

A PSYCHOSOCIAL APPROACH TO THE USE OF THE INTERNET AND MASSIVE ONLINE ROLE PLAYING GAMES

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Abstract. *This paper seeks to provide an interdisciplinary systematic approach to the use of the internet, with special emphasis on the so-called Massive Online Role Playing Games (MMORPGs). The research effort here focuses on a general framework of studying internet addiction and its relevant psychosocial components and dimensions. This needs a comprehensive introduction to the contemporary notions of virtual communities, cyberspace and cybersociality, as well as to the crucial concepts of addiction and addictive behavior. Such an introduction is offered with the help of specific research data on the use of the internet and online games. The paper also presents and critically discusses recent demographic data on the use of MMORPGs and recent analyses of the personality of the excessive/addictive user, as well as of the various levels of user involvement. It finally concludes that an open-ended, well-rounded and dynamic psychosocial approach to technology, the internet and MMORPGs should necessarily include the "unpredictable" and seriously take into account the complex multiplicity of the relevant dimensions.*

Key words: *psychosociology, social research, virtual communities, addiction, internet, methodology.*

*'Time' has ceased, 'space' has vanished.
We now live in a global village*

Marshall McLuhan,
The medium is the Message, 1967

1. INTRODUCTION

Describing rapid social changes in Western societies during the 1960s, the Canadian educator and philosopher Marshall McLuhan (1967) perceptively refers to an *electronically-regulated world*, which ultimately forces us to move from the practical habits of arranging data to the meticulous recognition of patterns and regularities. Nowadays, the constant changes in the wider field of information and communication technologies feed a kind of *cybersociality* that pertains to the myriad spontaneously-emergent forms of sociality, which are self-organized and self-evolved within cyberspace. In this immaterial space, individual and collective identities, biographies and personalities are re-defined and re-shaped, in a radical and dynamical way. Meanwhile, cyberspace is becoming the main arena of an irreversible, uncontrolled and unpredictable process of globalization.

The emergent alternative forms of community life are outcomes of a *non-spatial here and now*, where different voices, cultures, memories and traditions are gathered, in a genuinely pluralistic way. The common denominator here is the pluralistic co-existence of new virtual worlds within an ever-expanding globalized field. Social networking is gradually digitalized and this results in an overwhelming transformation of its aesthetics, its character, its content and its cultural and psychological dynamics.

Nevertheless, the fundamental principle of virtuality signifies the ontology of a wholly new culture, which is both realistic and virtual. The ongoing interaction and interdependence of virtual communities increasingly enables human minds and groups to fruitfully interconnect to each other in and through a self-expressive anonymous *thinking collective*, which is unified in its vast diversity and made possible through the fluid, unstable and speedy cyberspace.

Of course, the central transdisciplinary notion of "community" (*Gemeinschaft*) is very familiar through, for instance, the "Royal Society of London", the "Community without propinquity" (Melvin Webber), the "community liberated" (Barry Wellman), or the "Imagined Communities" (Benedict Anderson).

But following the dramatic gradual loss or decline of "real" or "physical" human communities, the highly contentious and ill-defined "cyber-conception" of "virtual communities", within the ICTs-and-Society field, signifies a decisive historic break with material human geography and the subsequent emergence of dynamic Net-based "social aggregations" (Rheingold 1993), electronically-grounded, complex networks of interactive social, cultural, political and economic relations.

A virtual community (e.g. a Massive Multiplayer Online Game) is conditioned by the basic principles and rules that define the behaviour among the "users" or "members". By definition, consequently, the participation in a virtual community is conditioned by a number of specific regulations, which have simultaneously socio-psychological and technological content and character, without which it would be totally impossible for such a community to exist.

In virtual communities, every member has the ability to actively and interactively participate and engage with members from around the globe, as well as to converse and exchange views upon any subject of personal or public interest. Virtual communities are perhaps the most people-centric, interactively collaborative and creatively participative technological enterprise in human history, giving substantial impetus to emerging socio-political, cultural and intellectual movements. For the first time, humanity is spontane-

ously moving so fast towards a non-linear, self-organizing and self-evolving *community model* of democratic governance.

Massive Online Role Playing Games, as genuine virtual communities, are fundamentally grounded on individuality *and* interaction, locality *and* universality. Through these technologically-constructed environments, people obtain the original chance to imaginatively visualize their personal visions and interests, in an immediate way. They are also enabled to develop new and direct forms of cooperation and communication (sometimes extended off-screen), as well as to overcome social or geographical exclusions, enriching their skills and worldviews.

2. CYBERSOCIALITY, DEPENDENCY AND ADDICTION

When did "cybersociality" and "virtual communities" actually appear? Are these just a reaction to the dramatic loss or decline of real human communities? Already, since the dawn of the new millennium, S. Junnarkar notes that the more time people spend on the internet, the less time they get together with other people in real life settings. This makes us wonder how "normal" is it for someone to invest in a "cybersociality", de-investing from the "earthly" sociality which surrounds him/her by conditions of physical presence and interaction. Consequently, if the internet reduces our sociality, we can assume the hypothesis that it leads us to form an addictive relationship. Yet, when does the use become abuse and when do we call abuse an addiction? We have many possible and plausible answers to this question. Mental health professionals, sociologists and educators form theories and propose solutions. Reporters sometimes distort facts and parents with children are targeted from all directions (scientific and non-scientific). A desperate voice of a young user helps us proceed with our train of thought: "I watched a show and they were rumbling about crazy stuff. I bet many mothers have watched it too and they will get paranoid again. Of course there is addiction but I think that something must have gone wrong for someone to get addicted. And certainly I am not talking about the web itself, but about something else." As we see, the young people are often the target of every kind of reaction from their parents and they try to locate where the addiction is. At this point, let us try to define "internet and online games addiction".

M. Schlimme (2002) defines addiction as a primary, chronic disease, which is characterized by impaired control over the use of a psychoactive substance and/or behaviour. In clinical terms, the manifestations occur along various biological, psychological, sociological and spiritual dimensions. We easily assume that the above definition can also be applied to the excessive use of the internet and especially of the online games. The very first definition of internet addiction was formulated by K. Young (1996), when she tried to apply the diagnostic criteria for pathological gambling. Nevertheless, she was harshly criticized for the validity and credibility of the sample she used, with results showing 70 - 80% percentage of prevalence of the disorder. So, J. M. Grohol suggested an alternative model (see Figure 1), in which the pathological internet use is considered as a phasic process. Users were at first enchanted by the activity (characterized by some scholars as "obsession"), followed by disillusionment (with chatting) and a decline in usage; then, a balance was reached where the level of chat activity has been normalized.

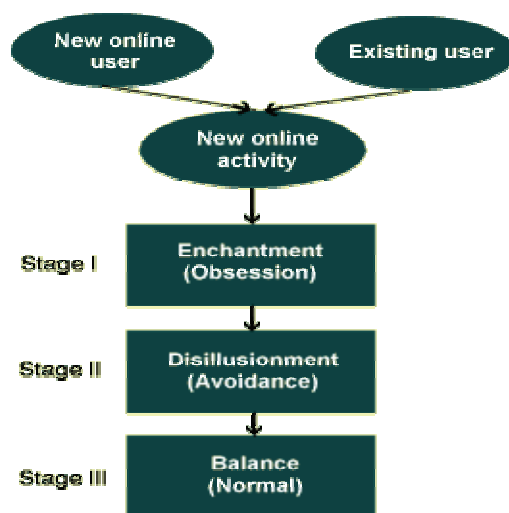


Fig. 1 Grohol's model of Pathological Internet use
Source: <http://psychcentral.com/netaddiction/>

3. RESEARCH DATA ON THE USE OF THE INTERNET AND ONLINE GAMES

The epidemiological data resulted from research projects worldwide make it even more difficult to reach a clear-cut definition for the Pathological Internet and Online games use [3% (Mitchell, 2000; Whang et al, 2003), 8.1% (Morahan-Martin & Schumacher, 2000; Tsai et al., 2001), 9.8% (Anderson, 2001), 13% (Scherer & Bost, 1997), 25–30% (Chou et al., 2005)]. In Greece, according to a recent research conducted by the Medical Department of the University of Thessaly, in the adolescent population, an 8.2% percentage of pathological use was noted. Except for the numbers, which do not help us demonstrate and prove the existence of a new disorder of "addiction to the internet and online games", it is imperative that we move forward to a *qualitative analysis* of the reasons that lead us to the excessive use and the characteristics that locate a user of these electronic media to a high risk group.

The stereotype which describes the high risk group as introvert males, really adept at computers is falling apart. Through research, we realize that the majority of MMORPG gamers are about 16 – 24 years old and are occupied with this activity at an average of 22.71 hours per week (Yee, 2007). The 50% of these gamers have a regular work, whereas the 22.2% are students. The female population is clearly more limited in numbers as we can track it down between 9% and 20%, depending on the game genre. In other words, as the 6th Panhellenic Child-Psychiatry Conference concludes, the addiction mainly has to do with boys who play online games at an average of 5.5 hours. As high risk groups for the development of internet addiction are depicted the university students and the adolescents (Katerelos & Papadopoulos 2009). The research conducted by Katerelos and Papadopoulos (2009) took place under the aegis of the Institute of Audiovisual Media (Athens, Greece) and showed that about 30%-50% of the adolescents have access to a

connection to the internet they administer themselves. Nevertheless, the research itself informs us that the activity which gives the most pleasure is online gaming. Regarding the feelings of the young people who browse in the web, we shall only refer to the sense of security and how valuable and security-worthy they believe their personal information are. We clearly see that the user identity information of the services of the internet, as well as of the economy and banking information used in exchanges, are their highest priorities in the sense of security of the young people.

Nevertheless, it is interesting to see how much they believe they have to protect their photos and videos concerning themselves of members of their close environment. Almost 70% of the boys and 80% of the girls, find it of the utmost importance to protect their data. Tracing the youth beliefs we can realize that they are in their lowest priorities. Only 22% of the boys and 20% of the girls consider them to be information worth of high security measures. In correlation with the above, the research shows that the majority has neither experienced nor expressed negative behavior. Yet, most of the students asked, answered positively to the questions concerning illegal behavior and specifically downloading music files and movies. In other words, young people can freely express themselves in the web; but they can also access information and material against the law. We now seek to analyze these modes of behavior and their consequences even further on. It is hereby important to distinguish internet users into three categories: the high risk, the medium risk and the low risk groups (see Table 1). Thus avoiding characterizations which are directly linked to pathology not yet fully explored.

Table. 1 The three categories of internet users

Source: Authors' work

	Group IIXI	Avg.	F	Sig.
In a regular day, how many hours do you spend on the internet?	Low risk	1.98	81.25830	0.00
	Medium risk	2.26		
	High risk	2.94		
How many hours have you spent on your computer in a non-stop way?	Low risk	4.18	50.65025	0.00
	Medium risk	6.03		
	High risk	9.23		
How many hours have you spent on your computer <i>on-line</i> in a non-stop way?	Low risk	2.50	42.03190	0.00
	Medium risk	3.63		
	High risk	7.21		

According to this separation, the research, as shown above, demonstrates that the high risk group deals with the internet at a daily basis of 3 hours (2.94). Concerning the nonstop online time, we find the high risk group students having spent at maximum 9 hours (9.23) – in average, 7.21 hours. In addition to the above, the research has displayed some "pathological" signs concerning the extreme internet use. In particular, two of the

most frequent symptoms, while being offline, are the following: The first involves the strong feeling of getting back online and thus of behavior repetition. It is remarkable that 17% of the sample answered that they have this feeling at least most of the time away. The second is the user's feeling that he/she is "crossing the limits" and thus he/she feels bad and guilty about him/herself.

Also, the research outcome is notable concerning the activities developed while online. We can track the high risk group participating in forum conversations, chat rooms and email exchanging more often than the other two groups. On the contrary, the medium and low risk groups seem to occupy themselves in information and data collection for school or other projects more often than the high risk group. Reviewing the data of the research outcome, we can clearly realize that internet is not a single item to be accused as addictive and that we have to distinguish the kind of use that we make of it.

Another interesting aspect of the research was the opportunity to observe the students' opinions and views on several subjects concerning the internet. Namely, the high risk group seems to identify its self-image with the one it projects on the internet. Even more, the same group tends to believe that "web-friends" are actually better than the ones we can make in real life. In addition to the above, they also tend to believe that someone can act freely while online, without having to consider a certain cost for his/her actions.

In other words, the "virtual reality" merges with the (subjective) reality of a person. This can become especially dangerous for the development of this person's character, once he/she is experiencing and acting upon a situation without acknowledging any responsibility for his/her actions. In these "virtual" worlds, he/she experiences positive and negative emotions, joy and sadness, agreement and arguing, inclusion and exclusion, friendships or even sexual relationships, hatred and love. All in all, he/she experiences a virtual reality capable to affect him/her directly, as "real life" does. Although, the subsequent lack of physicality often results in irresponsible and ephemeral relationships, as well as in the detriment of empathy.

At this point, we importantly notice the young peoples' opinions on the people who frequently judge them. In general, they believe that those who oppose to the use of the internet are old-fashioned and technologically illiterate. Using this mechanism of "psychologization" (Papastamou, 1989), the messages stemming from the people who are opposed to the internet use are considered insubstantial. That is because the people who transmit them have no credibility for the young people. Of course, once we speak about students, it would be unwise to leave out their teachers. In particular, there is a statistically significant difference between the teacher's and the parent's view on the students' activity over the internet. Namely, the teachers see the students' parents to be stricter than they really are concerning the internet use. Moreover, the teachers also consider this occupation far more negative than the students themselves do (see Table 2).

Table 2 Conflicting opinions on the internet use*Source: Authors' work*

	Participant Category			F	Sig.
	Student	Parent	Educator		
Do you believe that your school performance has been affected by your activity over the internet? (1=absolutely negative – 7= absolutely positive)	4.30	4.41	4.51	2.78	NS
How do your parents perceive your activity over the internet? (1=absolutely negative – 7= absolutely positive)	4.19	4.44	3.99	4.58	0.01
Are you aware of the importance of exposing personal and familial data on the internet? (1=none at all – 7=extremely aware)	4.05	4.35	4.13	2.69	NS

This research raises our awareness about the pathological internet use in a more rounded and integrative way. It also points out the dynamic relationship between sociality and the internet, with an emphasis on the role of the internet in cultivating social skills. Nowadays, it is widely acknowledged the multilevel effect internet has in peoples' lives and especially in the youngsters (see Table 3).¹

Table 3 The Kid and the Internet*Source: EU Kids Online Network*

	The Kid as receiver	The Kid as participant	The Kid as creator
Learning Digital Education	Sources of knowledge and information	Contact with others sharing common interests	Cooperative learning
Political Participation	Access to the information at a global level	Exchange between groups sharing the same interests	Development of specific forms of political participation
Creativity and personal expressivity	Variety of Sources	Invitation to creation	Creation of a content by users
Identity and social inclusion	Advice	Social networking and sharing of experiences	Expression of individual identity

The questions and fields for further research are widened more and more. However, we shall focus on a specific use of the internet which, according to the previous research, is the most likable. This is online games.

¹ See <http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/Home.aspx>

4. DEMOGRAPHIC DATA ON MASSIVE MULTIPLAYER ONLINE GAMES – MMOGS

The excessive use of the internet and online games is increasingly elaborated and discussed as an autonomous object of scientific study. A **massively multiplayer online game** (also called **MMO**) is a multiplayer video game, which is capable of supporting hundreds or thousands of players simultaneously. By necessity, they are played on the Internet and feature at least one persistent world. MMOGs can enable players to cooperate and compete with each other on a large scale, and sometimes to interact meaningfully with people around the world. They include a variety of game play types, representing many video game genres. The most popular genre of these games is the Massive Multiplayer Role Playing Games – MMORPGs. In comparison to Social, Combat or Sci-Fi games, MMORPGs are preferred by the large majority of the users, as we can see in Figure 2.

The particular measurement took place by counting the registrations to these games. We can hereby make an assumption that online gamers are a constantly expanding market for the companies. To better understand the dynamics of this (relatively) new market, we can see the following graph, in which we notice the rapid increase in active subscriptions to MMOGs (see Figure 3).

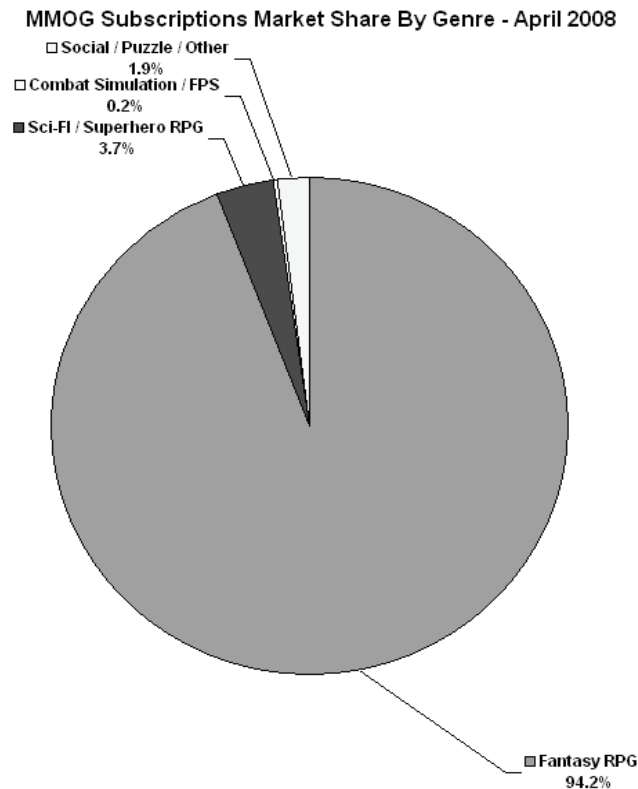


Fig. 2 The prevalence of role playing games
 Source: www.mmogchart.com

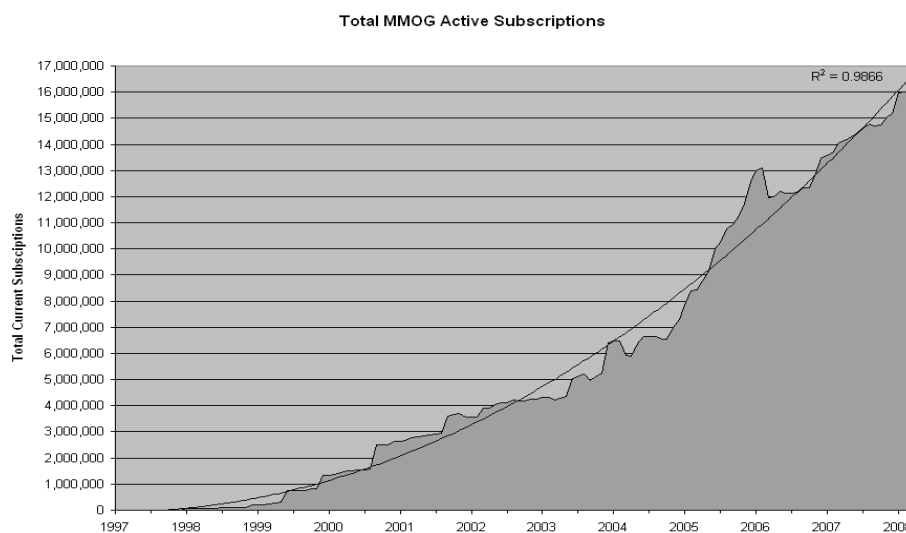


Fig. 3 The increase in active subscriptions to MMOGs

Source: Woodcock, Bruce Sterling. "Total MMOG Active Subscriptions." Chart updated April, 2008. <http://www.mmogchart.com>

Regarding the most popular genre of online games, which attracts more than 9.000.000 users around the world, we shall name some basic characteristics. Namely, these Role Playing Games have a rich and unpredictable virtual environment with extended and detailed worlds based in different narrative multiplayer environments. There is a full ability to visualize the emotions, as the character used by the player (avatar), the user's identity in the virtual gaming world, can express every kind of emotion, such as anger, mockery, joy, sexuality etc. The most salient characteristic of these games is the high level of social interaction between the users and the virtual life, within full anonymity, if the user wants to do so.² World of Warcraft, Runescape, Lineage, Everquest and Anarchy Online are some of the most famous MMORPGs. In these games, the non-player characters (NPCs) are constructed with an artificial intelligence, which provides them with a wide range of reactions among the users and the environment, thus enhancing the feeling of sociality and belonging to the virtual world. The goal is to provide the user with a rich 3D, a very realistic virtual world, which should be populated with thousands of interacting players (100.000 users simultaneously) (Cole & Griffiths, 2007). Teams gang up in quests, or against other teams, and the users communicate with each other through texting or even voice-communication (Williams, 2007).

² See <http://www.pegi.info/gr/index/id/224/> (accessed on 19 October 2009)

5. PERSONALITY AND LEVELS OF USER INVOLVEMENT

Who is the excessive user? Can we describe him/her? A relevant research (J. Block, 2008) has shown that compulsive elements are certainly included in the very definition of a new "pathological entity". Thus, we come across impulsivity, which is enhanced by repetition. A subsequent research perceptively points out the main attributes of the excessive-addicted online gamer (Griffiths, 2009). These are six core components that Griffiths considers as "required criteria" to classify an online gamer as addicted. Salience, mood modification, tolerance, withdrawal symptoms, conflict and relapse are set by the researcher. The above criteria in the case of online gaming have the following meaning:

- *Salience* – The overgrown importance of online gaming in the mind and actual life of the gamer. The thoughts become so dominant that even away from game, the gamer still thinks about getting back to it.
- *Mood modification* – This criterion has to do with the "subjective experiences" that the gamer eventually uses as coping strategy for any kind of problem he/she faces in real life.
- *Tolerance* – This is a meaningful process whereby increasing amounts of online gaming are required to achieve the former mood modifying effects.
- *Withdrawal symptoms* – These symptoms, either psychological or physiological, arise to the gamer when he/she suddenly discontinues or reduces online gaming.
- *Conflict* – This refers to conflict that occurs to the online gamer in three different levels: interpersonal, intrapsychic and with other activities that the person may have. It shows the serious difficulties stemming from spending too much time online.
- *Relapse* – This implies the gamer's tendency to repeat old patterns of excessive gaming after a short period of abstinence or control.

Nevertheless, most of the times, we simply focus on the pathology and do not go any further. The online gamer, as a "user", is far more complicated and social than we usually imagine. The gamer has a "virtual identity", the avatar, which represents him/her, in his/her virtual world. He/she is both the transmitter and the receiver of several stimuli *simultaneously*. To better understand his/her place and position, we could use the following diagram, which describes the user involvement experience in a virtual environment that is offered by the internet and the MMORPGs specifically (see Figure 4).

We refer to an "environment" where the user is represented through his/her virtual identity, which fully interacts with the rest of the users and the elements of this action environment. As we can see in the diagram, there are certain factors profoundly related to the user personality or his/her social interaction. These factors seem to be able to "hold" the user in the virtual world of the game and thus they depict the complexity of online gaming, which cannot simply be categorized in a "crude" pathological way. Without analyzing every one of them, we shall refer to the conclusion of the researchers who describe a model focusing on identifying predictors for MMORPG addiction: **MMORPG addiction= 0,126 Curiosity + 0,243 Role-playing + 0,206 Belonging + 0,145 Obligation + 0,193 Reward.**

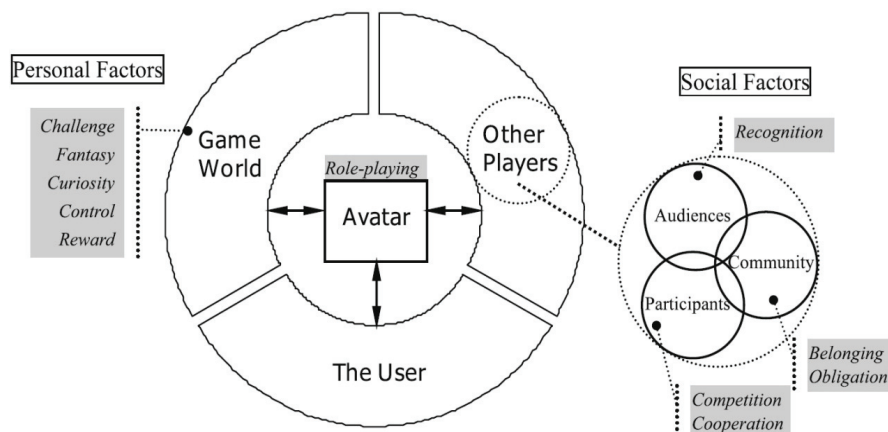


Fig. 4 The user involvement experience in a virtual environment

Source: Hsu et al., 2009

Shortly analyzing the above predictors, *curiosity* refers to the motivation of the gamer to discover new aspects of the virtual gaming world. The discovery is not always cognitive (to explore new worlds); it also signifies the exploration of the technological capabilities of the game (sound effects, graphic resemblance to reality etc) (Malone & Lepper, 1987). The researchers' hypothesis lies to the fact that users are repeatedly motivated to satisfy their curiosity, thus increasing the possibilities for excessive play hours. *Role-playing* refers to the bond which is developed between the player and his/her avatar during the play. Namely, the fact that the player is expressed through his/her character is a means of either failing or succeeding in certain tasks or quests, at both social and personal level (Yee, 2006). The *sense of belonging* is the core of a community (P. Block, 2008), as well as a *social need* highly sought after according to A. H. Maslow (1954).

In the present research, the main hypothesis is validated. That is, the users getting involved in communities (factions and clans) with other players run a higher risk of addiction. This leads us to talk about "*obligation*", which is directly connected with the inclusion in the community and the recognition gained in it. The member of the community feels that it is his/her duty to offer as much as he/she can (Seay et al., 2004). The gamers wanting to meet their peers' expectations spend more and more hours gaming. Also, "*reward*" refers to the gamers' satisfaction and their enhanced motivation to keep up with their current activity (i.e. gaming) (Deci & Ryan, 1987; Ducheneaut & Moore, 2004). The "user-experience mode", as described above, points out interaction and belonging as the core predictors of MMORPG addiction.

We nevertheless confront a paradox here. Psychoanalytically, the addicted user aims for the narcissistic satisfaction drawn from his/her online experience. This satisfaction is drawn self-erotically – hence, without the presence of the other person (Freud, 1897). Considering the MMORPG addiction predictors, we can clearly realize that the most important predictor is *social interaction*. Thus, we are standing before an addiction whose foundations lie in the need for communication. Internet and MMORPGs offer this aplenty in a truly innovative way, both comforting the need for communication and isolating the user. As a result, it is the user's personality that will mostly set the boundaries of the influence of this virtual reality. The person's experiences, his/her ability to control his/her

emotions and his/her background, in general, are setting the standards. Consequently, it is the user's inability or lack of control to his/her emotional reaction and attachments that will play an important role in this non-chemical addiction. The gamer/user indulges into this activity in a way definitely dictated by his/her own needs. The lack of self-regulating skills will lead him/her to an obsessive repetition of the behavior which is a substitute for maintaining balance in the psyche (Christopoulos, 2008). In Figure 5, we can note the "normal" behavior and distinguish it from the addicted one. What vividly characterizes the following scheme is the fact that the same experience might be easily handled, and even self-rewarding, for the "normal" gamer, in contrast to the addicted one, who is already overburdened and will not handle the activity to his/her benefit. Thus, it will be imprinted as a means for regulation. The saliency is much wider and the memory of the action is much more overwhelming, reflexively leading to a boosted drive for repetition.

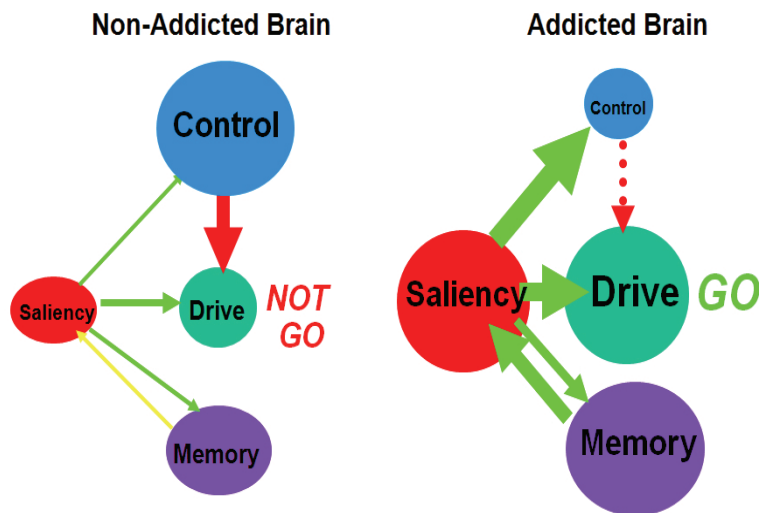


Fig. 5 A distinction between a Non-Addicted Brain and an Addicted Brain
Adopted from Volkow et al., Neuropharmacology, 2004.

We hereby understand that, in the addicted behavior, there is an already burdened and vulnerable underlay. Given this vulnerability, online gaming is the experience which is mishandled. The burdening of the underlay has many possible factors, not necessarily related to online gaming itself. Sometimes, online gaming, as many addictions do, acts a means for self-regulation or more often as a "mood-altering" means. According to Greenfield (1999), 30% of the internet users make this specific use of it – in order to relieve themselves of an uncomfortable feeling. Yet, except for the relief provided by the internet, a video game has an extremely important influence in the gamers' mood. Wood and Griffiths (2007) found that the sentimental state of the person after the experience of video gaming is much different than their initial state. We better realize this in the following data table measuring Total Mood Disturbance (Table 4).

Table 4 Total Mood Disturbance (TMD)*Source: POMS Inventory*Means, Standard Deviations, and *t* Values for the Measure of the POMS Inventory

Poms Inventory	Pre VG Playing	Post VG Playing	<i>t</i> (40)	<i>P</i> <
Anger	7.450	7.725	-0.391	0.698
Confusion	8.025	6.750	3.135	0.003*
Depression	8.575	8.150	0.652	0.519
Esteem	20.425	13.150	20.218	0.001*
Fatigue	9.850	9.175	1.070	0.291
Tension	9.350	10.225	-1.682	0.101
Vigour	11.775	12.125	-0.516	0.609
TMD	11.050	16.750	-2.433	0.020*

*Significant difference at the 5% level at least.

The user involvement with online games is definitely multidimensional and affects the personality of the user in many different levels. We cannot simplify the issue and conceive online games as a sole influence to gamers. There are even games which cultivate the political conscience of the gamer (Lenhart et al., 2008). According to recent data, it is interesting to mention Citzalia: "Citzalia is democracy in action. It is **role playing game** and **social networking forum** wrapped in a virtual 3D world that captures the essence of the **European Parliament**."³ Of course, not every game is helpful and well cultivating the gamer's personality. There are games in which the target is rather unethical and prohibited in real life (i.e. killing other people). An online game though, is largely shaped by its own users. They have the relative ability to react in any way they prefer; they can be aggressive, passive, insulting etc. Cyber-bullying is one major aspect of this freedom, which shows a pathological behavior explained and expressed in different kind of ways.

The influence of a game is not something that becomes exhausted once the gamer stops playing. The gamer is affected online *and* offline, with results obvious to his/her normal everyday life. So, how much a temporal role through a custom makes an avatar affecting someone and changing his/her behavior and attitudes? Based on recent research in the most popular MMORPG, World of Warcraft (Yee et al., 2009), the self-perception, the self-image and the behavior are directly affected through interaction with other gamers. A main factor that also plays an important role is the change in the appearance of the avatar.

The gamer can be whoever he/she wants to be – selecting gender, height, skin tone, haircut, clothing etc. Creating a wholly new virtual self makes the gamer redefine him/herself even in real life. In the experiments conducted, the changes in behavior or appearance, during the game, also influenced the gamer's behavior afterwards. A handsome and sexually appealing virtual character made its user act in such a way, for a short time, after terminating gaming. An aggressive attitude in the game made the user more aggressive in immediate actions that he/she did after the game-time. Ultimately, the fantasy field, which is created by online gaming, is a place of expression without the fear of the

³ See <http://www.citzalia.eu> (accessed on 9 August 2010)

consequences, thus allowing someone to perform roles not sanctioned (or permitted) in real life. However, it is difficult to accept that this is the norm. We can definitely see the interaction in so many different levels. Bots, players, environment and real life thoughts are all combined in an interesting mixture, not fully explored yet.

6. CONCLUSION

In conclusion, we hereby realize that a comprehensive, open-ended and dynamic psychosocial approach to technology, the internet and MMORPGs, in particular, should necessarily include the *"unpredictable"* (the surprise, the innovative, the unplanned, the unanticipated) and seriously take into account the multiplicity of the relevant dimensions, such as the personality of the users/gamers, the factors that lead them to an excessive/eccentric behavior, the "nature" of virtual technologies, the complex relationships formed among people who use them and the overall cultural context in which humans and machines (non-humans) mutually interact. We should also theorize the research questions emerged from a non-spatial and non-timely reality as always amendable and empirically open. This involves the "real" nature of virtual communities, where the "old" or "traditional" philosophical questions are not merely hypothetical any more. *How do we know? (The question of Epistemology)* What is existence and *What is reality? (The question of Ontology)* Who am I and *How should I act? (The question of Ethics)* These are now material issues with serious technological or technoscientific consequences. They are definitely not distant or abstract issues, given the vast ability to create experiences as persuasive as reality (Krueger, 1983).

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PSIHOLOŠKO-SOCIOLOŠKI PRISTUP UPOTREBI INTERNETA I INTERNET RPG IGARA

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Cilj ovog rada je da pruži međudisciplinarni sistematski pristup upotrebi interneta, sa posebnim osvrtom na takozvane RPG igre (MMORPG). Istraživanje je fokusirano na opšti okvir proučavanja zavisnog odnosa prema internetu i na bitne psiho-sociološke komponente i dimenzije. Ovo zahteva složen uvod u savremene ideje o virtuelnim zajednicama, sajber prostoru i sajber društvima, kao i uvod u ključne koncepte zavisnosti i zavisnih oblika ponašanja. Ovakav uvod se nudi uz pomoć specifičnih podataka koji

se tiču upotrebe interneta i onlajn igara. U radu će biti izloženi i kritički prikazani skoriji demografski podaci koji se tiču upotrebe MMORPG igara i novije analiza ličnosti zavisnog/opsesivnog korisnika, kao i različiti nivoi učešća korisnika. U zaključku se ističe da otvoreni i koherentni dinamički psiho-sociološki pristup tehnologiji, internetu i MMORPG igrama bi obavezno trebalo da sadrži ono "nepredvidivo" i ozbiljno uzme u obzir kompleksnu višestrukost relevantnih dimenzija.

Ključne reči: *psiho-sociologija, društvena istraživanja, virtuelne zajednice, zavisnost, internet, metodologija.*