarchal social setting. There is “social capital” to be gained from the experience of interaction in these leveled social playing fields.

¹⁰ Science fiction movie wherein intelligent robots kept humans trapped in small vessels, hooked up to an artificial reality “matrix” that kept them content while their bodies were harvested for heat energy by the robots.

research they can afford to do, and the better technology they can afford to develop. And it is my point that such trends need to be monitored and, if necessary, checked or regulated.

Beyond the Matrix-like slippery slope, there are other social implications as well. These social implications lie in the fact that many of the people who allow themselves access to the gratification of the games are the very same people who could be benefitting society at large, real world society, if they were to apply the time and skills they have to real world events. An excellent example of this comes from a case study done by Dmitri Williams. He writes about a woman who is a leader of a guild¹¹ in the MMORPG *Lineage I*. Her guild is very successful at accomplishing tasks and goals in the game, and he writes that she is a “renowned guild leader” and that the game “enables her to play a leader in the virtual world in ways she is typically unable (or, more accurately, not allowed) to in ‘real life’” (Williams 9). First off, I’d like to point out the use of the adjective “renowned.” That word implies fame or some degree of positive recognition. That is Williams’ word, and he does not even go on to explain his choice of it. He simply addresses her in this fashion as he talks about her, implying that he himself, as someone who has had to play the game in order to know enough of it to study within its context, recognizes that people—players—can obtain degrees of status to which such adjectives can be ascribed. Furthermore, Williams is describing the fact that this woman is “a leader in the virtual world” which suggests that she is *not* a leader in the *real* world. However, to become “successful” and “renown” leading a large group it seems that a person requires a certain set of personal skills—confidence, intelligence, charisma etc.—whether it be online or off. Yet this woman is, by her own admission, not a leader. Williams asks her about her that very thing. She

¹¹ Players in MMORPGs often form large groups or teams, called “guilds,” that cooperate for the purpose of achieving very complicated in-game objectives that are too difficult or even impossible to accomplish by playing alone. These guilds can get very large, even including hundreds of members, and they can stay together for periods of time lasting as little as a few weeks, or as long as many years, even moving together from one game to another as newer, more technologically advanced MMORPGs are introduced.

replied, “Im nothing of a leader in RL [real life] ... I look like a simple silly person ... Im short, small ... im not loud or talk much... im shy.” To this, Williams asked, “well, what made u [you] different here [online] than in RL [real life]?” Her answer was, “I think physical presence... I dont see people, people dont see me... I dont have to worry about how I look or if my hair or clothes are ok... it sounds shallow but thats what it is” [sic] (9). So what this woman seems to be saying is that because people don’t actually, physically see her, don’t recognize that she is small, don’t realize that she is shy and don’t see what degree of fashion or cosmetic effort she has or has not put into her physical appearance she can, therefore, lead effectively. But the fact is, here is an example of a woman who is clearly capable of organizing a large group of people, successfully leading them through complicated in-game goals, and holding them together through all of the conflicts and squabbling that inevitably occurs in large groups over time. She *is* a leader. But look what she is leading: a game guild. She says “I look like a simple silly person” and “I’m nothing of a leader,” and yet, she is leading, and successfully so. And my point is that in leading online, she is not leading *off* line, and it is in the absence of her obvious leadership skill that I assert the existence of a larger social cost at stake in these games, and one that needs to be watched and monitored. If she’s leading other gamers in cyber quests to kill digital dragons, she is not leading other women to slay social dragons in the real world where women might still find themselves discriminated against because they are small, or shy, or because they don’t meet certain social expectations of how they should look and if their “hair or clothes are ok” or even just because they are women. This to me seems a better use of talent than buried away in some make-believe world online. To me, while this woman may be gaining some social capital of her own, the larger community of life is losing some. Now I admit that this woman has obviously lived her life apart from my opinion, and I don’t profess for one

moment to have walked a mile in her shoes, and I am certainly not claiming that there do not exist discriminatory practices in her community and even our society that might well be too large and complex for her to overcome or even attempt to overcome. However, my point is that, if people like her can find solace in the video games, and more and more like her are given the rapidly expanding subscribership of games like The World of Warcraft, the pool of people who are going to lead the charge against said discriminatory practices will dwindle as gaming companies research better ways to pull them away from the cruel realities of real life experience. That to me seems the heavy social cost of these types of games.

And I am not the only one who sees that real world potential lays in talents being seen, and arguably wasted, in these kinds of games. Sherry Turkle gave an interview on National Public Radio in which this idea of political potential being lost through these games was addressed. She said:

A lot of organization and a lot of political skill goes into making a good virtual life. And I guess I'm concerned that the young people . . . bring those skills back out [into real life] to address the problems in the physical real [and] in the political situation that we face in this country and in the world. And I've done several studies with people who self-identify as being politically active in cyberspace by which they mean that they're very involved in the politics of virtual world, who proudly say they don't vote.

Turkle is concerned with the social implications of these games too, pointing out that the skills being used to run and deploy these game guilds should be used to deal with "problems in the physical real" and the "political situation we face in this country and in the world." Which is exactly what the woman from Williams' study wasn't doing, she wasn't addressing the physical

real and political situation in her part of this country and the world, yet seemed possessed of the skill set to do so. Her case study exemplifies Turkle's point. When you add in the idea that players are actually "politically active in cyber space" and yet who "proudly say they don't vote," it seems to me that there really is a problem brewing beneath the surface of these games, games being created by companies doing research and "pushing buttons." The players Turkle is talking about are "proud" they don't vote. This is not the same as just admitting they don't vote, as if they knew they should be but don't care or can't be bothered. No, these players are proud of the lack of participation in real world society. They are happy about it; it appears to actually make them feel good. Crack makes people feel good too.

The reality is that companies like Blizzard Entertainment are in business to make money, which is a perfectly legal and encouraged activity in the United States. However, there comes a point when the pursuit of profit, particularly when that pursuit includes research based understanding of what makes human beings tick, these companies must recognize—or be made to recognize—that the products they distribute come with some responsibility and culpability. In some industries, this realization has already come, or been forced upon them. But for others, like Blizzard Entertainment, this realization hasn't hit home. It seems the closest Blizzard Entertainment comes to acknowledging that a problem exists comes in the form of a game tip that pops up occasionally when players log into the game that says, "The Parental Controls section of the Account Management site offers tools to help you manage your play time." On the surface, this seems like a tip for parents to manage a child's play time, but look closely: Blizzard's game tip says "manage your play time." *Your* time, not your child's. There's a difference. Now granted, this may have simply been an oversight in editing the game tips, but I have a hard time accepting that, or at the very least letting them so easily off the hook,

particularly given what's at stake. And what's at stake is participation in the real world by real people, people with skills to lead and, at the very least, to vote and shape society. If the big companies can find a way to keep people happily glued to their computer screens, keep them from fighting against exploitation or marginalization or any other bad kinds of -ation, then there is a risk of companies, through the continued research and development of these crack-like products, to have a frighteningly large portion of our society essentially being farmed for cash much like the humans were farmed for energy in *The Matrix*. If game developers devise newer forms of cyber crack, users will keep buying it and sit happy in their homes, "Closet Basers." For me, this is too much control for large corporations to have. The strength of our country, to my mind, has always come from the balance of voices, always arguing to find the middle ground between strong economic growth and concern for the individual. But if economic powers are allowed to push our buttons and make our voting voices fall "proudly" silent, then that balance begins to wane. Consumers need to pay attention. Just because much of the research says these games are fine, and that the problems presented from them are "symptomatic" and only a "tiny percentage," I just want consumers to be aware that there is a danger if we don't at least allow that the possibility of "cyber crack" is real. I saw the movie *The Matrix* and I've read a lot of newspaper articles about U.S. companies with too much power and influence—think Enron, WorldCom, various cigarette companies and any number of robber barons from the past—and, frankly, I'd almost be happier letting the *Matrix* robots farm me than some of those guys. So just be aware. That's my point.

Works Cited

- Blizzard.com. FAQ. 10 Oct. 2007. <<http://www.blizzard.com/press/070724.shtml>>.
- . Press Releases. 24 Jul. 2007. 10 Oct. 2007 <<http://www.blizzard.com/press/070724.shtml>>.
- Blizzard Entertainment. The World of Warcraft. CD-ROM. 2004.
- California Rehab Facility. "Drug Related Street Terms/ Slang Words." 12 Nov. 2007.
<<http://www.addictions.org/slang.htm>>
- Crack Cocaine.com. "Cocaine Prices." 2000. 12 Nov. 2007.
<<http://www.crackcocaineaddiction.com/cocaine-prices.htm>>.
- Griffiths, Mark. "Internet Addiction: Does It Really Exist?" Psychology and the Internet: Intrapersonal, Interpersonal, and Transpersonal Implications. Comp and ed. Gackenbach, Jayne. San Diego: Academic. 1998. 61-75.
- Klug, Christopher G. and Jesse Schell. "Why People Play Games: An Industry Perspective." Playing Video Games: Motives, Responses and Consequences. Comp. and eds. Vorderer, Peter, and Bryant Jennings. Mahwah: Lawrence Erlbaum. 2006. 91-113.
- Reuter, Peter. "On the Need for Dynamic Models of Drug Markets." University of Maryland and RAND Drug Policy Research Center. 12 Nov. 2007.
<<http://www.puaf.umd.edu/faculty/reuter/Modeling%20Drug%20Markets.pdf>>.
- Turkle, Sherry. "Go Get a (Virtual) Life." Interview with Ira Flatow. Talk of the Nation: Science Friday. National Public Radio. KXJZ, Sacramento. 31 Aug. 2007. Transcript.
- Williams, Dmitri. "Where Everybody Knows your (Screen) Name: Online Games as 'Third Places.'" Journal of Computer Mediated Communication 11(4) article 1. 7 Oct. 2007
<<http://jcmc.indiana.edu/vol11/issue4/steinkuehler.html>>.

Yahoo.com. "The History of the World of Warcraft." Yahoo Games. 6 Jan. 2007. 28 Oct. 2007.

<http://videogames.yahoo.com/printview_feature?eid=500851>.