METHODS FOR STUDYING COGNITIVE SKILLS REQUIRED TO PLAY ONLINE GAMES OR THE ALTERNATIVE USE OF ELECTRONIC GAMES

Alessandra Maia   José Messias*

MSc. Candidate in Communications, Technology and Culture - PPGCOM/Uerj, Brazil.
Supported by the MSc. Fellowship of the National Council for Scientific and Technological Development (CNPq)
*PhD Programme, Graduate School of Communication at UFRJ, Brazil

Abstract

The objective of this paper is to propose research methods for studying the cognitive skills that are required to play online games, and also the skills required for the alternative consumption of games (mostly pirate initiatives); the first subject is part of a master's degree research, and the latter is part of a PhD research. These cognitive skills shall be studied through five categories of analysis which were created by the CiberCog/Uerj research group. The issue of cognitive skills for online games will be studied with a qualitative method (e.g. netnography; interviews using the Underlying Discourse Unveiling Method – UDUM; participant observation - watching and interacting) and also with a quantitative method (closed questionnaire available via Google Docs). Meanwhile, to study alternative consumption of games a participant observation on virtual communities shall be used.

Keywords: research methods, game, cognitive skills.

Authors' contact:
alemontmaia@gmail.com
*jmessias.santos@gmail.com

1. Introduction

The objective of this paper is to propose research methods for studying cognitive skills that are required to play online games, and also the necessary skills for the alternative consumption of games (mostly pirate initiatives); the first subject is part of a master's degree research, and the latter is part of a PhD research.

These cognitive skills shall be studied through five categories of analysis which were created by the CiberCog/Uerj research group, namely Cybertextuality (in Portuguese language, *Cibertextualidade*), Creativity (*Criatividade*), Logicality (*Logicidade*), Sociability (*Sociabilidade*) and Sensoriality (*Sensorialidade*). The issue of cognitive skills for online games will be studied with a qualitative method (e.g. netnography; interviews using the Underlying Discourse Unveiling Method – UDUM; participant observation - watching and interacting) and also with a quantitative method

(closed questionnaire available via Google Docs). Meanwhile, to study alternative consumption of games a participant observation on virtual communities shall be used, with a description of the processes and social dynamics between the actors, thus creating the ethnography of the Brazilian gaming community.

The proposals deal with cognition in a broad aspect, the plural conceptualizations employed in the methodologies that will be described next are the cornerstone to the practices investigated in this paper. The variety of these initiatives goes from acts such as playing online games to distributing and customizing content in a social network.

With this paper, the authors intend to show how videogames can establish a set of practices that, we believe, will change human cognition as whole – a transformation that is put in motion through contemporary entertainment and should "leak" to others aspects of the culture. One example being the political bias of the piracy.

Beginning our explorations with a didactic approach, first we shall explain the five categories of analysis and methods employed for each study.

2. Categories of analysis

For the analysis of cognitive skills for playing online games, we have selected five categories created by Fátima Regis [2008]: Cybertextuality, Creativity, Logicality, Sociability and Sensoriality. For the alternative use of electronic games we have selected only two of them, namely Creativity and Sociability.

The Cybertextuality category investigates a trait of entertainment products of producing texts which intentionally refer to other cultural productions, encouraging users to connect information from different media/cultural products, and to develop ergodic processes of reading, product and associate contents, that are different regarding the reading of traditional books. In this category, the following variables are observed: narrative structure (divided into number of characters, number of plots, number of groups of characters and the links between them); metalinguistic and hypermediatic resources (citations,

references and parodies of other media products), which are skills related to what Aarseth calls ergodic reading, i.e. navigation processes in cyberspace and the articulation of texts with different language structures [cf. REGIS 2008].

The category of Creativity is dedicated to investigate the stimulus for a creative manipulation of cultural products by users, either by creating new works or mixing, writing fanfictions, creating parodies, mashups and spoofs. This category also includes the participation in the social construction of knowledge through blogs, websites and social networks, which constitute the so-called Web 2.0 (while Web 1.0 has created activities of publishing and connection, the Web 2.0 emphasizes the participation of users through the social construction of knowledge enhanced by digital devices).

The Logicality category regards the stimulus for mental skills that are related to the traditional logic, like problem solving and decision making, as Steven Johnson argues with his categories of probing and telescoping [cf. REGIS, 2008]. Some items which may be analyzed within this category are: probing and telescoping, associative abilities (regarding association of intertextual references), and the ability of learning how to use new interfaces and programs.

Sensoriality examines how new platforms (mobile phones, iPods, DVDs, Virtual Reality devices, and video games), by combining the use of multiple media simultaneously and hybridizing textualities and different languages, offer technologies which challenge consumers to awake their senses and challenge their skills of perception and attention (e.g. tactile skills for handling small equipments; visualization skills for tiny, divided screens; handling various types of joysticks and appliances' remote controls; selective attention and perception to locate desired information). In this category, we shall observe changes in media, interfaces, and digital platforms. The analysis will be done on gaming platforms, types and sizes of screens, types of joysticks and how to handle them, disposition of contents on the screen (on the whole/split screen), among others.

The Sociability category relates to how digital technologies promote production of content (individual and collective); stimulate the formation of communities of taste, partnerships, discussion lists and blogs; encourage individuals to look at several media in search of desired information; and engender a process of collaboration / partnership between individuals who come together in virtual communities, discussion lists, and blogs to find, produce and share information about their favorite cultural products. To achieve their objectives, users employ various media such as Internet, cell phones, iPods, MP3 and MP4 players, among others.

This "participation" of viewers is reflected in the creation of a complex social network. By social network of comments we understand the complex set of communication tools employed by users to exchange information about their favorite media products. This network is not a Cybercultural

invention, since for decades movies, TV shows, books, and comics are reviewed in newspapers, entertainment magazines, television documentaries etc. But surely the apex of the media network of cultural feedback finds its support on the Internet whose blogs, websites, mailing lists and collaboration software, social networks (such as Orkut and Flickr) become complementary resources of cognition of programs and mobile media (cell phones, iPods). This network of media comments is what Bolter and Grusin call "remediation" - a mediation of mediation: "(…) each act of mediation depends on other acts of mediation. Media are continually commenting on, reproducing, and replacing each other, and this process is fundamental to media. Media need each other to function as media at all" [1998, p. 55]. In this item we shall investigate the variable social networks, i.e. use of media support (zines, blogs, websites, clubs and social organizations) and communicative practices (fan conventions, Web 2.0 programs).

Through these categories, the authors believe that is possible to understand why the videogame is an entertainment product that demands a physical and mental challenge from the players, in other words, a non-trivial effort (AARSETH, 1997). E.g., in the offline game experience the gamer usually plays by himself, relying only on the set of practices already predicted in the program of the game, while, in online mode, he can experiment the unpredictability of playing against someone else. So, the points raised here have some alignment with concepts of mutual and reactive interactions of Alex Primo (2007).

Of course, in the cases discussed above there is an effort demanded from the user by the challenges imposed against him, even if they are completing a game mode or beating an opponent. In addition, we also understand that this physical and mental effort is not restricted only to mediatic/cultural products that can be traced to the so called Cyberculture, given that in interactions with other cultural "modalities", like reading a novel and watching a movie or a TV show, a kind of effort is present too.

In this context, the use of the categories from the Cibercog/Uerj Lab in the two methodologies marks the intention of the authors to contribute, in their own way, with the research developed by the group they participate. Videogame's space and relevance are increasing in contemporary society, as Regis highlights in her entry about the medium:

> […] the cultural and economic relevance of games grows in the same proportion that their public expands and diversifies itself. Today the audiences of games are formed by every age group, from children to the elderly, and games are the most profitable product of the entertainment industry[1] [REGIS, in press].

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[1] Translated from the Portuguese original: a importância cultural e econômica dos *games* cresce na mesma proporção em que seus públicos se expandem e diversificam. Hoje o público dos games é formado por todas as faixas etárias, de

So it is expected that the present (and future) results of these investigations could enlighten some of the ways in which human cognition works and is stimulated by this technology.

3. Methods for studying cognitive skills on online gaming

The objects of this methodological proposal are the so called seventh generation consoles and their features. The Xbox 360, the second console developed by Microsoft, launched in 2005 has among its main competitors the PlayStation 3(PS3), from Sony Computer Entertainment, and the Wii, from Nintendo. Its main characteristics is the integration with the Xbox Live system, which allows multi-person online game experience, demo versions, arcade games, downloads of movie trailers, TV shows, music and film features, and the access to the Windows Media Center (a multimediatic engine). The 360 still has a HDMI port that entitles better image quality.

The first Xbox 360, the Arcade, was released with a 512 MB internal capacity, which could be expanded to 20, 60, 120, 250 or 320 GB – the so called slim model has the internal capacity of 4 GB, also expansible. The wireless joystick runs with two AA batteries or a rechargeable one and is compatible with a personal computer (PC), regarded the use of the Wireless Gaming Receiver (WGR) tool. The same joystick also can be purchased in a wired version with a USB connector, making unnecessary the WGR. The Kinect bundle, launched in 2010, is a movement sensor that "reads" the body of the player and allows him to control the game without the stick, only with his "bare" moviments.

The PlayStation 3 (PS3), released in 2006, employs the Blu-ray Disc (BD) as primary source of storage; HDMI ports for more quality in image output, an exclusive service of unified on-line gaming, the PlayStation Network, multimedia capacity and connectivity with the PlayStation Portable, and the Sony Bravia TV. The first edition of this console was capable of reading the game of its antecessor (PS2), but the slim version of the PS3 eradicated that functionality. The Dual Shock joystick is the same of the antecessors (PS2, PS1), but wireless this time.

In 2010, Sony launched a bundle with movement sensor capabilities, PSMove, intended to compete directly with the WiiRemote, from Nintendo. The PSMove come with two "joysticks": a wand-like one with an orb on the top, called Motion Controller, and a Directional Pad, similar to a TV remote control, called Navigation Controller, and also a camera that captures the movements of the Motion Controller. Most games do not require the Navigation Controller to be played.

The Wii (2006) is compatible with the games and controllers of its antecessor, the GameCube. Unlike its rivals, the console resorts to a lower graphic resolution.

The "joystick" Wii Remote Plus has the shape of a bat; it is also wireless and functions through movement, even though possessing a directional and more eight buttons. The Nunchuk, required for some games, has a directional and two more buttons. Another characteristic of the console is the WiiConnect24 that enables the reception of updates and messages from the Internet.

To make the study of this games (PS3, Wii and Xbox 360) possible, we need to execute a mapping of games that can be investigated; e.g. one of the criteria should be the capacity of multiplayer gaming, and that would demand an informal survey on websites and social networks for the search of genres that enable such interaction (some examples being the car race games, like F1, Gran Turismo and Mario Kart, or fight games, like Mortal Kombat, Street Fighter and Super SmashBros Brawl). After that first selection, a list will be distributed for players with experience in playing on networks. This precaution may be made to assure the best choice of objects for studies. Consulted players will also be responsible for introducing the researcher in the field. From this point on a field diary will be kept (audio, virtual notes, and print screens, when needed).

The research for investigating what are the cognitive skills required for online gaming will take advantage of the netnographic method, since we consider to be important to interact with users to (at least) try to understand what are the requirements to play in this way. The data collecting takes place in two steps: (1) qualitative and (2) quantitative, as we believe that we may be able to compare what is said with what is perceived in the field work. The information collected through participant observation is intended to be divided in twofold steps: watching without interfering with the action (when it is possible) and actively participating in the task group, as "the observation and the narrative of details are what Geertz (1989) calls a thick description, and the ethnographic account as a result of multiple textualities" [FRAGOSO *et al*. 2011, p. 185]. As Suely Fragoso, Raquel Recuero, and Adriana Amaral highlight: "Not only of observation lives the field, but also of exchange and cultural trades, and from hearing informants" [FRAGOSO *et al*, 2011, p. 186]. For this reason we may conduct qualitative interviews using the Underlying Discourse Unveiling Method (UDUM) via Google Talk, Skype, Yahoo! Messenger, Facebook Messenger, MySpace IM, MSN Messenger and so, where the exchange of messages between people happens in real time:

> If these are new natural environment in which a lot of our informal conversations happen, it is important to learn how to explore them and use them as needed in order to reach our research goals[2]. [NICOLACI-DA-COSTA 2009, p. 38]

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[2] Translated from the Portuguese version: Se esses são os novos ambientes naturais nos quais acontecem muitas das conversas informais nos nossos dias, é importante que

The UDUM works as a speech homogenizer, since we opted for a large sample with diverse personal aspects – age, gender, occupation, social status etc. – and some latent characteristic (i.e., previous handle of the controller and the console) or some experience with a specific game genre. The script of the interviews is flexible and built from the categories of analysis and participant observation. The total amount of participants will be decided by the discourses homogeneity and the researcher contact information is also available so the users can reach her whenever they are decided to talk.

The quantitative research shall be done through the development of a closed questionnaire, shared (via Google Docs) with a wider audience that the one contemplated by the qualitative research, for comparing collected data. Finally, analysis and reflection on the data collected during the study shall be done. It is noteworthy that is also relevant to explore the skills required to play offline, also for comparative reasons.

4. Methods for studying the use of alternative games

On the other hand, Game Studies can be used not only to talk about the act of playing itself but to study the Game Culture as a whole that surrounds these practices. In this sense, our study about game piracy in virtual communities intends to shed some light to the complex system of distribution and customization of cultural products promoted by the collective action of users and technical objects.

The acts of distributing (and its counterpart, acquiring) and customizing involves a very large set of actions deployed by users such as: providing trustable links, encoding those links in order to protect them from others, distinguishing trustable and not so trustable links, editing the game, sharing your personal add-ons with others and so on. We believe all these social and creative proceedings (and many others not listed here) configure an intrinsic part of the contemporary entertainment, at least in the case of videogames. Once mere spectators, players now have an active role in the fruition of cultural products, even in the so-called mass media.

According to game theorist Stuart Moulthrop, "in games the primary cognitive activity is not interpretation but configuration, the capacity to transform certain aspects of the virtual environment with potentially significant consequences for the system as a whole" [MOULTHROP, 2004, p. 60]. The configuration logic presented by Moulthrop highlights what the author considers to be the core characteristic of the medium, i.e. its interactivity. Interactivity is not

just a game feature, it is the trait that defines them (alongside its playfulness/ludicity, of course).

In this context, games could be considered as an ergodic activity per se, since they rely on actions of the gamer to take place. The concept coined by Espen Aarseth deals exactly with the non-trivial effort demanded by cultural products from their readers/users.

> The performance of their [reader-response theorists] reader takes place all in his head, while the user of cybertext also performs in an extranoematic sense. During the cybertextual process, the user will have effectuated a semiotic sequence, and this selective movement is a work of physical construction that the various concepts of "reading" do not account for. This phenomenon I call ergodic, using a term appropriated from physics that derives from the Greek words ergon and hodos, meaning "work" and "path". [AARSETH 1997, p. 1]

This means that there are other cultural products, not necessarily games, stimulating our cognition just by their own complexity – in such a way that we almost have to split these products in order to watch/read/play them. And, as we are trying to argue, this stream of cultural goods, which is not limited to the digital media, also have a role in the development of specific cognitive skills (those who will lead to the piracy strategies that are described in this work).

Although Moulthrop is referring to the actual play, he has a very broad understanding of what configurative practices could be. Moulthrop says:

> If we conceive of configuration as a way of engaging not just immediate game elements, but also the game's social and material conditions -- and by extension, the conditions of other rule-systems such as work and citizenship -- then it may be very important to insist upon the difference between play and interpretation, the better to resist immersion. Any analogue of literacy for interactive media would probably need to encompass such resistance [MOULTHROP 2004, p. 66].

Thus, seeing that the strategies employed by users to distribute and customize their games are indeed forms of cybertexts, as Aarseth would say, we presume that they are a way to engage in an even more personal experience. Then, it will not be wrong to assume that the contemporary gamer will look for a customized experience whenever it is possible, even if he is not allowed to (e.g. in piracy), and that this logic may transcend to the virtual world.

5. Creativity and Sociability in piracy

As it was said before, these two methodological proposals are inspired by Fátima Regis's work with the Information and Communication Technologies (ICTs). Using two of the five categories of analysis created by

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aprendamos a explorá-los e a usá-los quando tal uso for adequado, ou mesmo necessário, para os nossos objetivos de pesquisa.

the author, it will be possible for our research to map out cognitive skills demanded from users.

The first one, concerning the promotion of social relations, is the Sociability. In pirate communities, is possible to see an eventful group formation based on the shared interests of playing games and even playing in a way they were not suppose to or were not allowed to.

It is important to emphasize that all initiatives that shall be described have in common the production of subjectivity linked with the Brazilian culture, and also technical needs (language, values, style, devices etc.) since those games are foreign products, not specifically developed for the country's market. So, in this sense, they can be also perceived as a form of biopolitical resistance such as seen by Antonio Negri [2000, 2004]. In their book *Empire*, Negri and Michael Hardt discuss what they call biopolitical production:

> The great industrial and financial powers thus produce not only commodities but also subjectivities. They produce agentic subjectivities within the biopolitical context: they produce needs, social relations, bodies, and minds—which is to say, they produce producers. In the biopolitical sphere, life is made to work for production and production is made to work for life [NEGRI and HARDT 2000, p. 32].

Leaving the political implications of these initiatives aside for now, it is enough to say that, in this research, our specific frame of piracy acts are considered a form of resistance (to power, to sovereignty, to capital) in the same way the authors categorize in their latter book Multitude. Although we are ultimately talking about consumption in the era of cognitive capitalism, we interpret these strategies not as another form of consumerism, but as truly creative forces acting upon the structure of capitalism and, hopefully, changing it from inside. As authors say:

> The second principle will pose a correspondence between changing forms of resistance and the transformations of economic and social production: in each era, in other words, the model of resistance that proves to be most effective turns out to have the same form as the dominant models of economic and social production […] Each new form of resistance is aimed at addressing the undemocratic qualities of previous forms, creating a chain of ever more democratic movements, finally, will lead us to see the most adequate form of organization for resistance and liberation struggles in the contemporary material and political situation [NEGRI and HARDT 2004, p. 68].

A brief example of the methodology employed to categorize the complex properties of group formations surrounding the games may be the distinction made among researched communities. We believe these communities can be divided in open ones and closed ones. The open communities – social networks, forums, blogs – accept free participation and contributions in every part of the customization process. On the other hand, the closed ones are moderated by secluded groups that deliver a final content.

It is not forgotten, though, that the so called open communities undergo the action of moderators/curators that regulate exhibited contents. But it is also true that this is a far more complex social dynamic – one that is inherent to the virtual groups – in order to manage them in a very different way from the hierarchical and much less flexible system of a closed community.

Regis' notion of Creativity as a characteristic stimulated by cultural products deals with the user's urge to reconfigure and give a new meaning to the available content. And, in the case of piracy in video games, a configurative practice already, this notion extends itself beyond gameplay. Creativity is required to gather, organize, distribute and customize the virtual data manipulated by users. One specifically creative act is the production tutorials.

In the search for new ways of acquiring and installing games, users have developed appealing and innovative tutorials. We are talking about large sums of files that need to be successfully handled to start playing a game. Moreover, when we talk about customized games, it is implicit that, at least in open communities, there is a need to share the knowledge of the users for everyone to be able to performance the customization without relying on closed communities.

The basic structure of these tutorials is a set of rules, a recipe, showing how to perform a specific task. Appropriating the digital culture, that list of actions is transformed and ported to many platforms, as avoiding being shut down by law enforcement or even damaged by other users. YouTube tutorials are a good example: like video classes, they represent, through image and sound, the steps that must be taken for the customization process; therefore they substitute a more standard presentation of the written document.

Notably, what matters the most, summing these practices, always are the cognitive factors that are observed in the complex relations between mind, body and technical objects. As Andy Clark affirms:

> The distinctive way human brains repeatedly create and exploit wideware – various species of cognitive technology able to expand and reshape the space of human reason. We, more than any other creature on the planet, deploy nonbiological wideware (instruments, media, notations) to complement our basic biological modes of processing, creating extended cognitive systems whose computational and problem-solving profiles are quite different from those of the naked brain. [CLARK 2001, p. 150]

Reflecting on the chosen objects, i.e. Brazilian virtual communities of distribution and customization of games, it is expected for us to observe that, beyond the capability of easy acquisition (even an illegal one) of games, these communities work both as networks for the exchange of techniques and as a storage and database for files. The actors make use of each and every platform available (Orkut, Blogs, forums, YouTube etc.), often reinventing their original purpose in order to meet their necessities. Thus, the proposed

methodology will be a participative observation and a description of these processes and dynamics – we expect to use Bruno Latour's Actor-Network Theory [2005] – thus performing an "ethnography of the Brazilian gamer culture".

6. Distribution and Customization

In the same way this proposal see the practices selected here as an expression of creativeness and/or collectiveness, we intend to also divide them in relation to their "purpose".

Two pillars of this methodology are the notions of distribution and customization of the content. In this sense, it can be noted that all initiatives summoned here take place in function of these two "invitations to action". In this central division are found the distinctive ramifications that the so called participative consumption can present in the Contemporary Era.

We also believe that the this set of practices forms a socio-technical network in latourean terms. The interaction between human and non-human *actants* in virtual communities is considered the key to the appearance and efficiency of the types of virtual piracy that we look to study.

As it was said before, this project distinguishes open and closed communities. However, what defines the status of a community it is not the material support (or interface) used by them, but the hierarchical methods of internal organization applied.

It is also noteworthy that these distributing and customizing initiatives produce a subjectivity intimately linked to the Brazilian culture and the technical need of the players (regarding language options, style, game platform etc.). Not forgetting that these games are ultimately foreign product that are not made exclusively for the country's market.

7. Politics in the digital

Back to the political bias of this project that was set aside earlier, Matteo Pasquinelli helps us see that discussion about the cognitive capitalism also includes the digital interfaces. At first place, he argues that: "when we talk about cognitive capitalism or the hegemony of immaterial labour, we do not refer to something 'immaterial' but to a very physical machinic intertwining of our own bodies and social relations" [PASQUINELLI 2011, p.16].

Nevertheless, the cognitive capitalism, a conceptual umbrella in which the work of Negri and Hardt are also incorporated, deals with a biopolitical dimension of the work already present in the industrial age. As it was seen in Negri earlier, the surplus value of the worker are obtained not only through physical effort but by the usage of the mind and the subjectivity in the dynamics of production. According to Pasquinelli:

> At the beginning of the industrial age capitalism was exploiting human bodies for their mechanical energy,

but soon it was realized that the series of creative acts, measurements and decisions that workers constantly have to take is the most important value that they produce. Alquati defines as information precisely all the innovative micro-decisions that workers have to take along the production process and that give form to the product but also give form to the machinic apparatus [2011, p.07].

If in the industrial age this form of exploitation of the biopolitical potential was already in place, in today's digital world, the fragmentation of boundaries enabled an even more radical rupture in the work/leisure distinction. That means our creativeness, collective action and affections are being used by the Capital not only in the productive process but in our spare time as well.

> Cybernetic machines, in other words, escaped the factory and increasingly transform social cooperation and communication into productive forces. It is difficult today to find a *virtuoso*, as Virno would define the post-Fordist worker whose performance is not mediated by a digital device [PASQUINELLI 2011, p. 19-20].

And the machinic apparatuses that enable this system to operate are the likes of games, social networks and others that we happily engage with. As Galloway puts:

> [...] a video game is not simply a fun toy. It is also an algorithmic machine and like all machines functions through specific, codified rules of operation. The player—the "operator"—is the one who must engage with this machine. In our day and age, this is the site of fun. It is also the work site. I adopt the terms "operator" and "machine" not to diminish the value of fun, meaningful play but to stress that in the sphere of electronic media, games are fundamentally cybernetic software systems involving both organic and nonorganic actors [2006, p. 05].

So, this paper proposes a transition of this logic from the universe of the work and economics to the universe of entertainment. We think that the piracy actions also constitute a form of valorization both of the social network (that gains more followers, that means, more lives, affections and subjectivities transported to the their digital realm) and of the games (that indirectly feed themselves from the work of this players).

This positioning could seen a little darker from the political point of view but it must not be forget that resistance also rises from the inside of the cognitive capitalism.

> Each new form of resistance is aimed at addressing the undemocratic qualities of previous forms, creating a chain of ever more democratic movements, finally, will lead us to see the most adequate form of organization for resistance and liberation struggles in the contemporary material and political situation [NEGRI and HARDT 2004, p.68].

It is not our objective to make a justification of piracy, at least not in a direct commercial sense. These initiatives are seen in a broader context, as a resistance

to consumerism as a whole, as an inversion of the capitalist logic.

8. The Object

As this paper consists of exploratory researches, the partial analysis of some of the thesis's objects shown below will serve as a sample of this methodology's reach. The project foresees the utilization of virtual communities of social networks, naming the Orkut. The three games preliminary chosen as objects are the Pro Evolution Soccer, Guitar Hero and World of Warcraft franchises. Through the ethnography of their Orkut communities we expect to understand some of the strategies applied by users to distribute and customize content.

Although its use is in decline today, when the Orkut held the user "monopoly" in Brazilian social network market, before the ascension of Facebook, the page was frequently seen in police section of newspapers precisely for the actions of pirates[3]. Famous virtual communities such as "Discografias[4]", with tips and links to musical content, were constantly shut down (and soon re-opened) for copyright infringement – and the same goes for movies and TV shows communities. Soon after the complaints, the download links were easily found and remove from the page by the programmers, what could even lead to the exclusion of the whole community.

For this reason, we believe that a large number of people is one of the main factors to be considered to understand the dynamics of virtual communities. It is assumed that the assemblage of people in the tens or even hundreds of thousands, concentrated in one singles subject (and its subgenres) should provide some diversification and reliability to the sharing practices in social networks. In the same way a peet-to-peer sharing system like *torrent* relies on determined contingent of fans to distribute a file, keeping it online and of easy access. Even though it is not the leader in users anymore, some communities of the Orkut are still very active and hold thousand of members talking, sharing and customizing content, as we will see later on.

Due to the limitations of space and, of course, the brief period of development of the thesis, it only will be described here a couple of initiatives of one community of the game Pro Evolution Soccer. Created by the Japanese company Konami, the Pro Evolution Soccer (PES) is dated from 2001. An evolution of the Winning Eleven series, name still used in Japan until 2008, it can be said that from this change onwards the series reached international projection and today divides the world market of Association Football

(soccer) games with the FIFA series, property of the North-American Eletronic Arts (EA).

Contractual matters have made difficult for Konami to acquire the rights to names and badges of the teams from the International Federation of Association Football (FIFA, in the original in French), the licenses, for obvious reasons, go to their competitor game, considered the official game of the institution. So, in such cases, as the British Premier League, the non licensed squads have generic definitions to dribble this legal issue (Manchester City, for instance, becomes ManBlue). Besides that, some editions not even come with that generic version of the national championship – like ours *Brasileirão*[5] or the German *Bundesliga*. It is known that these are the great motivators to the practices this paper intends to describe.

That said, it is important to clarify now how the so called ethnography of the virtual communities will take place. Through the previously mentioned Actor-Network Theory of Bruno Latour we will investigate the traces of these pirate actions. For Latour, "action is not done under the full control of consciousness; action should rather be felt as a node, a knot, and a conglomerate of many surprising sets of agencies that have to be slowly disentangled" [2005, p. 44]. So, in that sense, we expect to describe the very components (actors or actants to Latour) that made the action possible, being them human or not-human. In that sense, another key concept to understand the way associations are being made will be Gibson's notion of affordance [1986].

The choice of the Orkut social media comes from the understanding that its message board system (in the communities) is one of the primary enablers of the kind of piracy promoted there. Remembering Negri's theory of the precedence of resistance over what he calls the counter-insurgency – the way the System has for appropriating users' creativity and rebellion tools – the picture portrayed here brightens the perspective for players.

> The creative forces of the multitude that sustain Empire are also capable of autonomously constructing a counter-Empire, an alternative political organization of global flows and exchanges. The struggles to contest and subvert Empire, as well as those to construct a real alternative, will thus take place on the imperial terrain itself [NEGRI and HARDT 2000, p. xv[6]]

Beginning our brief analysis of some features of the open community called Pro Evolution Soccer™ PES BR, the first observation concerns its significant number of participants, more than 180 thousand.

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[3] A story (in portuguese) from 2008. Available in: `http://www1.folha.uol.com.br/folha/inform atica/ult124u455850.shtml`. Access: 31/07/2012 às 03:58.

[4] As can be read on the previous link, the community reached the marc of 755 thousand members, being considered the biggest in the social network at that time (2008)

[5] The new PES 2013, due to launch in September of 2012 will be the first to come with the Brazilian national championship mode. Before that, since 2011's game (launched in 2010), the only way for national teams feature in the games was through Copa Libertadores – the Latin American version of UEFA Champions League – in other words, a continental competion.

[6] Taken from the preface.

Although the community is considered open according to our methodology, it is a closed group in terms of the Orkut – meaning it is need to be a member to visualize the content. That way this technical object projects its agency upon the gamer making him join the community in order to interact with it. This illustrate the point made by Raquel Recuero, as she says that "in entering a community, the actor reflects himself upon it (once his presence is noted by the appearance of his photo and name in the group system) and the other actors that will see him[7]" [2009, p. 33]. However, it was needed for the researcher to unjoin the community to realize that. Confirming Latour's position that "the object of a performative definition vanishes when it is no longer performed —or if it stays, then it means that other actors have taken over the relay" [2005, p. 37-38].

Another characteristic of the open communities are their plurality, once they are not restricted to piracy. This kind of community is a forum in the classic meaning of the word – a space for broad discussion of the PES games and other related topics (generally involving soccer). From a first impression it can be said that very little was spoken and produce in terms of the piracy. On the other hand, there is a strong trade of information about gameplay, Best squads, dribbles, publishing of in game goals and so on. This community is a virtual and interactive "bar table" for excellence.

Piracy may not be the central topic of the group but that does not mean that it is not there. Through a rapid search on the topics history was found a board just for sharing the famous "patches" – pirate files that modify game's original content usually complementing any trait the game does not have. One of the contributions made consisted of a patch retrieved from an external page called *GameVicio* (from Portuguese, GameAdction). In the post the user tells the context of his acquisition and provide a little tutorial for the installation of the patch.

This little example illustrates the kind of activities that will be traced by this thesis and that are only one half of the project. The other half consists in the analysis of the cognitive skills required to actually perform the practices of customization shared in the virtual communities. But that is for some other time!

9. Conclusion

This paper intended to propose research methods to study cognitive skills required to play online games from the seventh generation of consoles and the alternative use of electronic games (that could be called piracy). However, our main intention was to share the proposed methodologies for our projects and to discuss possibilities and limitations of each item proposed.

The hypothesis behind both methods was that the cognitive skills (represented by the categories) demanded for the interaction with this emerging and very popular cultural product in our culture, will turn out to be very important in other spheres of the social life and not only in the communications and entertainment field (as was seen, the political is one of them). Understanding which are the cognitive skills required and stimulated in current entertainment and how they work, the authors believe that will possible to substantiate advances in fields such as formal education, rehabilitation, participative consumption, fashion, among others.

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[7] Translated from the Portuguese original: Do mesmo modo, ao entrar em uma comunidade, o ator tem um reflexo sobre a mesma (já que sua presença será notada pelo aparecimento de sua foto e nome dentro do sistema do grupo) e sobre os demais atores, que virão a vê-lo.

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Orkut communities
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