MMORPGs such as *World of Warcraft* have instigated concern in scholars and the press about the usage patterns and habits of the players. Often, doctors cite extreme cases of neglect in order to bring attention to this ‘social phenomenon’ of popularity and addiction (Orzack as cited in Steinkuehler, 2004). Indeed, certain factors and attributes that can promote or amplify addictive behaviors are present in these games, and are also cited as reasons for playing. The amount of time players spend in virtual worlds, as well as real life consequences of playing are seen by some as indicators of a new and dangerous addiction. However, while speaking to players, they themselves compare their playing habits to any other hobby or activity that pleases and excites its user. Where can the line be drawn between addiction and proclivity? Does the fact that MMORPGs entice people and, often, keep them playing necessarily mean that they facilitate addictive behavior and negligence towards responsibilities? Doesn’t it make a difference that these games often satisfy some important emotional, social and psychological needs of players? MMORPGs can provide players with valuable relationships, interactions and learning experiences that do not necessarily detract from the real life counterparts of these fulfillments. However, why is it that players often choose to satisfy these needs or desires in virtual worlds? From what I have gathered through research, game play, and interviews, the answer is that a) they can, and b) it’s *fun*. As simplified as this answer may seem, the nature of the game and the virtual environment promotes (mostly) consistent and enjoyable ways for players to satisfy emotional, social and psychological needs and desires. An attachment can be formed to friends made, avatars created, or environments explored, but from my perspective, the attachment and enjoyment that results from game play should not warrant the same concern that scholars assert toward gambling and narcotic addiction. True, some players allow their habits to negatively affect their responsibilities and obligations, but these players do not represent the majority. From what I have discovered, the more experience players have with these environments, the easier it is for them to manage both their virtual and real life responsibilities and recreations.

**Literature Review**

**The Psychology of Addiction**

Psychologists have studied certain aspects of a person’s psychological makeup that may amplify their susceptibility toward addiction. Apparently, some of these personal qualities are especially catered to by the Internet and online games. Findings by Gabel, et al (1999) state that novelty seeking, or the need for “new, exciting, challenging, or varied experiences”, is highly correlated with the misuse and abuse of substances. *World of Warcraft* and other MMORPGs present players with a variety of different quests to fulfill, areas to explore, monsters to kill, and people to meet. Shyness has also been a personality trait associated with Internet addiction. The Internet provides a simplified medium for communication that erects a shield between users, thus allowing people with insecure social skills to interact more comfortably and openly (Chak & Leung, 2004). Shyness was determined to have a significant correlation with Internet addiction, and the reasons behind this can also be found in virtual worlds. The successful achievement of mastery in virtual
worlds can be an indicator of an internal locus of control, which Chak and Leung (2004) determined makes a person less likely to be addicted to the Internet. If a person believes in their own abilities to control the virtual world, they would also be able to control their gaming habits and distribution of time and energy (Chak and Leung, 2004). Conversely, Rheingold (1993) considers mastery to be an element that offers players who lack status in the real world a chance to achieve recognition and confidence in virtual worlds. This idea suggests that the ability to control and succeed in games provides players with another incentive to satisfy needs and desires in the virtual world instead of reality. All addictions produce a change in neurochemicals in the brain; when people engage in pleasurable experiences, dopamine is produced, which reinforces the activity taking place (Greenfield, 1999). This reinforcement can influence players’ frequency of use, as their brain tells their body to continue the gratifying action (in this case, playing the game). The psychological aspects involved in addiction can be seen as motivating factors that reward and reinforce game play.

Attractions and Motivations

Specific characteristics of MMORPGs can attract players to the environments and encourage extended playing time and repeated returns to the game. The data referred to in this section is from Nick Yee’s (2002) extensive research on MMORPGs, specifically the attractions to and motivations for game play. Yee cites three main attractions of virtual worlds- the rewards cycle, the network of relationships formed, and the immersive nature of the environment. In World of Warcraft, the rewards cycle keeps players wanting more; the ability to progress quickly at the beginning of the game reinforces play and promotes certain behaviors. However, the “instant gratification” provided initially begins to lengthen, and gaining experience points is harder, leveling up takes longer, and, therefore, extended playing time is necessary to receive rewards. This “slippery slope” of rewards, and the variety of areas in which players can be rewarded, encourages continuous and prolonged playing time.

Forming relationships with others in the game is also an attraction that keeps players attached. The nature of World of Warcraft and other MMOs encourages group play (for many races and classes) in order to succeed. Encountering stressful situations with other players requires a sense of trust and dependency, often forming a bond in groups. Guilds exist to stabilize groups, and some guilds and groups establish playing schedules and meetings to attend, thus creating an obligation to play. Also, when playing with friends, there is sometimes a competitive need to progress at the same level as others so that each player can handle a similar difficulty level in quests. Depending on the class of the avatar, players are expected to fulfill certain roles in group play. This encourages time investment because a player is obliged to fulfill their role in a quest or instance; if they do not sign on to play, they will have disappointed the group. The anonymous context of the virtual world may also allow players to disclose personal information to online friends. The consequences of disclosure may be less threatening because online friends are not face-to-face and often do not know a player’s real life social circumstances. The third factor Yee states is the immersive nature of virtual worlds, a concept that will be addressed later. Different attractions apply to different players, and often a combination of these factors can facilitate repeated game play.

The motivations Yee cites for players’ investing time and energy into MMOs can be related to the psychological aspects that promote addiction (discussed earlier). These motivations are real life stresses or problems that drive players into virtual worlds, often for escape. The need to feel powerful and accomplish goals can often be satisfied more easily in virtual worlds than in real life. Also, low self-esteem and a poor self-image can be overcome
in MMORPGs; in the creation of avatars, players are able to depict their physical attributes in any way they wish (almost...). Representing oneself as a strong, capable and attractive character can give players a better self-image through the treatment they receive or the satisfaction they acquire through success in the gaming world. Yee also cites a sense of control similar to mastery as discussed earlier. Feeling as if one’s real life is a result of overpowering circumstances can be overcome by exerting control over the virtual world or other players. Finally, simply playing the game and having fun can be a fulfilling stress reliever, allowing the player to escape real life problems and immerse themselves in their other world.

Immersion, Engagement, and Flow

When a player is immersed in a game or environment, they are engrossed with the story taking place in the world and the strategy involved in playing (McMahan, 2003). “The sensation of being surrounded by a completely other reality” and the activity of participating in this other reality are defining characteristics of immersion (McMahan, 2003). Engagement refers to the investment players make, often in an irrational context, while immersed in the game (McMahan, 2003). Qualities of virtual worlds, including graphics, the intelligence of the environment and non-player characters, the quality of social interaction in the game, and a realistic representation of objects, events and people can all increase players’ achievement of immersion and engagement (McMahan, 2003). The absorption that can result during immersion and engagement, when players are in a mode of complete concentration and enjoyment, is referred to as the flow state (Chou & Ting, 2003). Chou and Ting (2003) found a higher correlation of flow as an addictive causing behavior than repeat play, citing concentration, playfulness, time distortion, telepresence, and exploratory behavior as characteristics of the flow state. They also determined that certain components of flow to lead to goal confusion and obsession, two factors of addiction that influence a player’s behaviors and habits. The flow state can be experienced in virtual worlds in a subjective context, where a variety of activities can induce the state in different ways for each player.

Study Design

The purpose of this project was to determine the qualities of virtual environments that lead players to form attachments and addictive behaviors. Why are players so eager to satisfy their psychological, social, and emotional needs in virtual worlds? What aspects of MMORPGs encourage addiction in players, and how do players respond to the attachment that can result from extensive game play?

In order to answer these questions, open-ended surveys were distributed and interviews were conducted. The content of both methods were generally similar, although the interview allowed a more interactive setting where responses could incite reactions and further probing where needed. Questions referred to time invested in gaming, habits of game play such as grouping and reward reinforcement, characteristics of relationships with others, motivations such as shyness and escape, novelty seeking, mastery and control, and indications of flow, immersion and engagement. These surveys and interviews were conducted with college students, game developers, and experienced gamers. The range of experience in MMOs varies from five months to eight years; a few gamers admitted to playing seven days of the week, while most said 3-5 days, depending on other time obligations and workload. The final sample for this study was acquired from college students and gamers on forums online. I posted a thread on multiple MMORPG forums, requesting responses from gamers about playing habits and motivations and asking them to state a preference of method- a survey sent through e-mail, or an interview in-game or on AOL
Instant Messenger. Most of my responses from students were in interview form, whereas forum responses were conducted via open-ended surveys sent through e-mail. While I requested subjects on multiple forums, one forum in particular was much more willing to assist in research, and my thread stayed on the first page for a few days, resulting in replies and private messages of interest and encouragement. One interviewee informed me that older players, with an average age around 28, mostly visited the forum. I think their experience in virtual worlds may have contributed to their willingness to help. In addition to interviews and surveys, weblogs and sites of interest were consulted to obtain insight into more player habits and discussions of MMORPG addiction.

**Results and Discussion**

The results from research indicate a definitive player’s perspective on the characteristics of play behavior, habits and investment. The most common game attraction in responses referred to the network of relationships formed and maintained in the game.

> *My friends are pretty much the reason I keep coming back for more- if it wasn’t for them I’d have gotten bored ages ago* - axe

The idea that grouping in MMORPGs is almost necessary once a certain level of difficulty in the game is reached is evident in most players’ preference to playing in groups, membership in a guild, or at least some experience in group play. Groups and guilds often establish specific times to hold meetings or complete quests, dungeons, and dedication to a group or guild is an important aspect of membership.

> *When I was in a guild... we would have scheduled events that most people were expected to attend...there were consequences for those who missed too many events* - jester

> *I’ll start a dungeon, and you won’t want to get up in the middle of the dungeon because a) your party will f--king hate you forever if you bail on them in a dungeon, and b) sometimes it takes a lot of effort to get a decent party for a dungeon* - koala

This obligation to fulfill certain roles in groups, along with simply being present for events, can increase a player’s time investment as well as provide him/her with a necessary reason for playing. If social relationships are an important aspect of game play, than fulfilling commitments to online friends is a necessary activity. The difficulty of forming valuable groups with strangers to complete certain quests, dungeons or instances was expressed by multiple players.

> *I prefer to stick with my friends in groups- by and large I don’t like to look for pick-up groups.* - axe

> *[I usually group with the] same people. I almost never group with strangers, as they can be self-centered and extremely immature as a rule.* - bear

The other more experienced players I interviewed also expressed this preference to known group members. Interestingly, newer players more often played alone, suggesting a rift between players based on experience. If successful groups are hard to come by, and good group players mainly stick with each other, how can new players experience a satisfying group experience? If the social aspects of games encourage repeat play, how can new players form meaningful relationships if more experienced players are unwilling to show newbies the ropes? This may be a discouraging aspect for some newer players who find
they cannot solo for long, but also cannot find efficient groups to quest with. Interestingly, there were not many responses signifying the anonymous context inspiring a more open communication forum for disclosure. In multiple cases, it was quite the opposite:

*I usually don’t disclose any information to anyone in WoW, and I don’t expect them to either. I have no interest in meeting them or knowing more about them. I just like to play and enjoy the experience.* –drape

*I do not and will not disclose any personal information about myself because of my anonymity and the shield of my character.* –cone

The anonymous nature can facilitate a more open nature in people, but not always in a friendly manner.

*Honestly, I feel it’s safer to be rude to people in game than in real life. Like most people, I spend a lot of energy trying to be polite in real life, either out of fear of harm or fear of alienating others. In a game, there’s not much harm they can do to me, and it’s no big loss if I alienate them.* –bear

A few players did state that game play could facilitate relationships in the real world with others who also play the game. This is a way that players can use the game to extend their social network in real life by establishing commonalities between strangers and facilitating discussions about game play and experiences. Another interesting disparity between existing research and my findings was that not a single subject admitted to being a shy person or having any self-image or self-esteem problems. This may be an aspect that players are unwilling to openly identify in themselves, but could also indicate that not all players form social relationships online because they are unable to form them in reality.

Other characteristics of addictive behavior were expressed and contradicted through players’ gaming habits and attractions. The reinforcing rewards cycle in games successfully fortified repeat and prolonged behavior in some players, while others seemed unaffected by its pull.

*There’s always something to be done or a level to reach, it gets harder at higher levels because it takes so much experience to level. I thought that would stop me, but I think it just made it worse because I wanted to get higher and higher.* –drape

*I’ll play and be goal-oriented instead of time-oriented. It’s all about the next level, the cool new skills or items you can use... that’s what it’s all about to me.* –jester

Other players, more experienced players, stated that they used to play that way, but now they simply “get it later” instead of extending playing time to achieve their goal during the session. Once again, a distinction is drawn in playing style between players who are familiar with multiple MMORPGs and those who started playing with the release of World of Warcraft. This distinction can also be seen in the way players seek novelty in games. Newer players enjoyed fulfilling new quests, exploring new areas, and acquiring new objects. While I am sure these aspects are also enjoyable for more practiced players, they cited the progression from one MMORPG to the next as an incentive for seeking new, exciting and pleasurable experiences. Some players described an unwillingness to progress quickly through a game because they were reluctant to get bored with the content and move on to the next game before fully experiencing their current virtual world (Tobold, 2005).

The contradiction in existing research regarding the influences of mastery on addiction is similarly expressed in interview responses. Experienced and newer players alike
claimed they could not control the virtual world due to the nature of design in *World of Warcraft*, but did enjoy feeling a sense of mastery in specific circumstances.

*When playing WoW, I really don’t have a sense of control over the virtual world... it feels more like I’m subject to it, that I’m navigating some wilderness that at any time can bring its wrath down on me.* –jester

*On my level 60 rogue- I feel like he is unstoppable against most normal monsters... other characters- in some senses- with my priest I feel like I am a GOOD group player, and I get a good sense of satisfaction from keeping my group alive... I enjoy being immersed in the game and the fact that no matter what I do, there will always be tougher monsters I can’t take on by myself, so I will never fully be in control.* –axe

Thus, according to players and consistent to some research, a lack of control can increase a player’s attraction to a virtual world; this may be because the constant challenge keeps boredom at bay. However, feeling mastery in some ways reinforces players’ behaviors because of the satisfaction they receive from successful endeavors and fulfillment of roles in play.

When looking at indicators of flow and immersion in game play, there is another distinction drawn between newer and older players of MMORPGs that is similar to the variation in reactions to the rewards cycle. Experiences of time distortion, absorption in game play and the influence of advanced graphics were all experienced by newer players, while these factors seem to have lost their luster in more experienced players. Drape cites multiple examples of these qualities that draw him into game play:

*It’s really easy to [play for hours and not realize the time] with WoW because there’s so much to do...Usually I am totally absorbed while playing, especially when I put my headphones on and turn off the lights in my room it is easy to get sucked into the virtual world... Usually whenever I am in an instance I am really immersed because I’m with a group and I feel like we are on a quest for survival. Almost like reading a story, except now I can control what happens.*

Other newer players simply asserted a positive response to questions relating to these questions. More experienced players expressed negative responses to experiences of time distortion and extension, absorption, attachment to characters, engagement, immersion and the influence of graphics, or only experienced these aspects “sometimes” and in context to specific situations. Some examples follow:

*I sometimes [find myself playing for hours and never realizing the time], but I run a home office, so I’m VERY time aware these days and this hasn’t happened in a while. [A sense of immersion happens] in the context of me being the only one home.* –frog

*I used to enjoy [the fantasy aspect of MMOs], but through the years, I stopped seeing my avatar as “someone else I was becoming” and more a set of computer systems that I use to interact with an artificial world... I despise the tendency of game companies to focus more and more on the graphics as a way to increase “immersion”. Graphics may attract new users, but existing users learn to forget the graphics. And that’s when, in my opinion, they start playing the game and stop looking at it... I’m easily distracted and frequently die a lot because [I’m not totally absorbed while playing]. If the new trailer for Harry Potter were to play of TV, for example, I would most likely forget I was playing and turn to watch it... then most likely turn back to my character and see it was killed by orcs or something.* –bear
Ideas similar to these were expressed by other more experienced players; however, a few experienced players did enjoy the immersive nature of the graphics in comparison to text-based MUDs they had played before.

There are limitations in this research. First, the sample involved is extremely small and cannot be representative of the entire gaming community in any way; ten interviews from two main sources cannot be generalized to the 1.5 million subscribers to *World of Warcraft* alone, not to mention the plethora of other MMORPGs available. Similarly, the time allotted to conduct this research was much shorter than the amount of time necessary to receive quantifiable data from a multitude of sources. Another problem lies in the ability of potentially addicted players to accurately recognize and portray their gaming habits and behaviors. Whereas a player may say his/her "hobby" is under control, sources close to the subject may beg to differ. I vaguely attempted to tackle this problem in one question of the survey, which said, "If I asked your roommate if your time responses were accurate, would they agree with you?" My responses to this question were overwhelming positive, which may suggest a problem, but at the same time, heavy players willing offered up answers of extensive playing times. If more time was dedicated, a brief interview with a source close to the respondent could clear up any discrepancies in behaviors reported by players.

Another problem may lie in my disregard for the extreme cases often cited by doctors and researchers investigating this topic. These cases of addiction and neglect are not hard to find; in fact, an entire forum exists for loved ones of addicted players and "cured" players who once had a serious addiction. The extremes do exist, and serious problems can result from extensive game play. However, my reasons for neglecting this data lies in the fact that previous researchers used these extremes to imply a norm, and they assumed that an addiction would necessarily lead to dangerous consequences for players and their loved ones. While reviewing the thoughts of players on this topic, I recognized an obvious frustration with these assumptions and the existence of an in-group vs. out-group perspective. Gamers, especially those who were able to control their playing, were exhausted with and annoyed at doctors and journalists who freely prescribed such a negative label without much experience in the game and with the gaming community.

Indeed, Adams (2002) expresses his exasperation towards this idea in an article/rant found on GamaSutra. He recognizes the implications of the term ‘addiction’ on the general public, where it can incite a comparison of games to drugs and game developers to drug dealers with the intent of rotting the minds of children. Adams appeals for a new term to describe the “addiction” people refer to in gaming terms and suggests “compelling”. This is one reason why I never used the term addiction when conducting my research; I was aware of the negative implications of the term and the frustrations of gamers at the constant attention this idea is given by “outsiders”. I did not want assumptions to be made that might skew players’ willingness to participate in the study, and I did not want players to alter their responses in an attempt to disprove the assumptions made by other researchers. I do not mean to imply that problematic addictions never occur as a result of game play; I simply wished to answer my research questions without the bias of a preliminary, negative assumption.

**Conclusion**

These multiple factors of addiction and symbols of addictive behavior express the ability of games to entice some players into the virtual worlds and keep them there, always wanting more. However, some players experience a few of these aspects and are aware of the rest, but do not allow them to influence their behaviors or habits of game play. It seems as if the more experienced players have caught on to the addictive aspects of the games
and allowed themselves to play without being heavily influenced by these qualities of MMORPGs. Although they may play for extended periods of time (some cited seven days a week) they also claim that their responsibilities and obligations in the real world are not negatively influenced by game play. Specific questions were integrated into the survey that were directly taken from Dr. Greenfield’s Virtual Addiction Test (1999). When asked about concerns from friends or family members, most experienced players stated that if, or when, these concerns were stated, they scaled down their playing time appropriately. Others gauged their amount of time spent playing depending on the amount of work and other real world obligations they had at the time. Most did not lose sleep, were not preoccupied with the game when not playing, and explicitly expressed their priorities of work before play. While many players, experienced and new alike, expressed playing as a form of escape, they compared this escape to any activity a person would take to relieve stress or relax, such as watching television, going out to a bar, or exercising. Rheingold (1993) cites Pavel Curtis, the creator of LambdaMOO, in his discussion of the addictive nature of MUDs:

These are very enticing places for a segment of the community. And it’s not like the kinds of addictions we’ve dealt with as a society in the past. If they’re out of control, I think that’s a problem. But if someone is spending a large portion of their time being social with people who live thousands of miles away, you can’t say they’ve turned inward. They aren’t shunning society. They’re actively seeking it. They’re probably doing it more actively than anyone around them. It’s a whole new ballgame.

This concept of communication and relationship seeking activities in players can still be applied today to MMORPGs.

The less experienced players of virtual worlds did have a higher frequency of positive responses to symptoms of addiction; three respondents (all college students) who exhibited very similar consequences of extensive play will be referred to in this context. They often lost sleep, and one player (koala) cited his prescription to adderol as directly facilitating his ability to play for long periods of time that often extended late into the night. They expressed a preoccupation with the game when not playing by thinking about past or future experiences in the game, especially while sitting in class. Two of the subjects found the question of escape laughable:

Why does anyone play games other than to procrastinate and get a little joy out of this wretched existence we call life? –jester

This statement was somewhat of an exaggeration, and it should not be taken as a serious cause for concern, honestly. Some of these responses, from my perspective, represent the frustrations of college life more than a serious addiction to MMORPGs specifically. Many students daydream in class about the many things they would rather be participating in other than school. In addition, these three students expressed that if they did not play World of Warcraft, a similar amount of time would be spent engaging in some other form of procrastination and escape. As a fellow student and non-gamer (mostly), I can honestly vouch for this idea. The stresses of school require some time to relax, and most of the students I know find ways to occupy this “time off” that does not include studying or playing MMORPGs. My identity as a student can be compared to heavy players’ identity as a gamer: we don’t appreciate outsiders diagnosing our behaviors negatively when they do not understand the circumstances under which these activities take place. If players’ use MMORPGs to escape from stresses in the real world, it should be noted that there are many less intellectually stimulating activities in which college students and gamers alike can partake to relax, unwind and escape.
The disposition for gamers to satisfy social, psychological and emotional needs in virtual world is facilitated by addictive factors inherent in MMORPGs and often their players. However, the variation in the types of players that satisfy these needs online, and the ways in which these needs are satisfied, implies a desire to play more than a need. Players did not express any personality characteristics that signaled an inability to fulfill their needs in the real world; they preferred to fulfill some of these needs in the virtual world because it provides them with an enjoyable medium for communication, relationship formation, and escapism. The impact of time investment and attraction to game play is relative to a player’s experience in virtual worlds. Players who have explored and encountered a variety of MMORPGs, as well as MUDs, seem capable of recognizing the addictive factors of games, thus allowing them to manage the influence these characteristics have on their responsibilities in the real world. Perhaps these players can identify the “dangerous” aspects of MMORPGs because they themselves were once less experienced players who were sucked in by these aspects. Players with less experience in these types of immersive environments do show a higher predisposition to addiction formation, but the ability of older players to learn from their “mistakes” suggests a learning curve where players will eventually recognize which aspects promote “addictive behaviors” and will thus learn to discount the especially enticing aspects that facilitate negligence toward reality. However, further research is necessary to explore this possible development and decline of “addiction” relative to MMORPG experience.
Interview questions

- How long have you been playing MMOs?
- On average, how many days of the week do you play MMOs/ WoW?
- How much time do you usually spend online during each gaming session?
- Do you often find that you intend to play for a certain amount of time, but end up spending considerably more time playing than originally planned?
- If I asked your roommate if your time responses were accurate, would they agree with you?
- How many different characters do you play?
- What are the levels of each of these characters?
- Why do you play?
- Do you find yourself extending your play time after a minor set back or when you’re close to completing a quest/ leveling up/ acquiring a desired item, etc. in order to get that one last thing?
- Do you often play in groups or guilds? Do you prefer this to playing alone?
- When playing in groups, do you usually play with the same group of players, or does it vary depending on quests or instances you face at the time?
- Do you have scheduled playing times where you meet up with the same group of friends and quest together?
- Do you consider your online friends to know you better than your real life friends? Do you disclose more personal information to these friends because of the relatively anonymous context of interaction?
- Do you experience a sense of mastery or power when playing?
- Do you enjoy feeling in control of the world in which you play? Is this an aspect that draws you into the game?
- Do you find you can interact more openly and comfortably in a virtual environment than in face to face conversation with others?
- Do you consider yourself a shy person, or do you have any self image problems?
- Do you feel your social interaction with others in real life has suffered due to consistent interaction with the virtual world?
- Have your game-playing habits influenced your obligations to schoolwork, career goals, and/or friends and family?
- Have any friends or family members expressed concern over your game playing habits?
- Do you find yourself playing for hours and not ever realizing the time?
- Do you feel a release in tension related to real life problems when playing? Do you play in order to escape from these problems or stresses?
- Have you ever lost sleep due to playing?
- Do you enjoy the fantasy aspect of MMOs and the idea of becoming someone else?
- Do you feel a sense of attachment and empathy for your game characters?
- Do the graphics in virtual worlds increase your ability to connect with the environment and feel present in the world?
- Do you consider your actions in the game to have a meaningful impact on the virtual world?
- Are you preoccupied with the game when you’re not playing it? (ie: do you think about past experiences or future plans in the game?)
- Are you totally absorbed while playing?
- Does this immersion happen occasionally or in context with specific activities?
- What activities or features keep you returning to the virtual world?
- Do you keep playing even when you are frustrated or annoyed with a particular aspect of the game? Why?
- Have you tried to stop playing or cut back on playing time? Have you succeeded?
Works Consulted


