

Luis Manuel Martínez Hernández
Paula Elvira Ceceñas Torrero
Verónica Clementina Ontiveros Hernández

CYBERSPACE

Translation
Luisa Fernanda Félix Atellano
Luis Manuel Martínez Hernández

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Coordinators:

Luis Manuel Martínez Hernández
Paula Elvira Ceceñas Torrero
Verónica Clementina Ontiveros Hernández

Authors:

Luis Manuel Martínez Hernández
Universidad Juárez del Estado de Durango (UJED)
Instituto de Investigaciones Históricas - UJED
Facultad de Ciencias Exactas – UJED
Facultad de Psicología – UJED
Universidad Pedagógica de Durango
Red Durango de Investigadores Educativos, A. C.

María Elizabeth Leyva Arellano
Facultad de Ciencias Químicas – UJED
Área Básica - UJED

Luisa Fernanda Félix Arellano
Escuela de Lenguas - UJED

Paula Elvira Ceceñas Torrero
Universidad Pedagógica de Durango

Verónica Clementina Ontiveros Hernández
Universidad Pedagógica de Durango

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Universidad Pedagógica de Durango

Centro de Actualización del Magisterio (Durango)

Instituto Universitario Anglo Español

Instituto de Investigaciones Históricas - UJED

Facultad de Ciencias Exactas – UJED

Facultad de Psicología - UJED

Facultad de Ciencias Químicas - Durango – UJED

Escuela de Lenguas - UJED

Área Básica – UJED

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Name of painting “mi carnal y yo”

Cover design: Luis Manuel Martínez Hernández

Translation:

Luisa Fernanda Félix Arellano

Luis Manuel Martínez Hernández

Copy-editing in Spanish: Mtra. Paula Elvira Ceceñas Torrero

Copy-editing in English: Mtra. Luisa Fernanda Félix Arellano

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PROLOGUE

Living in this day and age, it becomes necessary to be aware of the influence of the internet on everyday life. We take all technological advances for granted, as well as the infinite resources provided via internet and yet we barely know the origins of it all.

The following work is a reflection on how our reality, surroundings, society and every entity reacts and has embraced the virtual world and has made it part of our daily routines and even of our personality.

Even though the words “virtuality” and “cyberspace” are used constantly by the media, education and everyone in general, it is also true that most of the times both concepts are used incorrectly. The aim of this work is to explain the reader the origins and concepts of those concepts so the viewer understands in a better way the nature of them.

This book is the result of the need to define and praise the rise of “virtual communities” that have become an important form of interaction among humans in the last few years, and it seems as if it will only become more important in the years to come.

The authors of this publication hope to shed some light on the readers on the importance of these concepts and hope the readers learn more about the beginnings of this technological age and embrace the opportunity we have to help this technology improve our lifestyles, economy, society and minds instead of loathing and fearing the change we are living nowadays.

Luisa Fernanda Félix Arellano

PRÓLOGO

En la actualidad el uso de la tecnología es necesario en todos los ámbitos laboral, económico, cultural, educativo y social como un medio inmediato de comunicación. Ante esta necesidad surgen una serie de conceptos nuevos que facilitan la cercanía entre las personas que aunque estén alejadas de los cambios presentes y separadas por la distancia, les facilita a dichas personas que la comunicación sea inmediata.

Este libro es una obra más que presenta la Red Durango de Investigadores Educativos, A. C. (ReDIE) como una aportación de los autores Luis Manuel Martínez Hernández, Elizabeth Leyva Arellano y Luisa Fernanda Félix Arellano, catedráticos de la Universidad Juárez del Estado de Durango.

En este libro que hoy los autores presentan y que tienen a bien compartir con todos ustedes lectores interesados en el uso de las tecnologías, nos dan a conocer sobre los términos Virtualidad, Ciberespacio y Comunidades Virtuales.

Se espera que la lectura de esta obra permita despertar su interés por clarificar dichos términos y ampliar el panorama en su uso de las tecnologías y no como erróneamente se cree.

Virtualidad, Ciberespacio y Comunidades Virtuales para algunas personas se relacionan básicamente con la computadora, aunque son conceptos que tienen otras aceptaciones demasiado amplias e importantes en la actualidad.

Paula Elvira Ceceñas Torrero

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WHAT IS THE CYBERSPACE?

Abstract

Nowadays, every day around the world new spaces are created, new words and concepts, and one of them has gotten a great importance. This is the concept of cyberspace. That is why this paper gives an approach to the concept and how the people is currently using it; since its origins in Gibson 's novel to nowadays in the boom of social networks and online games that have changed and almost eliminated time and space, as formerly known, leading to new topological spaces where internet users live.

CYBERSPACE

The exponential growth and rapid evolution of Information and communications technology have changed the way we see the world, where the contemporary societies of the past quarter -century and early twentieth century, have generated a large number of ideas and thoughts about the number of people using this new medium, creating commercial applications.

There are new ways of using technology today. We create virtual communities and we can apply them in education, for example, creating new models for education where technology can be of use.

This is a society where knowledge is the most consumed product is knowledge instead of goods, which has generated the creation of companies with new types of services for the consumers. All of this is a consequence of the new media and communication channels, such as the internet and everything technology-related which have had an enormous impact in what was once referred to as public space and the concepts we had for countries, states, etc. Therefore, it is of vital importance to make some theoretical considerations about what the Internet is and more importantly, what the cyberspace is since these two concepts have radically changed the way that society is perceived and the new structures that have

emerged with the use of this new media. This has given origin to a new area of public action and, at the same time, has made it necessary to create laws to regulate such spaces in order to accept and adapt ourselves to this modern entity that has transformed the economic, political and cultural life in contemporary societies. Such regulations will allow us to discover or create new realities that have been generated in the cyberspace and the Internet and will also allow us to understand what this phenomenon is about.

The concept of cyberspace was created by the science fiction writer William Gibson (1948) who created the concept of cyberspace in his novel *Neuromancer* (1984) to describe the space that existed inside of computers and their interconnections. Now it defines an anthropological space in computer networks where once all network users enter cyberspace, they become cybernauts. These cybernauts are part of a cyber-society, characterized by alternative forms of socialization and social appropriation of ICT's, and this is how cyberspace is a defining element for the virtual relationship between users of the Internet and other networks or computers (Valdes, 2013).

Cyberspace is perhaps an unfortunate word if somehow it was to remain linked to the desperate, dystopian, near-future sight that is in Neuromantic plans. Nevertheless, a word gives name to this new stage, a new and compelling event in the development of culture and in the daily life of men under the sign of technology. A new, a parallel universe created and sustained by computers and communication lines in the world. A world in which the global traffic of knowledge, secrets, measurements, indicators, entertainment and alter human identity take shape, images, sounds, presences that had never been seen on the surface of the ever blossoming earth in a vast electronic night (Faure, 2009).

For Levy (1997) cyberspace "means the universe of digital networks as a world of interaction and adventure, [It is] the space of global conflicts and a new economic and cultural frontier".

According to Gasperin (2005) Cyberspace is a vulgar term, common among cybernauts. That is, among people who use the net without technical knowledge of it? Cyberspace and the Internet are not the same thing. Internet is the infrastructure and cyberspace is the content. Generally, users are also part of the content via email, the web, newsgroups, lists, Gopher, etc. Cyberspace is usually but not always multiuser and not always in real time. Heidegger said that language is *the house of being*. Nowadays this idea is not very far from reality as new terms are continuously generated in the language of the Internet. It is essential to present some examples to understand the characteristics of the XXI century human being and the language that is being built in the so-called cyberspace.

Gibson's novel *Neuromancer* begins in the heart of the Japanese city of Chiba, a place known as "The Zone ", which becomes a heaven for future transactions of everything from drugs to information. It is a paradise for surgeries intended to intervene the human body, capable of creating cyborgs that are torn between the machinery and biology. Case is a cowboy, a sailor of the networks, who wanders between the bars and the dark corners with no destination. Then tried to cheat one of your employers and revenge was a contamination that left him unable to experience cyberspace: could not connect. It all starts in the shadows, in a dense world, built with a pessimistic view of the future society. There are also large corporations, material entities with a prominent presence in cyberspace, generating intrigue and powerful structures that cowboys try to weaken, often to steal information. Ashpool Tessier, Hosaka, Sense Net, Maas, are shown in this first serie. Able to kill for a small disk filled with data, to kidnap brilliant minds to make them work for their benefit, to maintain armies of murderers, and generating families and heirs who behave with the typical apathy of the royal families of today. This is another example of the amount of characters and situations that are described and that try to formulate ways and entities existing in the virtual world.

Considering what was just explained, we present the results of the data collected in a school, since the intention of this work is to weave the main elements in the stages of adolescence and cyberspace, with the axis of the born education so we can see how new languages and forms of cultural expression are born Gasperin (2005).

Umpress (2007) says Gibson talks about the term cyberspace, which he defines as a fictional computer network that contains a huge amount of information that could be exploited in order to acquire wealth and power. In the cyberspace, the physical world and the digital world are confused to the point that human users perceive computer-generated experiences that have no real existence, and sensitive digital entities that affect the physical world. Although Gibson's descriptions of computer-simulated reality, cybernetic ally enhanced humans and artificially intelligent entities remain in the real world of science fiction, it is not the case for the concepts of "exploring" large amounts of data and "visiting" remote computers.

Moreover, the premise that computer networks contain information that people can exploit, for better and for worse, is very real. We need a physical infrastructure of computers and communication lines to implement cyberspace. In other words, cyberspace requires computers. However, what lies "inside" computers provides the highest degree: we measure the true value of cyberspace in terms of the information contained within that infrastructure. The crucial features of cyberspace include the fact that (1) there is information in electronic form, and (2) computers can manipulate (save, search, indexing, processing, etc.) said information.

Cyberspace has become a metaphor for the digital society that can be made possible by computers and computer networks. When referring to it, in the abstract, it means the total amount of information available electronically, the exchange of such information and the communities that emerge as a result of using this information. When used in reference to a particular military operation, it means information available to a specific audience. It is not necessary for cyberspace to

be publicly accessible, although internet is of public accessibility. Military units can operate private networks that constitute their own limited versions of cyberspace. In fact, there may be a number of “cyberspaces” disconnected, each serving its own community of users.

Cyberspace is not something that is already finished or even about to be finished; it is being built gradually day by day. This is how cyberspace is becoming a fast growing entity and it is also becoming a social relationship framework for parallel, original and even sometimes alternative conventional contexts. Since this moment, in which solidification is detected as another meeting place and social exchange, this framework becomes an interesting object of study for sociology. Cyberspace suggests a metaphor of enormous dimensions. It is a term that attempts to represent the irrepresentable, the ideas that reside in our minds. Saez (2013), where a learning object as email becomes the most significant promise of expanding not only the means but also the communication spaces offering computer-mediated communication (Villanueva, 1997).

Although this regard Mayans (2005) provides four different meanings of what is cyberspace?

- Cyberspace as synthetic space created by the interconnection of computers around the world they neither understand nor exploit its most important features from the model of broadcasting to which mostly have been treated so far.
- Cyberspace creates a space where not even logic based on physics are valid: this is a result of an acentric space type and produces a kind of spatial and social environment for the activity that is independent of location (physical) in which it takes place.
- Cyberspace is a dimension more affordable than other broadcast channels and useful information. This makes it possible to be inhabited by millions of people.

- Cyberspace is a conceptually accessible and manipulable environment where there are many forms of contribution and not even the most complete or the most complex are inaccessible, given the language with which one can access and participate.

For some people, we live in a digital society. Digital not only using computers that have changed from analogue to digital, but we live in the information society, which is mediated by the use of Information Technologies and Communication (ITC). Since the most significant and distinctive feature of this age, compared to other historical moments, is the digitization of individual and collective life: the accumulated knowledge, information, and social relationships that are not only occur in person but through social networks in virtual communities, where virtuality is something real and corporeal. It means, objective to the subject, this is a subjective (not subjective) reality Martinez (2013), where the use of free time and all the processes of production and consumption are becoming digital in cyberspace. This can be seen on amazon.com, a site where not only books are up for sale but one is able to buy any sorts of products. Free market and large corporations have stopped selling in person and have started selling their merchandise online. This has been the cause of the bankruptcy of some companies in the United States, as it is Circuit city (a company which use to sell electronics) and Blockbuster (a company dedicated to the rental and sale of movies and video games) and was superseded by chains movie rentals and online video material as could be Netflix.

Does this so-called digital society means the arrival at the cusp of cyber interaction in the social structure? For some, it is the beginning of a complex and fuzzy moment like a nuclear issue of our time. For others, information technology and communication contribute to eliminating borders, the onset of the global village, the free world, equal, with no distance and construction of world-cities, telepolis; whose topological base "... is not the interior, exterior and boundary enclosures, but the network of nodes interconnected by telecommunications technologies and in particular, for teletematic networks" (Bermudez, 2001).

In this sense, an important concept that is going to be used is the term Topology, but what is the topology? The topology is probably the youngest of the traditional branches of mathematics. In contrast to algebra, geometry and number theory, whose genealogies date from ancient times, the topology appeared in the seventeenth century with the name of *analysis situs*, that is, analysis of the position. Informally, the topology is concerned with the properties of figures that remain invariant when these figures are folded, dilated, contracted or deformed, so that there are no new points nor there are any matching points.

The transformation that takes place presupposes, in other words, that there is a correspondence between the points of the original shape and the newly transformed one, and the manipulation makes points close by match with others that are close by. This latter property is called continuity, and what it requires is that the transformation and its inverse are both continuous: thus, we work with homeomorphisms. The topologist considers the same objects as the geometer, but he sees them differently: not fixed on distances or angles, not even on the alignment of the points. For the topologist a circle is equivalent to an ellipse; a ball is indistinguishable from a cube; it is said that the ball and the cube are topologically equivalent objects, because it goes from one another by a continuous and reversible transformation (Stadler, 2013).

So, in this sense, the cyberspace is a topological space where there are certain properties that do not change but it uses the internet as basis. A topological level for example, is a triangle which is the same as a circle. One can be transformed into the other continuously, without cutting or pasting. On the other hand, a circle can never be transformed into a segment from the topological point of view, because such transformation would require breaking the continuity.

Thus, Internet is a fundamental part of the cyberspace because cyberspace is part of the internet and the internet is built with the interconnection of networks. For

example, the Internet is a collection of interconnected networks at a global scale, that is to say, a global network of computer networks. There is therefore a computer network in the usual sense, but a network of networks that have the particularity that each network is independent and autonomous. The connections are made through telephone lines (although connections may be of other types) of optical fiber lines or coaxial cable and as a result of the computers that speak the same language on the network that communicates each other. The networks that form the Internet are of different kinds, nature, purpose and size. There are public and private networks, local, regional and international institutional, educational, university dedicated to research, leisure, etc. (Martinez, 2008).

But before we need to ask ourselves: What is a computer? A computer is the most revolutionary artifact that has entered our homes in recent years. This instrument allows differential treatment of information (from the term "computer" which comes from the Latin "computare").

The computer also called microcomputer, processor, electronic brain, among others, are terms used in Spanish to designate any device or machine for processing information. By process, I mean following stages or processing manipulations the information goes through to solve a particular problem, following the instructions of a registered program.

While there are such things as virtual computers, we generally refer as computer to any electronic device consisting of a processor, memory and a device I/O (input/output). The main feature of the computer, compared to other similar devices, such as a calculator, is that you can perform a variety of different programs (software) loaded into memory that are executed by the processor. This is why it is said that a computer is a general purpose tool. The computer is always looking to optimizing processes, saving time and making it easier to use. It simplifies routine tasks, and computers have peripheral devices to communicate with the outside (such as network cards, audio inputs and outputs, USB, Firewire,

Tunderbolt, etc.) and finally, computers have a program that allows the computer to communicate with other computers, manage computer resources such as memory, the I/O (Input/Output), storage devices (Hard Drives, CD- ROM), Cloud, etc., and the interaction with people, this program is called operating system.

We must also know what a network is. At its most basic level, a network consists of two computers connected by a cable or other means so that they can share data. It does not matter how sophisticated, a network comes from a simple system interconnecting computers.

While the idea of two computers connected through a cable may not seem extraordinary, in retrospective, it was a great achievement in communications. Networking arises from the need to share data in a timely manner. Personal computers are an excellent working tool that produces data, spreadsheets, graphics and other information, but they can't share data as quickly as it is produced. Without a network, the documents have to be printed in order for others to edit or use them. In the best case scenario, files are delivered on disks for others to copy them to your computer. If others make changes to the document there is no way to mix them. This was, and still is, called working in an isolated environment (to stand alone).

If a lone worker connects his computer to other computers, he could share the data on the other computers and printers. A group of computers and other devices connected together is called a net: "Network". And the concept of connected computers sharing resources is called "networking". Computers that are part of a network can share the following resources: data, messages, graphics, printers, fax machines, modems, and other hardware resources. This list is constantly growing with new found ways to share and communicate through computers.

LOCAL AREA NETWORKS

Networks started off being small, with perhaps 10 computers connected simultaneously to a printer. The technology limited the size of the network, including the number of computers connected as well as the physical distance the network could cover. For example, in the early 80's the most popular method of wiring allowed about 30 users on a cable length of about 200 meters (600 feet), so that a network could be enough for a single floor office or small company. Nowadays, for very small businesses, this configuration is still adequate. This type of network within a limited area is known as a local area network (LAN). Today's networks can be connected thousands of miles away with the use of optical fiber cable, which allows the distance to be shortened more and the transmission of information is greater and faster. So one of the main attractions of the Internet is the huge amount of information and the relationships that can be built there through the forums, wikis and any other social networks that may take place in cyberspace although, one of its main problems is how to find what is sought and how to do it quickly.

Someone could say that the biggest drawback of the Internet is that it can be terribly slow, even with the so-called broadband, but this may be due to two reasons:

1. Our computer and internet connection might not be adequate since the majority of users connect to the Internet using modems and telephone lines. Given that the capacity for data transmission through telephone lines, known as bandwidth, is slow, electronic data reception can take really long.
2. Our Internet access provider is not appropriate. When choosing a provider of Internet access, we must take into account the speed and quality of the service offered, because frequently, these providers support more users than what they are capable of covering which ends up in a slow connection.

The speed in which data is transmitted through networks has been improved with the advent of ADSL, optical fiber lines or via cable television. They have increased the bandwidth, which makes the network faster, and more agile.

As the width of our bandwidth is enhanced, we will be able to enjoy new services in the network: Internet via television, distance learning, home automation (Internet home control), social networks, youtube, facebook, and new technologies that are continuously expanding Internet possibilities. For instance, we can mention 4G technology that enables access to the Internet through mobile phones at high speed. Regular use of spoken communication with the computer is a reality, as is Siri, which is included in the iPhone 6.0 and 7.0 operating system, in which speech recognition is quite acceptable, and allows access to information through language processing. You can get non-experts in computer to search and retrieve information, and allows access to the Internet from small devices such as smart phones.

Universities, work with something called Internet2, which is a project led by American Universities to develop new technologies in this field. The NGI project is another big project. It is an acronym in for Next Generation Internet, and it is developed by U.S. institutional agencies such as NASA.

Regular use of spoken communication with the computer is included in the near future. Speech recognition is when the computer is able to recognize the human voice, distinguishing the syllables and words, and processing this information to extract the meaning of sentences. Through language processing, non-experts in computer get to search and extract information and they are allowed easier access to the Internet from small devices like mobile phones.

The Cyberspace

For Mayan (2005) Cyberspace, computers and the Internet can be considered as a type of technology or a space of relatively easy access. This power of accessibility is crucial to understand what is and what we can get out of the cyberspace and for that purpose we should look at it from different points of view.

- First, the accessibility factor must be contextualized and relativized seriously before making any other statement that may make the mistake of forgetting some unavoidable factors. In economic terms a personal computer and an Internet connection are relatively affordable and accessible to a large number of users that live in the so-called First World. But not for all and for all alike. We cannot forget also that there are millions of people for whom a computer or Internet access is rather a luxury. It is a Utopia if we think of the needs of many. With all the inevitable caveats we want and need, we could agree that access to cyberspace is relatively cheap.
- Second, computer technology and environments using a computer and the Internet can also be regarded as highly accessible. And so the computer becomes an appliance that is useful to non-expert people, and unlike other appliances, computers have a potential utility curve much more prolonged than others and more vertical growth. Thus, for example, the difference in effectiveness, usefulness and potential that may exist between a mobile phone, a refrigerator, or a video and a computer, generate a radically different curve, since the limits of knowledge and experience in a computer are much higher than those of any other of these appliances. It is important to remember that computers are extremely silly machines a priori because they do not do anything for themselves, compared with other appliances that already work alone or with very few instructions. But it also reflects perfectly what we want at

this point: the user of this appliance can get a lot more juice as you learn to use it and experiment with it.

The latter issue of experimentation is also very important. A remarkable thing is not just that the computer and the World Wide Web, or as we call it: Internet, are means of a progressive learning and from low standards, but it is also important to consider how this learning can be obtained. For one, it is a kind of learning that could take years to develop through a more or less formal training. The best example of which is the University. However, we know that this is a type of content that is strongly linked to developments and constant changes in technology hardware, software and programming language. Therefore, the experience and use have much to do with this learning approach, probably to a much greater extent than in other knowledge acquisition through formal training.

If we keep that on mind, we are directed, in a subtle way, towards a hypothesis that could serve as an explanation of why this constitutes a kind of knowledge with a learning very steep learning curve. The difference is that one is not confronting face to face with a tool that does things (for example a computer program such as AutoCAD) and learning to use such tool can get the job you want done, but a computer and the Internet is a tool that works with tools. And it does not just work with them, but also allows creation, modification and adaptation to fulfill any purpose. The example of AutoCAD and architects are very helpful in differentiating a tool in the classical sense (which serves to make or helps making something, in this case, plans and elevations of a building, for example) of a tool that creates, manages, operates and may even allow these tools to modify and create (in this case, the computer that is uses AutoCAD but also the computers with which it was programmed and that continues to work with every new version of AutoCAD).

One factor that is very important in this regard is the growing importance and influence of movements for free software because it has been long understood that democracy or independence of cyberspace cannot be something to be granted, but

something to conquer by the media the cyberspace and computer technologies offer. As of today, it is becoming increasingly clear that one can reach for a free software operating system without too much trouble or real handicaps of stability, security or assistance. But the conviction in a level of servers is even greater and stronger: it is no longer Linux – on a domestic scale - and UNIX technologies that are found in most commercial servers, but even languages like PHP, the management tools Postgre MySQL database, and official government regulations and standardized versions of Java, HTML and XML, etc., are helping to build solidly this mass public accessibility to be active and creative part of cyberspace.

Many civilian agencies, businesses and public institutions work hand by hand with tens of thousands of users around the world, becoming a massive self-help group and constant experimentation lab that are helping to really understand what cyberspace is.

Thus, the Internet offers new ways for people to exercise their political rights, but also, as it has become clear in recent months, is granting government's new tools to curb dissent. While Internet creates new economic opportunities for people in different parts of the development spectrum, it also offers new ways for criminals to steal personal data and intellectual property. Caro (2011) in which the Internet becomes the central nervous system of society, it must be remembered that all critical infrastructure sectors rely on ICT.

It is managed by a supervisory control systems and data acquisition (SCADA) and other complex processes of information technology (IT) that are connected in one way or another to the Internet, Touré (2011), where computer networks that were once an obscure and arcane set of technological elements used by a small elite, is now widely used and has become the subject of political debate and public interest and a part of popular culture (Smith, 2003).

In this regard, Smith (2003) states that Internet optimistic theorists have argued that gender, race and age are losing importance in on-line interaction.

At the very least, many people claim that the absence of these labels will provide the opportunity to explore and invent alternative identities. Jodi O'Brien responds curtly in his chapter to this opinion: "Writing in the body: the (re) production of gender in online interaction", where he says that sex is a trait so essential to the organization of interpersonal relationships that people have to make great efforts to provide online genre.

It is very complicated to know the sex of the people on the internet and on that matter Smith (2003) notes that it requires effort to reproduce sex in an online interaction. "Are you male or female? (Are you male or female?) Is such a very common question that long ago it was shortened to "RUMoF"? It is important to say there are no other widespread abbreviations used relating to age, height, weight, socioeconomic status, etc.

Sex is the feature of our corporeal lives that becomes the central feature of the interaction via the Internet. And it is not just that gender is reintroduced in a world without physical marks. O'Brien makes a surprising remark by stating that gender is reintroduced in a more limited and stereotyped way than the one existing in bodily interaction. There are no limits on how you can describe yourself in cyberspace. However, gender descriptions that can be found on the Internet have less variation and imagination than the ones given in face to face interactions.

People recreate themselves as stereotypical ideals and O'Brien points out that this hypergeneralization is particularly prevalent among those trying to cross-dress (ie. men who present themselves as women). We conclude that a world without restrictions has led to greater homogeneity rather than new forms of identity.

In cyberspace, does it really matter the gender of the person? It can occur that in this virtual space, sex change can happen without it being real. How fundamental is sex in a relationship in cyberspace? Where a person can fear that a close friend is the subject of seduction of a person (or entity, since you could be talking to a computer at the other end) because the sex does not necessarily fit in what we know as gender because the word in Spanish from Mexico is feminine and in Spain is male (the computer). The debate over when and whether sex change is appropriate has led to the concept of a vocabulary of motives (vocabulary of motives) presented by Mills in 1940, which makes change something acceptable as a way of avoiding abuse or to experience a new perspective, but makes it unsuitable if it is an intent to deceive. It is, however, a fine line poorly defined, because what is one man's experiment is deceit for another. Smith (2003).

Also, when a person is on-line, that person create a series of roles that are not given in the objective reality because the reality you perceive is a subjective reality, not subjective, is the subject of this interacting with others persons or with the computer. However what is more beneficial? Having a discussion face to face with another person? Or having a discussion on-line that could be synchronous or asynchronous with another person? When you are online you can write things and send them, not knowing what the person on the other side is doing. There is no body language that inhibits communication many times and does not say what you think, which is why today the process of communication conversation between people on-line is fictitious and may not be authentic or real or it can be virtual or real, but not both Martinez (2013). One must remember that the real is not virtual and virtual can become into subjective reality, facing a situation in which identity is linked reliably with your own self personified in our real world and often in the virtual world.

So can we say that the cyberspace is an illusion since cyberspace is a non-place that only exists in our heads? Cyberspace is something that cannot be framed in geographical terms. One thing seems certain: more and more people define and

experience cyberspace as real, and sociologists should know that "if people define situations as real, they are real in their consequences" (Benschop, 2010). There is not a religious center in the words of Mayan (2005) who says the horizontal structure of the cyberspace, does not digest the tremendous vertical stratification of our society as well as many would like. Of course, cyberspace reflects the unequal and stratified world that created it, but this reflex is not entirely true and blurs and compresses many nuances of the complex socio-economic and political ladder context in which we live.

Of course cyberspace is a reflection of the uneven and stratified world that created it, but this is not a truthful portrayal because if it was conceived from its beginnings as something reticular, modular, and scalable and that could eventually spread everywhere. It is also true that the technical structure is not built just like that, but with clear and explicit reasons used for very different purposes than those for which it was conceived initially. This structure was created by the Department of Defense of the United States in its Arpanet project. Though certainly not so far from what their first engineers had in mind 70 years ago, not even today. Cyberspace remains without a center, despite multiple attempts and dedicated efforts from governments and large corporations to have control over it, under the name of national security, morality and decency, economic interests or thinly disguised in one of the multiple euphemisms that represent a notion of censorship.

Clearly, this is one of the main arguments for maintaining hierarchical structure and a centralized world. The fact that these reasons are not convincing enough in cyberspace, makes this a place where it is more difficult to get the same levels of power, and to enjoy the same hierarchical stratification prevailing in the outside, where along sociological or philosophical reasoning, cyberspace creates a new mathematical mind and a new spatial dimension that is part of our daily lives becoming increasingly more relevant in cyberspace. It is a space whose logic and structure does not correspond to physical geography or Euclidean space. Nowadays, there are communities that currently exist only in cyberspace, and it is

therefore important to find ways to investigate these existing social groups in cyberspace, which are sometimes used in mass media. For example, shows that tell the audience about a statement a celebrity gave, or what is buzzing on social networks such as Facebook or Twitter. But it is possible that social relations created or supported in cyberspace get to alter our society and modify our real communities, for instance, we witnessed the overthrow of Egypt's president where social networks were the means citizens used to reach an agreement on the uprising and the overthrow of the regime.

If we look at the specific uses of the networks to build or improve communities and the ways in which online networks can be used for collective action and to improve our quality of life as individuals within our physical space.

Although space may be considered of little relevance in the online interaction, there have been numerous online networks that are organized around specific physical communities. Willard Uncapher (1995) describes one of the first community networks in his chapter on "The electronic colonization in rural frontier: Big Sky Telegraph and its community." In the late 80s, a computer network was created to meet the needs of an entire physical community. It was located in Montana, which is a very large but under-populated town, in which social communications and business transactions are often difficult and expensive due to the size of the territory where computer networks make it easier for people to share resources and to socialize. The study of this case is valued because of its historical significance and also, the fact that it provides information on many of the issues surrounding the adoption of a new technology while reporting on how physical communities and online communities affect each other (Smith, 2003). Where the network provided a number of important benefits for teachers. For example, people were willing to answer questions directly on-line, to share school programs and to organize on-line circulation of library materials. There were new areas created in Big Sky Telegraph for other groups and activities among whom were business, Internet access, and touristic information and community services. According to a

report by Uncapher, despite the many benefits of the network, the adoption rate stopped for a while and only 30 of the 114 schools were still active in the network after two years of existence. This leads to the crucial question to find out why the teachers did not connect. Although it is true that money, modems and information necessary to make everything work would sometimes take a long time to arrive, Uncapher ensures that the factors determining the rate of adoption were more complex than simple structural difficulties.

On this subject, Morocco gives us three different perspectives of what is cyberspace:

The techno-scientific perspective of cyberspace: Cyberspace, as a new (electronic) mean to generate a new political space (as a space for new political action subjects generated by using/interacting with new technologies), is an advanced development in technological-scientific parameters. Following the interpretation of Manuel Castells, we believe that the revolution brought by new information technologies create a new era for politics. It is occurring, thanks to this scenario of technological overdevelopment, a virtualization of culture. A process that can be described as the transition from a culture focused on current events to a culture based on the proliferation of virtuality. Virtuality, as the most characteristic sign of the new era for the use of hypermedia and it is associated to cyberspace for its lack of materiality, physicality and because it is not a subject to the space-time coordinates. The virtual matter is a process, what is open and it is not opposed to the real but to the present, which is the concrete, has a determined form and it is finished.

According to Baudrillard, contemporary culture as a culture of simulation is characterized by a progressive displacement of the real by its symbolic substitutes that, as perfect replicas, adapt and fit better than reality itself to the intense load of communicative activity, characteristic of a tele-informatic culture and an informational society, dominated by communicational exchanges.

The ontological perspective of cyberspace: We interpret the ontological nature of cyberspace as a rhizomatic space as a network of heterogeneous networks with multidimensional systematic significant breaks. The ontological traits accompanying the cyberspace in its definition are flexibility, re-combinability, permanent transformative fluency, an ephemeral constitution and a continuous reconstruction of identities within it thus adopting an anti-essentialist position. Also inside cyberspace a complex phenomenon occurs where multiple overlaps between projects in constant evolution generate the conditions of possibility for the production of new political identities characterized by ontological temporality, its fictionality, its reversibility, and its arbitrariness. The elements that exist in this new virtual environment are in a constant state of morphological transformation due to the ontological nature of cyberspace. Cyberspace, as rhizomatic space, allows unlimited sharing and conversational discourse, which produces the effect of a spring of ideas like never before, due to both the immediacy and interactivity of the cyberspace. Virilio poignantly notes in *Aesthetics of disappearance*: "Our whole lives are spent in the fast prostheses of fast traveling, of which we are not even aware anymore." The highly accelerated rate sets the basic medium that makes possible such dissemination and pollution of information, political ideas, and aesthetic tastes and preferences. On the other hand, the impressions generated by the accelerated rate of such trips allow us to be and not be in a place simultaneously. Cyberspace produces a horizontalization and delayering phenomena, a dissemination trigger and the proliferation of ephemeral, moldable, flexible and contingent identities, all of them related to adjacent contexts: understanding cyberspace as a new cognitive space of being, as a field of mediation/intersubjective interaction where strategies are produced (self) creating identities (sexual-political-aesthetic) virtual based graft, in the network exists fragment that you can "copy-paste". These are virtual identities that last as long as the connection to the chat or forum, clinging to its fleeting and contingent nature.

Cyberspace frees us from the constraints (space-time) of the body and its attributes, which always link the subject to a stereotype given beforehand. The overcoming of the inherent constraints in the "here" and "now", which turns individuals connected to cyberspace into beings with the ability to be placed anywhere, acquiring an identity that is as capricious (or desired) as it is ephemeral, fulfilling the (cyber) dreams of achieving (virtually) what we always wanted to be (really) and we got to be (pretending). Where choosing a nickname or names overlaps with our real name and where an avatar are necessary for the construction of virtual identity that is created in cyberspace itself to be used on social networks or discussion forums becomes a type of ID or CURP or identification card which may be the same for all virtual spaces or you can create a large number of IDs that can be used anywhere you want, as long as they are not already being used. This new identity is our real identity in the virtual, in cyberspace, although nowadays we have been trying to homogenize the real and the virtual identity but it has not yet been regulated and it often cannot be tracked but this agglutination of people, are really them or are they just a virtually real identity only in virtual reality but not in the physical reality? It is similar to the Matrix we saw in the movie The Matrix, as this new reality displays our desires, hobbies, fantasies, memories, dreams or feelings relevant to us, which we want to be recognized by the other members of the forum, other people that are as virtual as us.

It is then that we become citizens of cyberspace as much as we are in the physical world, since it leads us to have a variety of virtual roles that can lead to a loss of identity, and we have a new opportunity to define ourselves and present ourselves in a way in which we feel more comfortable. This also drives us away from conceiving the concept of identity as a narcissistic type search because in the internet we relate according to social relations. It is also evident that the self is not a given, but it is being built by the subjects, in a decentralized manner.

We can engage in different virtual sites where the participants can start building

their own rules, and define their roles, often differently as in the physical world. There are many ways of order the roles of each person (cybercitizen) so, in this way anybody can do the necessary thing that you can need in the cyberspace, but there is always a discussion and ethical dilemmas over in what context a person can play with the personality that he or she is building, with their parameters that others do not have. We can hope that the valuable experience we get when inhabiting places where things and people are not typed in the traditional manner, can cause changes in the physical world, and especially out of the game situation.

An idea we should think deeply about is, if from experiences in cyberspace we can perceive ourselves differently, or if we only perceive ourselves as fragments, as in a game with multiple personalities that we create, those related to sex change, they would be very difficult to develop in the physical world, due to existing social conditions, then they have a very important therapeutic role in allowing subjects to create his own personality, through a kind of trial and error.

Then in cyberspace, when we are connected, we are incoherent, we have a different personality, that is, we can play any role like a performance in a film and when are disconnected, we may be more consistent with physical reality, but within virtual reality we are other actors who play a real role where we equally value all the different scenarios in which we find ourselves. Or rather, in each scenario we give different importance to the role we are playing. Their interventions are fantastic, and others are as real.

We are then actors in cyberspace that have an identity where there is no compromise on these relationships, but we value some things more than others, according to how it is defined. What an observer can perceive as many different more or less incoherent masks for the subject in question; they are likely to pose no problem regarding identity. Even more, they could be a unit, according to the different meanings that the subject will give to each. (Even the observer can, through interpretation, assign a unit of meaning).

Cyberspace is then a "life on the screen" where it is constituted by fantasy worlds (virtual or unreal), the characters never stop being characters that eventually happen to become one with the author. What cybernauts would do next is to objectify their experiences in order to learn something that can be used in "real" life. Then, he also unconsciously assumes there is a prominent reality. It is the unbalance in their everyday lives, in this way, we can say that there is an artificial live that occurs as a psychologist session.

Net-citizens are these virtual characters who have a digital body, that virtual person has a virtual body, it means that they exist but in cyberspace as a "body without organs" where cyberspace is a rhizomatic structure, characterizing the mode of being of cyberspace. It is a network without hierarchy or a center, that consists of movements, speeds and intensities which produces the constant play between re-territorialization (understood as stabilizing organization in a territory such as a language, a family, a political-ontological identity-sexual) and deterritorialization (as a solution of the territory).

In this sense, Deleuze and Guattari oppose the rhizome, a-centred system as finite automata network where communication is made of any other member of the network and where all members are absolutely interchangeable

The political perspective of cyberspace: Once we have located cyberspace in a techno-scientific (overdevelopment of microelectronics technology) and social context (information society of late capitalism characterized by mass consumption of products made by electronic technology and a quasiuniversal access to cyberspace) and we have interpreted it ontologically as a rhizomatic space as told by Deleuze and Guattari, all that is left to show is how this virtual space is a new space to think politically.

Cyberspace opens new horizons for reflection on politics in the context of digital technology overdevelopment. It should be noted that cyberspace leads to the creation of "virtual communities". Such communities can be formed either because their members share a common hobby (gardening, satellite or the nineteenth - century Russian music) or because they share an ideology or values more or less diffuse or systematic, as mentioned above. Therefore, there are diverse forms of articulation of activism in the virtual world. "Activism thus becomes a form of collective experimentation to test the tissue of power relations that constitute us, through the displacement of symbols, the search for new technological uses of communicative conflict, the role reversal or break of dichotomies that predetermine the perception and action on the world." The discursive and communicative order of the dominant system is questioned by an established digital activism of the new political subjects of the virtual environment across multiple tactics such as simulation, ironic appropriation, subversion and transgression of semiotic codes of the system, the displacement and virtual mobilization.

Such strategies are based on opening multiple virtual channels of participation and interaction of a horizontal nature, as off-centered networks that make many experiences available for everyone, with alternatives to those promoted by the dominant discourses relating to large political and economic interests, seeking a numbing and paralyzing uniformity of critical impulses.

Cyberspace is then a "laboratory" where experimentation of political power in unprecedented ways is possible. Alternatives question the ontological and meta-political assumptions of the real factual political power.

According Morocco virtual political activism in cyberspace can be defined by these parameters:

- New use and critical appropriation of images, as a revolutionary, lawbreaking element to fight against legitimizing norms and values of standardized ways of life, both public and private.
- Use of cyberspace as a territory for the release of areas that are not reached by the influences of political power systems, that allows experimentation of alternative ways of exercising political power and the establishment of new political configurations of being a political subject (with rights and duties).
- Political action is no longer only based on explicit and formally structured organizations (rigid, hierarchical and based on ideological metanarratives) in the form of classical political parties, typical of industrial capitalism. In the information society, the creation of large and diffuse communities communicated through a network without a privileged center of decision making is a natural objective.
- The nomadic political subject regroups constantly before system modifications that obey due to multiple natures (economic, technological, aesthetic, etc.)

Thus, cyberspace is the "place-time 'in which particular cultures and technology converge in a process of globalization. It is where all the parts articulate the ethical subject as traditionally defined as a combination of body and soul. Perez (2008). But are we part of the cyberspace? Are we citizens of cyberspace? Or are we citizens of Mexico? Where do we belong to? Diaz (2013), being a citizen means that this person assumes ethical values that result in actions such as voting in elections, paying taxes, having solidarity with others, and so on. Validating or accepting these values through their practice involves commitments (assuming there is no one else, but we all are one) and constraints (those established by the monopoly of the sovereign power).

Thus the subject who inhabits this new space (cyberspace), this new being that will no longer have the limitation of time and space, it implies that there are no traditional subject anymore, but does this persons will have ethics? Or the human

will be with a ideology itself but this ideology will be alienated by different types of subjects that will be around the world, many of these subjects have a transformation, a restructuration and even a recreation where it is necessary for man to become aware of their own course of evolution and see the future in a clearer and more ethical way, to be responsible for himself and their environment, not only the physical environment but the virtual environment as well.

Cyberspace is the new dimension where digital technologies converge; this interweaving that expands inside, behind and beyond the computer screen. It is the space where Internet begins to take part of this new world in the networks, Regil (2004). In the U.S. there is even a strategy for the protection of cyberspace, created during the administration of George Bush, in which the former U.S. president states the following about cyberspace: Our nation has critical infrastructure that is composed of public and private institutions: agriculture, food, water, public health, emergency services, government, defense, information and telecommunications, energy, transportation, banking and finance, chemicals and hazardous materials, and postal and shipping. But now Cyberspace is its nerve center and therefore is part of the system that controls our country; the healthy functioning of cyberspace is essential to our economy and our national security institutions, this national strategy to secure cyberspace is part of our effort to protect the nation overall (Bush, 2003).

Cyberspace is a non-physical or geographic space that has been the subject to political struggles because states have had the need to exercise control over it. Therefore, on February 8, 1996, in Davos, Switzerland, John Perry Barlow wrote the Declaration of Independence of Cyberspace in which it called on governments not to exercise sovereignty over cyberspace, which defined himself as "the new home of Mind", Diaz (2013).

In this sense Rheingold (1993) says that people in virtual communities use words on the screen to exchange pleasantries and argue, establish intellectual

discourses, have commerce, exchange knowledge, share emotional support, make plans, gossip, fall in love, find friends and lose them, play games, flirt, create sophisticated art talk. People in virtual communities more or less the same as in real life, but we have to leave our bodies. You can not kiss anybody and nobody can punch you in the face, but a lot can happen within our borders.

In this sense Diaz (2013) refers to a virtual reality in the cyberspace that occurs when you use computers and through networking with other people located in a different place. It is not a physical place but the consequences of participating in cyberspace can be physical, intellectual, behavioral and emotional.

In cyberspace, cyberculture is transformed into a super-ego that legitimizes the ruling classes, which are provided and increased in their fantasies of omnipotence, and justifies the illusions internalized by users, from which derive r over-technologized behavior derives from: cyberpunk, computerkids, whose personalities (masks) are outside any theater other than the network. Freud is now Bill Gates in cyberspace terms, Perez (2013).

ICTs (TV, videos) have generated the postmodern self: a self with a significant ability to be present in more than one place at once, a performing self which changes its symbolic, sexual and aesthetic identity. The most genuine example of this is the Multiple Personalities disorder or multiple identities, where the self feels in the process of absolute liberation and lets go of any fixed identity (Moya, 1995). Each individual, information-saturated, is colonized by all the others. "I contain multitudes" Walt Whitman said.

In cyberspace cyborg is the figure which occupies that special place (Sánchez Navarro, 2004). Donna Haraway's work has illustrious theoretical manifesto, along with Steve Mann implants or her praxis Kevin Warwick says. The attributive base in Haraway is noted in the meeting of heterogeneous parts, whose borders have many gaps: animal-human-machine (Haraway 1995, 258). But the intentional unit

of his notes is not conjunctive, it is not a unit that can be claimed as in Marxism (that would not exceed porfiriana structure, according to Haraway, for example women drive supported by the "work"): It does not have any ties with bisexuality, or pre-oedipal symbiosis, or the non-alienated labor or any other seductions of the organic wholeness through a final appropriation of all the powers of the parties in favor of a larger unit, (Haraway, 1995).

Each one will have to choose the language they wish to speak, the language with which you will write your own biography with, not from the origin but from the concrete situation: either from a raped, hardworking, white, licensed woman.

The "crossing" between body/cyberspace space

Cyberspace is the place where there is no space or time where technology and globalized culture converges. It is where a new type of person has been created, where there is no body or soul. Cyberspace identifies with Virtual Reality, ie, a set of three-dimensional images created by digital technology. Virtual Reality is constructed by digital computing. It is a binary logical operation that functions as a Kantian transcendental structure, a condition of possibility, thus drastically limiting all ontology: only possible where everything can be translated into a Turing machine.

Turing proposed that any digital or programmed machine can imitate the inputs and outputs of the brain. As a matter of fact, it can be intelligent, and it is regardless of the materials implemented in the machine or its mechanisms. In particular, Turing states that "if a particular machine can be described as a brain, we just have to schedule our digital machine to imitate this and it will also be a brain" Turing (1951).

Gonzalez (2011) says that intelligence is a sub-product of the computable function of a machine, regardless of the material of this, and that the key to creating

intelligence is to design digital machines that imitates what a brain does. As it was commented by Gonzalez (2011) in his article *gearless machines and bodies without minds*, Turing proposes ideas that are fundamental for understanding the functionalist theory of mental states (Putnam 1967) and the principle of multiple realizability, curiously resembles the Cartesian modal intuition which states there is certainly conceivable that mental states without any corporeality exist, a thesis that has earned the classical theory of the Artificial Intelligence (AI) an accusation by Searle of ascribing the dualism. Take for example this famous passage where Searle strongly accuses AI: "Certainly, the AI only makes sense given the dualistic assumption that, when it comes to the mind, the brain does not matter". In the AI (and in functionalism as well) what matters are programs, and these are independent of their realization in machines, no doubt, when it comes to AI, the same program could be made by an electronic machine, a substance Mental Cartesian or the Hegelian spirit world.

The most amazing feature that I discovered by examining these issues is that many AI researchers are shocked by my idea that human mental phenomena might be independent of the physical-chemical properties of actual human brains. But if you think about the idea for a moment, you can see that it should not have surprised me because unless you accept a form of dualism, the AI has no chance. The project is to reproduce and explain the mental by designing programs, but unless the mind is not only conceptually but empirically independent of the brain, you cannot carry out the project, as the program is completely independent of any realization (Searle 1980). So the symbolic orders (soul) and causal (body) can be connected in cyberspace with the use of a logical syntax. It seems that we returned to the God of Malebranche in which the Real and the Symbolic are left confused (Diaz, 2013).

Cyberspace thus emerges as a dynamic memory, continuously updated in a cooperative and objectified way. Thus unmatched by traditional media storage and access of information and achievements: libraries, newspaper libraries, video

libraries. Cyberspace is the latest and most powerful coordinating and inducer of Humanity's collective intelligence "object". Cyberspace creates the possibility of a large-scale communication in which all the nodes have the possibility to be transmitters or receivers, participating democratically in the generation, trading and stabilization of knowledge and intelligence sharing (Ramos, 2013).

For Ramos (2013) shared memory and intelligence is reflected beneficially by individual intelligences, which are enhanced in its action by using local versions on-line encyclopedias (Encarta) and search engines and robots, which are increasingly effective. The results of the individual processes nurture and integrate the common intelligence and memory, and the latter empowers individual intelligences, closing a powerful cycle of knowledge generation. Cyberspace thus combines the fascination with diving into the global brain and its obvious utility. But it is not the same a collective intelligence than an intelligent collective. The balanced construction of such intelligent collective balanced requires more than willingness to do so.

Cyberspace has intangible objects, but at the same time they are important to society. They are not real objects, but they are virtual (for more on this discussion of reality and unreality virtuality see the text on virtuality of the magazine Manuel Martinez investigative praxis redie) where words such as electronic money, electronic commerce (e-commerce), scientific objects (virtual meetings), entertainment products (demand video libraries, games, online games, virtual education, online classes line, etc.) are objects that cannot be in a real place, but they can live in cyberspace as a virtual reality that is part of an objective reality.

Cyberspace is a space in which it is possible to dictate and enforce the laws as we do in our society. Cyberspace affects laws that are in the code that runs: we can do what the software allows us to do; and therefore emphasizes the importance of free software, which is what allows users to have their rights supported (Lessing, 1999). And within the interconnected network that is able to integrate traditional

networks (within the framework of digitization) and most modern networks, becoming the most important quantitatively and qualitatively element from a socio-political, socio-cultural and socio-economic point of view (Ursa, 2008).

This can only be understood if we understand cyberspace as a world that is inhabited, and therefore, is conceived without mediation. It is not a projection of our personality, or city, but it is establishing ourselves. The presence in cyberspace is not mediated by language, but it is present with him. There are many differences between cyberspace and the physical world, but they are different ways of being ourselves. Needless to say, this far exceeds the scope of this work and theoretical knowledge, (Galvani, 2003).

It is a new ethical paradigm from the Free Software movement, where the synergy is opposed to competition, and where the scarcity of a good does not make it valuable, but the opposite. Bustamante (2007), say that communicate with other people who are geographically distant, and share with them different experiences. What is produced in here is not just a relationship between people and computers, but especially relationships between people through computers. It gives a place and time (called virtual) to relate to others (Galvani, 2003).

A virtual world is a simulated three-dimensional world enclosed in a computer, which has been voluntarily brought into existence by human. Humans have always lived with the virtuality, recreating magical worlds in her mind, and the digital world is another resource for these recreations; thus recreating mental spaces (Casanovas, 2010).

Cyberspace brings us the power of transform the ways of writing, allowing students to have some interactions with scientists and specialized people through the internet for responding to their concerns and collaborating in their research thus supporting cognitive processes, multiplying an improvement in the quality of pedagogical processes, Dominguez (2006).

It is a "consensual hallucination experienced daily by billions of legitimate operators; a graphical representation of the data of every computer in the human system. Unthinkably complex", Hernandez (2013) and Hernandez says that two strong positions to define the usage of the network and returning to the precepts of Teilhard de Chardin (1962) Evasion optimism and Evolution optimism. These precepts can be located within what he calls "The Great Option," where Teilhard de Chardin says that human beings are in a constant search for complexity of himself, and in that process, he lives a "Hominization": that leap of consciousness and unification with the environment. The choice of life that man takes will eventually lead to the point, a new point that exist in the cyberspace.

The optimism of evasion is the one described next: *"If a virtual tree falls in a computer-generated forest, does it make a sound?"* Barlow (1994) argues that a trip through cyberspace is like a trip to Disneyland for an epistemologist since the person is reduced to a point. This is a place where the laws of physics do not apply and there are only the guidelines established by the speed of the connection that the computer has, where there is no "Prana". Prana is the Hindu term that defines both the breath and spirit (Makkuni, quoted by Barlow, 1997). Again, Barlow thinks that the central question in the virtual age is whether the concept of "prana" can be incorporated into cyberspace or not. For him, the prana is a vital element in the ecology of interpersonal relationships and this along with body language, the tone of voice, the smell and all that for him is real life, is lost when connected to network.

Barlow is not representing any of the demography on the Internet, since most of the people, who are connected, are Caucasian men under fifty, but we have to consider that Barlow's study was done in the year 1994. Meanwhile, until the year 2000, 40 million people were connected to the network daily. Five million emails were sent per minute and the number of neocitizens doubled every one hundred day. There was no twitter or Facebook, not even smartphones such as the iphone,

Samsung Galaxy, HP ipaq and tables like ipad, galaxy tab, etc., and therefore this data is to be taken with reservations, these people had good typing skills and had strong opinions about almost everything as well as exacerbated shyness, especially with regard to the opposite sex.

In the same opinion, Esteinou (2003) notes that the Internet still operates as an elitist and privileged tool that excludes large social groups, without mentioning the cost of a good computer, a proper connection to internet and the predominant use of English. Mayans (2002) says that the computer-mediated communication (eg, chat rooms and instant messengers) does not substitute another type of environment or social interaction media (telephone, television, a coffee, or a random encounter of two people), the cultural product that a netizen builds to communicate and socialize through the computer is not the usual written record or oral policy (although they take elements), e.g. the guide for parents of teenagers in his publication of 2004 that says "The use of the Internet and other similar technologies are part of the lives of adolescents. In a 2007 report by the Pew Internet and American Life Project about teens and social media indicated that about 93% of adolescents aged 12 to 17 uses the Internet. This is 6% since 2004. In Facebook there are nearly 1.1 billion people online every month. Of these, over 60 % do so almost daily. 750 million connecting from mobile, which means that they can access from them continuously and they have become an essential communication tool. Miguez (2013), for example, Mexico has the following statistics on social networks:

1. When it comes to sex, everyone wants to know about it. In social networks links about the topic are shared about 90 % more than any other.
2. 57 % of users on Facebook are female.
Women spend an average of two hours more than men on social networking sites on their computers and three hours more hours on mobile devices
3. On average, 20% of the time people spend on the computer, is on a social network.

4. 85% of women are bothered by their friends on networks.
5. 30 % of Twitter users have an income of more than \$ 100,000 dollars.
6. After commenting on a social network, in 76 % of cases, people report feeling satisfied and happy.
7. Africa has over 37 million users on Facebook.
8. Pinterest has grown 1,047 % in just one year.
9. 25 % of Facebook users do not care to control their privacy.

Globally, cyberspace moves primarily through social networks. Below this we show a social media study done in 2013:

General statistical study (Social Media):

1. 20 % of the population with Internet access is a member of a social network.
2. At least 90 % of internet users know 4 social networks sites.
3. 70 % participate in at least one social network.
4. There is no intention from users of social networks to leave the network they belong to, nor to belong to more networks.
5. The average user checks his social network at least twice a day.
6. The more commonly used tool on social networking sites is to send personal messages.
7. 80 % of users become “fans” or participates in any way with other users or profiles.
8. On average users have 190-200 friends, although this may vary in some countries even doubling the number of friends per user.
9. Nearly every user has ever removed a friend, especially in personal profiles.
10. 15% of users use an image that is not current (look more handsome, interesting, intelligent, etc.)
11. There is a big difference between European and Asian users, the latter are more open.

12. Half of the users cannot access social networks from their jobs in their company.

The most popular social network in the world is Facebook. 85% of Internet users know Facebook and it is also the best known in all countries or regions of the world, being less known in Asia with 40 % of users in the know. In contrast, in South America and Australia almost 95% of internet users know Facebook.

The most popular social networks after Facebook are in this order:

• MySpace	-	75%
• Twitter	-	65%
• Hi5	-	30%
• NetLog	-	22%
• LinkedIn	-	20%
• Orkut (Google)	-	20%
• Xing, Ning, Hyves	-	5 %

These data are averages worldwide, logically there are areas or countries in which users know better others, as it is the case of Xing which is better known in Asia where its popularity reaches an average of 20 % which is far above the world average.

Other case to highlight is Orkut that is known in South America by 90 % of Internet users.

Statistical data by country. What are the most popular social networks in each country?

As we have seen Facebook is the most popular social network in most countries,

let's see what are the most popular networks in each country, and the percentage of Internet users who know them.

The most popular social network is Facebook in:

- Spain 98%
- UK 98%
- Italy 98%
- Australia 96%
- Germany 95%
- France 94%
- U.S. 93%
- Romania 90%
- Russia 68%

The best known social network is hi5 in:

- Portugal 97%
- The Netherlands 96%

The best known social network is Orkut in:

- Brazil 98 %

The best known social network is MySpace in:

- China 47 %

Foreseen growth for the use social networks. Is the market saturated?

In general, users do not intend to stop using social networks. 75 % of users will

continue to belong to social networks although 40 % of them will not register in new networks.

This behavior is common to all regions and countries of the world, but a serious problem for this is the quality of information and the generation of knowledge. The important thing is not to have access or information in it, but the amount and quality of it, as this is a very serious problem in cyberspace, particularly in Web pages. That is why universities and/or research centers should create or strategies that correlate the education, training and development of students to enable them adequately in the use of ICTs.

Furthermore, the same cyberspace is blurring legal boundaries from the moment that there are no local or international barriers which frame a scene of "computer crimes" to determine a method of prosecution. These are the notions of ownership value and nature of wealth which are fundamentally changing due to electronic distribution.

So the Internet is the medium through which cyberspace exists that contains entities that are represented and live in cyberspace. In this sense Pierre Levy (1997) proposed the concept of collective intelligence, defining it as a form of universally distributed intelligence constantly enhanced, and coordinated in real time, mobilizing the individual's skills effectively.

Cyberspace (sometimes called Internet) has been characterized as a free zone, where the exchange of information and/or knowledge is increasingly fast, but this exchange does not fully comply with the socialization of information and communication between people because not all of them have access to this medium. Besides there is a clear absence of social interaction because as we know, we are using a new language with new symbols (emoticons) which allows new rules of social interaction that have been created due to the connectivity and the use of text messages on cell phones. This has allowed a change to a

symbolized world where this world is the new social interaction. This is giving results in the creation of new cultures (cybercultures), attitudes, habits and behaviors, both personal and group, crystallizing the new nature of man cyberspace.

Levy (1997) believes that cyberspace will be established as a mean to attract the culture, it will allow people to have a new political form to organize this view and it is therefore important to generate:

1. Instruments that promote social development nexus through learning and knowledge sharing.
2. Communication methods that are routed to recognize, integrate and restore diversity instead of just playing the traditional forms of information distribution.
3. Systems that promote the emergence of autonomous beings regardless of their nature or the individuals involved.
4. Semiotic engineering that allows us to exploit and enhance for the benefit of the majority, data, skills and symbolic power accumulated by mankind.

Cyberspace is the concept or idea of a new virtual reality that integrates culture, knowledge, language, postsymbolic technology and the total sum of information and intersection of all computers and data networks.

In Conclusion

In conclusion in the cyberspace there are interactions that can be either synchronized or desynchronized where there on-line interaction are developed within in which you can create new ways to deceive others or cyborgs that are in cyberspace. They create new forms of identity and create new ways to establish identities. We can conclude there are new benefits and create new disadvantages when one belongs to cyberspace, where the old institutions reproduce stereotypes, and sometimes in an exaggerated way.

Thus social control and net-label is a necessary component of online communities, where we must examine the power and interests at stake in this new virtual world. However, this evolves every day, and even worse, the beginning of this evolution is not entirely clear, much less where it will end, as more and more people continuously interact on-line and the interactions that occur between these users are becoming increasingly important, so it is necessary to implement or regulate these new forms of mediation, since it is necessary to standardize or create a way where as in the physical world we have an official identity, we can have one in the virtual world.

The first thing you must have is an identity, hence the generation of on-line groups and the need for belonging to a particular community, but without depersonalizing or changing your identity since this results in many kinds of crimes in cyberspace and it is also a weapon to the physical world. This does not mean that online communities, social networks and virtual groups, can be considered identical to the physical world. Therefore, it is extremely important that everyone should have a net-tag, they are the rules of etiquette that are in the physical world, in addition to the penalties that may be in the real world if you violate the rules and regulations of consciousness in cyberspace; for example, economies of cooperation and collective action change significantly when moving to online interaction and money and the economy are virtualized so companies that have no physical value because they have no assets or money in their banks, but can buy very large companies and solvents because virtual money is handled. Money that does not exist and it is likely to have it if certain actions occur or there are certain processes in the real world, but it is money that cannot be removed from the bank because they do not have it. This has been one of the problems with the bankruptcy of the United States: several companies are believed to have money, but when shareholders want it, in fact that money does not exist, it's just a virtual money, which is why it is necessary to have tools and models to study this kind of problems that occur in cyberspace.

But not everything is bad. We have observed that the interaction between virtual communities and the real world has served as an extremely effective tool for social protest, but these same features that make the Internet effective for coordination and communication, are the same that lead to the production and dissemination of inaccurate information because it is out dissenting voices. For instance, the overthrow of the government in Egypt in 2012, which was conducted through the social networks that were used to bring together rural and urban communities in order to carry out this social change. But the Internet is also used to improve the quality of life in the most vulnerable communities, demonstrating that there is a path to prevent government agencies that are of little help and to find people willing to share their information and knowledge. Moving such models from one community to another is difficult, since it is necessary to first have the technological resources like electricity, computers and internet.

Again we find that the online interaction is a "double edged sword ". These chapters avoid the extremes of utopian and dystopian visions when reviewing the information and sometimes conflicting processes within online communities. Evaluating the meaning and impact of new technologies is always a challenge and many of the predictions about the ways in which new technologies transform society quickly fade e.g. the telegraph, radio, cinema and television which supposed a revolution, but not in the expected direction. Hence the importance of going from having opinions and predictions, to the serious analysis and description of on-line groups.

So cyberspace can be seen as a chaotic space which only provides a piece of information sometimes conveniently manipulated by any cyber-user that has an internet connection. Although for many "globaphobics" the picture that is emerging on the internet is not flattering, they can see great advantages and great disadvantages, and they can only reach to a group of people who have the resources or that have access to a computer connected to the Internet. This leads

to having great inequalities between those who have access to this medium and those without it, but also leaves the use of information technology and communication fomenting ways to bring people to knowledge such as distance education to train people and updating of many of them as an open possibility.

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CONCEPT OF VIRTUALITY

Meaning and origin

For a very long time, virtuality has been used as something that exists only through the five senses. However, nowadays the concept of virtuality is utilized not only as something that does not exist or as games, but it is also used in spaces, economy, finances, work, market, arts, collective intelligence, management, science and in the educational fields such as reading, writing, cyberspace and virtual classes, among others.

The word “virtuality” comes from the origins of Plato when he comments that knowledge is generated through ideas and images that men receives from context. If men has the capacity of imagining and contextualizing reality; then the word “virtuality” means that through the process of imagining allows men to enter a different process that is learning, and via learning we can alter the reality and understand it at the same time.

For the author Josep Duart, virtuality is a reality look-alike and it is defined as an imaginary process and therefore, what we learn from a computer system appears to be real because the subject is real but it is not at the same time since we are not living the experience in real time. That is what we call virtual reality.

Gilíes Deleuze, in Levy (1999), gives us a definition for *virtual*:” What is virtual possesses a reality”. As for Roy Ascott, also in Levy (1999), who says “Virtual reality distortions absolute reality”.

Duart (2008) observes that “the new meanings that are generated from the reality in the virtual environments, leads us to understand the virtuality as a creative space” (Lévy, 1999), as something that generates different situations that did not

exist until now. Overall what changes in the virtuality concept is the communicative potential and the interaction. Virtuality establishes a new way to relate the use of coordinates of space and time. Virtuality crosses the space-time barriers and builds an environment in which information and communication are approached in ways that were unknown until now, at least in the concepts of volume and possibilities.

Michel Serres, in Levy (1999), talks about the virtual things as “out of there”. Imaginations, memory, knowledge and religion are vectors of virtualization that have made us abandon the “there” before the digital nets. While developing this topic, Michel Serres, the author of “Atlas”, opens a polemic on the philosophy of Heidegger about the “being there”. “Being there” is the literal translation from the German word “dasein” that in the philosophical and classic German means existence, and in Heidegger’s work it means human existence -being a human being-. However, not belonging to any “there”, or appearing in an indescribable space, or not acting in anything else than a contextualized, or just not being “there”, are not an impediment to existing. Although the etymology does not prove anything, we have got to point out that the word “exist” comes from the latin “sister”, to be in a place, and from the prefix “ex”, out of. Does existing mean to be there or to be out of there? Dasein or existence? It is as if the German language stressed the update and the latin highlighted the virtualization.

Society today is experiencing this social phenomenon which is primarily based on the internet. The internet changes at an exceptional speed, with no comparison to any other kind of technology that has existed before. The net, unlike the internet, creates a relation space that has been shyly explored, in which the interaction –in real time or differed tie and in a personal or multidirectional form-, as well as the access to the information play a very important role.

The virtuality that takes place in the interaction spaces are formed by people that are capable of feeling and manifesting opinions, always being responsible and ethical. In this relational space, people communicate, interact and exchange

information. If we observe these relationships carefully we can see that people act in the virtual world in a similar fashion to every other aspect of our real lives since virtuality itself does not makes us different.

Duart (2008) says that “the reference frame changes when inside the virtual world, and that shapes a new space in which rules, customs, the procedures of things and the ways of communicating are never going to be the same. From that we cannot deduct that there are new ethics that were born in the internet. We must come to the conclusion that even if values and moral continue to be the same because they are part of people, we are able to change the way we manifest and express them. This new space that the Net configures leads to new communicative and relational possibilities.

Levy (1999) conceptualizes what is virtual as:

“The term virtual is usually used to express the absence of existence by conceiving reality as a material matter, a tangible presence. What is real would be in the order of the “I van have it”, whilst what is virtual would be in the order of “you will have it”, or as an illusion, which generally permits to use irony”.

The word “virtual” comes from the Medieval Latin *virtualis*, which comes from *virtus*: strength, potency. In scholastic philosophy, the virtual tends to be updated although it does not set in an effective or formal way. The tree is virtually present in the seed. On a philosophical level, the virtual does not oppose to the real but to what is current: virtuality and the present are only two ways to be different.

In this point, we have to analyze a fundamental distinction between what is possible and what is virtual that Gilies Deleuze explains in *Difference and Repetition*: Anything that is possible is already constituted, but it remains in the limbo. What is possible is identical to what is real but it lacks existence. The

realization of something possible is not a creation, not in the material way but creating also implies the innovating production of an idea. Therefore, the difference between what is real and what is possible is merely logical.

What is virtual does not oppose to what is real but to what is happening in the present. Unlike what is possible, static and already constituted, the virtual is the problematic group, the tendencies or forces that come with a situation or object or any entity that claims a solution: an update. This problematic set belongs to the considered entity and constitutes one of its principal dimensions.

On one hand, an entity carries and produces its virtualities: an event, for example, reorganizes a previous problem and can be subject to many interpretations. *On the other hand, what is virtual constitutes an entity:* the virtualities originated in a being, their problems, pressures and future goals, as well as the factors that motivate them are an essential part of its determination.

We can observe such virtuality in human relationships because what is virtual is not only part of communication and information, but it also affects the bodies, economy, collectivity and human sensitivity when using intelligence.

The concept of what virtual is an inverse process to the actualization because the latter favors creative processes, expands horizons and goes beyond the superficiality of physical matter as Levy claimed in his book where he analyzed the virtual from “what is real or the present”.

For this author, it is vital to know the concept of what is real and the dilemma presented to people between what is real and what is virtual. He proposed that there is a line where the real and virtual are and from it different forms of virtualization are generated. Thus, virtualization comes from the idea of reality, possibility, the present and virtualization itself. This allows the idea that virtual and real things are not opposite concepts but different concepts. This is how an entity

produces virtuality: by generating conceptions from facts, and whatever is virtual is also an entity.

Actualizations are somewhat of a reply to that virtuality since the real is a possibility and the present is a fact itself as an answer to a process. From that point of view, the definition of virtualization is a displacement; not a transformation but a continuation, an extension of what is real.

That is why Levy started a discussion on how territory is lost through virtualization. Time and space change in the way they are and relate to each other. Time and space are defied by the possibility of changing them and to cross, along with virtuality, the barriers that space-time have built.

Youngblood, on the other hand, says that “virtual” (as an adjective), should not be understood as the opposite to something real but as the opposite to something in the present that shows a position in an existing reality on a conceptual state.

It is important to define “virtual” so that we can contrast it to what we have mentioned before. Herder (1996) gives the following definition:

From the Latin *virtus*: strength, virtue. Capacity to provoke an effect even if it is not done in the present. In general, it opposes to the real or effective. For Scholastics, the notion of what is virtual was the equivalent to what was as potential, as said by Tomas de Aquino, as virtues suppose perfection towards action.

For Leibniz, the word virtual addresses the way inherent ideas behave. These ideas live in the soul and possess all its determinations, so they only need to be thought of in order to be updated or turn into actions. He also considers the substance as something virtual that is not mere potentiality (as is matter) nor a pure act (as is God). In contemporary philosophy, this notion is important in Bergson’s work, who says the virtual is the opposite of the possible, but also the

opposite of the present. Deleuze has insisted in the importance of this Bergsonian thought; what is possible is not real, and what is virtual is not in the present but being something virtual it does possess reality. The virtual creates things through a process with differences and novelty. That is how Bergson interprets the evolutionary process guided under the vital élan: evolution goes from what is virtual to what is in the present and this is a process in the making. The possible is only a duplication of the real that is projected in the past and that lacks reality unlike what is virtual is real but not identical to the product of the actualization. The confusion between the possible and the virtual leads to pseudo problems similar to those in metaphysics.

Nowadays, when we talk about virtuality, we talk about bits that are utilized by a computer to emulate an unreal space but that we might perceive as real by some of senses because we can interact with them. The virtuality allows us to know our surroundings and to act through them. For example through the binary system (0,1) we can listen, read and see digital images. Thus, “the binary system allows the translation and the coding of words, numbers and others, and to process them through microprocessors; this explains the basic characteristics of technology and its revolutionary dimensions”. Rada (1997).

These combinations of zeroes and ones have originated, through a complex process, an explosion of ICT's (Information and communications technology) and to the convergence of TV, telecommunications and IT in a single digital paradigm. This revolution, remarkably noticed for the last 10 to 12 years in the phenomenon of the Internet, is accompanied by a homogeneous speech that highlights the democratic role of the access to the available information and the possibility of creating information. The last level is the correlation of the information that is part of an integral system whose dimension can vary greatly.

It is important to have in mind that there are three levels of communication that are qualitatively different. The first level is physical communication which makes it to

possible, through bits (for those who have the resources), to access places that are hard to reach, see the news as they happen, send emails, and overall just getting data. The second level is the information level that besides allowing a connection, it must be able to get information that makes sense and not only a great amount of data. The next level is the correlation of the information that is part of an integral system whose dimension can vary greatly.

This, for example, facts and dates from our historiography are the primary data; we will be able to have information when it is clear what happened exactly each time and we will generate content when we integrate the descriptions as a coherent whole that can eventually be turned into a magnetic digital device (0,1).

This way we can observe that virtuality has a few effects, but we can mainly say that if education has a teaching-learning process and this allows us to conceptualize the objective reality and also to imagine it, then virtual education means that the teacher and the student have the capacity to imagine, conceptualize and transform the same phenomena according to their context by using hypertexts, media and dual books.

Looking through the system theory we are able to conceptualize and learn our objective, subjective and subjective reality. Virtual education is part of the general theory of the systems when teacher-student-society have created a critical analysis that allows learning via ICT's.

Nowadays many branches of knowledge can be accessed by the Web, which lets us analyze and know objective and subjective realities while using learning objects. Virtual education allows us to analyze the context in which we live and we get to learn via digital media.

The incrustation of the concept of virtuality in education results in what we now call virtual education which is simulation of objective reality that lets the teacher

abridge that distance and study and learn from the reality formed in digital media through processes that did not take place in a classroom since in most of such cases, teachers and students are in different places or even at different times. That is when we are able to say virtual education is a mirror within ourselves but that is not happening in everyone's reality. Some authors use the term "real but not real" and it is why we utilize the concept of virtual reality where "real" refers to studying reality and "virtual" refers to not having physical nor synchronized contact with the person we are communicating with. That is could not be doing things at the same time or they could be without having physical contact either.

Moreira (2001) wrote that human beings perceives and knows reality through experimentation and as a consequence, he learns from it. This way, thanks to the use of computers, we have been able to create mathematical models of natural phenomena (real ones) which are presented in simulated and interactive (virtual) environments that allow humans to interact with a group of people as well as with a computer. This type of software (based on A.I.) makes decisions, makes hypothesis that solve problems, and also obtain the skills necessary for experimentation.

Virtual education is related to the theory of systems according to Gómez and Vieites (2000) who wrote that systems are a group of elements that interact to reach a series of goals or objectives. The learning process is related to virtual education because it is generated by the exchange of ideas. This process is acquired through analysis and the study of the environment, as suggested by Vigotsky. Knowledge is the feedback that lets us learn, thus participating in the education process.

But, what has this got to do with reality?

For Chiavenato (1998), "the general theory of systems allows the generation, formulation and conceptualization of reality". So we can say that education allows

us to know the reality where political systems and constitutional and territorial organizations take place and where education takes part of a bigger, more complex system. This system permits students to relate to other media and therefore we can say that virtual education utilized open systems given that the student and the teacher interact through a computer connected to the net in a synchronized or unsynchronized form. This results in collaborative learning where both student and teacher comprehend reality in a different way.

An important situation to highlight is the fact that in a virtual equation, the relationship between teachers and students changes radically since the teaching-learning process happens in two different forms: synchronized or unsynchronized. These options let the student have some time and space to perform their activities, besides the intellectual ones. The traditional idea we have of space and time in the educational field must change rather radically.

At the present, virtual education is still in its beginning stages in Mexico, one of the reasons is that it has not developed completely yet is that the professors have rejected the change. They do not want to change their teaching style in a classroom. As for the economic barriers, as long as private and public institutions are investing on virtual education, the costs will go down.

Long distance education in its beginnings, used pressed media and later on, phones and tele-conferences were utilized for meeting. Educational television was created with the arrival of TVs giving birth to “telesecundarias”.

Although many do not think that long distance education is as effective as traditional education in a classroom, it has become a more economical way to access higher education, giving people in remote areas the opportunity to have a scholar pursue. It even gives the chance to people to study in foreign school systems and schools because the costs are so much lower. Most Universities have started to offer courses online to have a wider coverage of the market.

The un-reality as a virtual reality

As we have seen before, the word virtual often has the same meaning as unreal. However, not everyone agrees with this connotation.

Herder's philosophy dictionary (1997) definition is:

From the latin "res" (thing, object), reality is what exists in a material or objective way, opposing to what an appearance is, an illusion or fiction. From common sense, we understand for "real" the things that belong to the world we live in, and therefore, what exists in the space-time paradigm. The rigorous application of this spontaneous notion leads to confuse the real with what is independent from the mind, or the material from the empirical. That is, everything that can be confused by our senses.

In fact, what is real should be defined along with the ontological and epistemological budgets from which we have defined an entity. This should be understood from a determined theory, but most of all, we should be able to tell it apart from what is simply appearance. For many, including Aristotle, the study of what is real is a subject to metaphysics, which studies what exists as long as it does exist, and which should dictate criteria to distinguish what exists from what seems to exist. The use of "seems to" opposed to "being" is not only perceived by common sense, but it is also a constant tradition in philosophy.

Greek philosophy, before Socrates and up to Plato and Aristotle, claims that the fundamental matter we have got to understand by "real" is a form, substance or atoms. Heraclitus and Parmenides are initial and opposing models in the approach of the problem: Appearance is all there is, or on the other hand, this appearance is really all that we are able to know and therefore all there is. Plato built his theory around ideas to fight Protagoras's idea, who said that things were whatever men thought they were.

Although it has always been rather evident that things are what we know them to be, what we perceived, what we have experimented or even what the time we lived in says. Berkeley is the first one to stress the fact that the “being” of things is manifested only by its appearance in the phenomenon. So what is real is nothing more than what it appears to be: to be is to be perceived.

Kant matches in the appearing of the phenomenon, the same configuration of experience, in the sense that they know something is to establish this object of experience, under the conditions of possibility that the subject itself determines; what things are cannot be separated, understood or the neither perceiving, but not the power to perceive and understand.

The later German idealism produces reality through the spirit: everything rational is real and everything that is real is rational. The new realism and the critical realism from the start of the XXI century tried to disengage the ties between what is real and what is perceived. Analytical philosophy, philosophy of the language and the new epistemological theories on the philosophy of science propose a new approach to the problem of reality, and look for new criteria to decide when we can say that a statement (empirical) is true.

It seems as if reality does not have much to do with virtuality, as H. Rheingold (1994) says, who hasn't read somewhere that the virtual is related to avant garde technology? Or a problem of the last frontier? There are even some who have stated that virtual reality is “the investigation field with the most importance at the moment. The most promising and unraveling. The mysterium tremendum that men will have to face...”

It is not as easy to use the word “virtuality” in the economy subject because the concept is very subjective because it is a topic that is primarily metaphysical and it is something that is not real enough as if it were some type of ghost economy or

virtual economy. Nobody doubts that this kind of economy is decisive in this globalized world. These effects are so real that we can give the example of the oldest insurance company in the USA that went to bankruptcy. Collin (2004) made a question: Are we on the verge of the triumph of spectral economy with undeniable and real effects?

Thus, we can say that the virtualization is present in every field where subjectivity can be produced. The market, finances, construction of knowledge and information are also of virtual character. Local and global economy are organized according to the everyday changes in different societies. This dynamic allows money flow, investments, pay of debt or the acquisition of them, and other activities to happen.

The use of technology in money transactions has become a necessity because the velocity with which said operations are done will determine the monetary earnings.

“The International financial market is developed closely to the web and intellectual technologies of digital support, and it tends to have a collective intelligence. On documents, it is of great importance to build intelligent collectives because they are what will determine the future of economy (and culture in general). It will not be about getting virtual money but about the ability to be creative when it comes to build knowledge that will make up the wealth of a town, group or individual. Nowadays information and knowledge are economical assets; they're sources for the production of wealth.

Knowledge stopped being static. The possibilities are infinite. That is why we have got to explore other possible sources of wealth. The relation between knowledge and money have changed. Every time a new technology is launched or the socio-economical configuration changes, the hierarchy is questioned.

Knowledge is not tied down to any platforms so it is free to wander and go from one person to another, or from a processor to another. The flow of knowledge has

broaden its objective; it stopped being locked in fields such as the scholars and experts and it is now accessible to every citizen.

It can be said that knowledge and information do not belong in the sphere of the material things but to the order of any process. Information and knowledge generate possibilities to create new problems and to give a solution. "Every idea that is effectively put to test is an inventive resolution to a problem".

Levy (1999) says that the difference between goods for consumption and virtual goods is that the first ones are prone to wear out, to be destroyed or ever lose their potential because of their realness. Virtual goods do not have a material base or a territory; they need to be updated in order to maintain their value, sense and especially to resolve their problems.

The idea that goods can be consumed without being destroyed or lost goes against the theory of scarcity that has its foundations in the character of consumism. For the author, this makes it possible for the economy of abundance to appear (opposed to the scarcity) and its practice will revolutionize the concept of economy.

Nowadays work depends on the information and knowledge we have at our reach, and which is constantly updated and linked to other types of knowledge. Before, work could be measured in time units.

Even though this practice still stands, in this cyberspace era we don't sell strength but we sell competence. Work happens outside the classic perception we have of time. Creativity is stimulated in the individuals and wealth and success is found in people's capacity to build.

The mutations that create new systems of information and communication in different dimensions of human life suggest other types of economy: it goes from an economy of change to an economy of use. This is how information and knowledge

in the web are updated when we read them. As for the payment issue, there is the idea of paying for the information as long as it is updated, although most of the information on the web is for free.

In order to have a clear idea of economic reality and its place between financial and real economy, we have got to have a notion of the real meaning of the concept of economy. There are other factors that intervene, such as an unbalance that can lead to severe economic crisis due to the irresponsibility of the people who have virtualized the economy.

For some other people, the virtualization of the culture in this era of information may be fleeting but has many faces that one can experience through the use of computers.

At the present time, thinking societies are being created because intelligence is developing in collective way. It is not only languages, artifacts or social institutions that are thinking within us, but the group of humans, with desires, affective dimensions, and hybrid thinking machines. We are now able to understand why human collectives can be classified as intelligent.

Human collectives are megapsychist species, not only because people can perceive and engage in affective relationships, but also because they can model themselves through a topology. An immense affective game creates what we call social life. The sequential selection and presentation in the human mind is covered in the collective group by political or religious structures and the media.

Intelligence is reproduced in a comparable way in different magnitudes: macrosocieties, transindividual psiquisms, infra-individual modules, transversal dispositions of different people within infra-individual modules (sex, complementary neurosis). Intelligent systems are holographical and human groups are the most holographical of the intelligent systems.

This collective intelligence is not a new thing. The notion of collective intelligence reminds us of the functioning of insect societies such as bees, ants, etc.

We are able to enjoy the collective intelligence individually, which increases or modifies our own intelligence. We contain or partially reflect the intelligence of a group. Among insects, only the society is capable of solving original problems whilst humans are more creative than other groups such as multitudes and rigid bureaucracies.

People have their own learning process, affective environments and virtualities of social mutation and they are not interchangeable. Some civilizations have tried to assimilate collective human intelligence with the one in ant's colonies by treating people as members of a certain category and trying to make it look as if this reduction of humans to insects was possible or desirable. This has never been the outcome since human beings are not fundamentally made to be in groups; humans can think by themselves and thus humanity can walk towards new forms of collective intelligence that are the complete opposite to the concept of ant colonies or honeycombs.

Aguilar (2008) makes a reference to what Stoerldijk said when he claimed that nowadays we deal with the construction of the experience of what is real through alternating reality with virtual reality. This could be because we consider the latter to be a match for a dream world; and by contrasting both realities future generations will be able to make up a new view on reality. They will be able to leave behind both of those worlds and to access a new one.

It must be taken in consideration not only group conscience but also individual conscience. Individual conscience can change a group's conscience unlike an ant colony where patterns are defined in a social conscience. We can say in this context that if there is a social intelligence that allows the integration and values

the subjectivity of an individual, which permits the creation on collective cognitive process that can happen in collective intelligence.

At the present, societies are being exposed to the phenomenon of cyberspace. Although it is still under construction, it allows a communication in a greater scale (.com) with no regards for space or time, which constitutes an important advance towards more evolved forms of collective intelligence. The intelligence of the net (or .net) is a net that thinks by itself but it is always under the guard of humans.

Any message gets to a great number of people which makes it a helpful tool to work with when it comes to collective intelligence. It is a sort of link that is alive and has a memory or common conscience. When it is balanced correctly, the subject becomes a subject of the cyberspace collective.

Aguilar (2008) says we cannot be completely sure that we are not mere simulations, as shown in the movie Matrix, because of the Leibniz theory where two identities cannot be distinguished from each other by any method at any time; they would have to be considered identical. This idea, along with the idealistic theory of Berkeley on existence (which considers that something exists as long as it can be perceived), constitutes a basic point in Tripler's theory.

Thus, the universe can only exist as long as the omega point observes it from the future, just like Berkeley's universe existed only because it was watched over by God. The possibility to exist is only real when it is observed by either God or another point of the universe, and that would constitute the strong version of the escopoliphical thought whose top commandments – God observes you, The omega point observes you and the cameras observe you- are centered in the vision as the generator of reality that makes reality, and also constitute the existence that would not be possible without anyone else seeing it.

New meanings are discovered in the collective activity. For instance, in MUDs (Multi-users dungeons and dragons), a new version of the classic dungeons and dragon's game, in which players get to create a virtual character that evolves as it makes decisions. Those decisions are taken through all the story and it develops as players around the world elaborate story lines in real time. The game stimulates the person into participating in the game and thus, to participate as part of the collective intelligence in the most pertinent way (Morahan-Martin y Schumacker, 1997).

The design of these applications on the internet allows the participant to be anonymous while interacting, which makes communication via internet have a characteristic that sets it apart from real life communication: disinhibition (Greenfield, 1999): Consists of the loss of shame and the fear to express freely which provides the person with a feeling of protection and freedom at the same time.

From angelical worlds to virtual worlds

As seen before, in medieval times, theology was an important part of life but the same vision can help us think on how society sees those kind of thoughts and how it relates to virtuality nowadays. Today, intellect is built on transcendent collective intelligence. Levy (1999) references eternal divinity of the theological speculation and it translates as the desirable possibility in the horizon of the human decay.

In this transformed version, the angelical world becomes the region of the virtual worlds, in which human beings build collective intellects. The agent intellect becomes the expression, in the communication space, of surfing the net and negotiation of the members of an intellectual collective. From that moment, we no longer are tied to a theological speech, but to an inseparable technological device.

When redefined from a human perspective, angelical regions open their doors to the communication of collectives with them, without having to be scrutinized by a deity or any transcendent representation. Virtual worlds are proposed as knowledge instruments that can be constituted in intellectual, autonomous and auto-poetic collectives.

Taking place at a time of cosmic ubiquitous agora and simulations, these films offer immanent heavens maps, dynamic descriptions of the world below, and moving images of events and situations which are submerged human communities.

Virtual worlds give shelter to “angelical bodies” (or virtual images) of members of an intellectual collective, encouraging them to find each other. Synthesizing the complexity and the transformations of the terrestrial world, virtual worlds communicate different forms of intelligence and travel along individuals in collective knowledge.

For the theosophy of Farabian inspiration, the highest degree of reality is where God is. In his absolute unit, his own contemplation. While the theological discourse thought of the unit as a source, anthropological studies was feeding of multiples. In the techno-social perspective of the human collectives, reality and wealth rise to the terrestrial and human multiplicity.

Angelical worlds have the clarity, density, luminosity to diversify and pluralize.

We can observe the individuals in contact with the ideas that are emanated by God, independent from any tradition, church or institute. It is this risk that led Tomás de Aquino to criticize the avicenic conception of agent of intellect.

Instead of shining intellectual light that descends from God through the sky onto men, virtual worlds reflect the clarity that come from human communities.

The importance y reality of knowledge relies on their degree of aqicity, incarnation and practicality. We can think that virtual worlds illuminate and enrich human intelligence, but not only through the transition from idea to actions, but opening possibilities that would not have been thought of in any other way. Informing them of the knowledge of other intelligences, offering new strengths and new power to imagine.

Starting off from concrete and individual intelligence, these can become groups that emerge to a virtual world of intelligence or collective imagination. This virtual world enlightens individuals which allows them to open new windows for grouping and knowledge.

The enigma and desire

Levy approached enigma and desire and defined them: “In the theological discourse, illumination came from above and the spokesman of God would spread it on earth. According to the humanist project, whoever is capable of making his way down there and receive the teachings of others, will shed to the virtual world all the wealth and diversity of all he will have conquered.

When originated, thoughts are in the form of learning, discovering, encountering. A prophet gives his place to the figure of an explorer that never stops learning and discovering. Knowledge would exist as a thing itself, autonomous and not as a permanent creation, distributed everywhere in the world.

Levy (2004): every transcending definition of knowledge excludes those who resist being submitted to it, or whose intelligence does not correspond to it. Therefore, nobody is ignorant, or in other words, everybody is intelligent in the act.

But then, if everyone is always intelligent, what benefits would come from the construction of virtual worlds that express collective knowledge? Let's say it again: the light that falls on virtual worlds does not let potential individual intelligences through, but a determined act to new potentials. What does that mean?

Dipping myself or my bodies in the virtual world, I can perceive with one movement, not only what I already know, but also possible knowledge that is still strange to me and that will probably always be. My angelical body in the virtual world expresses my contribution to collective intelligence or my singular posture on general knowledge. Now, this angelical body is never reaches the complete extension of the virtual world that holds it and that is the Angel of the collective.

The virtualization of economy

Thus, we can say that the virtualization is present in every field where subjectivity can be produced. The market, finances, construction of knowledge and information are also of virtual character. Local and global economy are organized according to the everyday changes in different societies. This dynamic allows money flow, investments, pay of debt or the acquisition of them, and other activities to happen.

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As Pierre Levy shows, virtualization is present in all the spheres where subjectivity is produced. The market, finances, the building of knowledge and information, they are all of virtual character. Global and local economy are organized according to daily changes in society. In this dynamic the flow of money is allowed.

Currency is a virtual object and the power of monetary economy is a manifestation of virtualization. This process happens collectively and gets to many kinds of arrangements. The use of technology is imperative. The speed with which operations are done will determine the earnings or losses.

Virtualization of the human

For Levy (1999), the human has been created through three fundamental processes of virtualization:

- Language
- Technique
- Institutions and their complexity.

Language opens a window in time to the past, present and future. It de-naturalizes it. It helps us drift apart from the present (here and now).

Levy says that when looking for possible answers to our problems using our experience, we make it evident that we live in time it being a problem itself. With the creation of language, social processes are speeded up.

Techniques are perfected through virtualization. A technique is the virtualization of the action.

From a technique we virtualize movement which is later crystallized in a tool, and this one is actualized with each new use it has for different problems. Tools also virtualize motor and cognitive functions.

It is important to say that tools wear off but techniques, being virtual, only mutate or transform.

The social construct is also a permanent process of virtualization. Systems such as religion, moral and laws are social devices (for control) to virtualize the relations with strength, instincts and immediate wishes.

Operations of virtualization

Is there a recipe for the virtual? To demonstrate a hypothesis to answer this, we have to use three operations of the language (grammar, dialectic and rhetoric).

These operations are key for the virtualization of the language and are also characteristics of the technique and social ties: they are capable of making escape the now and then.

Apparently, language takes us to a world of meaning while techniques gives us a belonging sensation only in the field of action. However, techniques also build sense and meaning through substituting and abstracting.

Grammar is the foundation of the virtualization because it fragments, creates virtual particles, that later form writing. Writing and printing continue the process when they separate the text from the mark of muscle movements. Then computing standardizes the elements to allow the compatibility in different information systems.

Dialectics, as a substitution, can give real identity to a different function, or another identity, meaning, etc.

Grammatical figures, dialectics and rhetoric also elongate the processes of virtualization of social relations through fragmentation, substitutions and the creation of new goals and meanings.

Technologies of communications and information affect profoundly the different types of intelligence, making some of them exist in particular spaces or in some cases, be overly affected by others and thus forcing them to disappear. Levy explains that the transformations of communication and the intellectual technologies lead to changes in economy and politics.

Humans are language beings, which favors a bigger collective dimension. That is, in the moment that ideas are virtualized from language and crystallized in tools that become public, we start to know an intelligent web from the past. Creations of our ancestors keep following us, although a little modified because each generation actualizes them in a constant movement of changes and mutations.

“Indeed, the social dimensions of intelligence is intimately linked to languages, techniques and institutions in very different locations and times”.

The virtualization of the intelligence and the constitution of the subject

Now that we have examined the operations of virtualization, I will now examine its object or more accurately, the appearance of the object as a realization of the virtualization. In the next chapters three topics will intertwine: the collective part of the cognition and personal affection, the matter of the thinking collective and the collective intelligence as a techno-political utopia. The intricacy of the topic of the object and collective intelligence will only be able to be justified during the development of this discussion.

Us, human beings, never think by ourselves or without the help of some tools. If the collective thinks of us: Can we think that there is an updated, effective thinking of the human collectives? Can we talk about intelligence without a unified conscience or without subjectivity? Just how bad do we need to re-define the notions of thoughts so they are consistent with societies? It is said that we are transforming into the brain cells of a planetarium hypercortex.

Therefore, it is urgent to clarify those questions and highlight the differences between forms of collective intelligence, especially those that separate human societies and ant colonies and honeycombs.

Collective intelligence can then be defined as a form of intelligence that is distributed everywhere; it is continuously valorized. In a third stage, we will describe the new forms of collective intelligence that are allowed by the digital interactive nets, and the perspectives that these last ones open in the road to a positive social evolution. The analysis of how cyberspace functions will have served to prepare the second part, dedicated to the analysis of the operator (object) in the constitution of intelligent collectives.

Finally, we will see that the object, key of the collective intelligence, is as opposed to the “real” thing as it is to its sinister and courageous double.

Cyberspace displays objects moving among the groups, shared memories, and communal hypertexts. The electronic autopsy degrades a circulating object to a thing one can appropriate. If cyberspace is the result of the virtualization of the computers, an electronic autopsy reduces something virtual into a thing. Cybernauts do not need money because their community already has a constitutive, virtual, de-territorialized object. The Net, when adopting circulating links of intelligent collectives, becomes an object accelerator, a virtualizer of virtuals. But, in its surroundings, this types of relations are suspended momentarily by the relation to the object. The experience of the virtualization.

The concept of Virtual

As we have previously see, the term “virtual” is used for virtual spaces, virtual organizations, virtual money, communities, language, body, virtual reality, companies, virtual images, and a strange special reality.

This takes us to what we can call unreal fiction, which does not belong to the reality we can have with our senses and one hand there is a reality we build, and on the other hand, there is a reality built in an unreal world.

Nowadays, we hear the term “virtual reality” that is widely used on the internet and is many occasions (not always) reduced to human relations where one or more people are connected through the Internet and this allows them to be part of a world community where reality is not tangible. That reality becomes a habit. Philippe Quéau wrote a book in 1994 titled “The virtual, mare’s y virtues” where he talked about the “enhanced” reality; an addiction to ordinary reality.

As we have mentioned it before, Pierre Levy has written a book “what is virtual?” where he established the link between the mutation of reality and human phenomenon, which is the origin and the consequence.

It is important to relate what is the relation of men with objective, subjective and subjective reality; where human beings are supposed to have a different kind of maturity because the internet turn this into evolution or a mutation where the term globalization is used to locate within a matrix. There can be, in this matrix, reactions of different nature such as progressive, regressive and reactions that allow evolution but also the opposite.

This is where virtual reality becomes a subjective and human reality that includes emotional, physical, mental and sensorial dimensions. Sometimes this kind of reality excludes the five senses because the person is more into the virtual world where he is ageless and the only thing that is real is their reason and conscience. Somehow, the individual lives in cyberspace because he think so himself. This new man tries to assume a new human condition where he must cultivate, create and stick to new values in order to belong in this new human reality where he reflects its human roots and more.

Thus, we can understand this new environment that leads us to what virtual reality is, where by respecting our environment we are respecting the others and nothing else.

Now, the means are the center of the experience, the human experience. This is where this vessel is only good for communicating and he is part of that new cycle where he is a participant but not an author because what is generated there is a global conscience. That is, his experience is part of a new reality that comes from bits, but those bits (electricity) by definition are the flow of electrons that we can't see, hear, taste, touch or smell. Then virtuality is something that exists but we

cannot perceive it not even with our senses, but we can be part of the virtuality in a virtual world.

We have access to virtual reality through the internet. The internet is an extension of our senses and the people behind the screens communicate through it and do anything: we can make business, politics, create companies, social structures, virtual adventures and even fall in love. If we suppose that the connection to the net is broken, then we find ourselves isolated and the virtual world where we are disappears, but only for me. That also does not mean I cease to exist in the virtual world. There are footprints that everyone leave behind on many servers around the world such as: emails, Facebook messages, twitter, videoconferences, etc. that are storage and at my reach the next time I am online, or there may even be a time where a computer can answer for me. This is why the virtual world is the world of the internet and it is made out of initiatives, interactions, will and charity.

This new world is built by men, the same way he built virtual economy, money and companies. But one of the most fabulous and important things of this new virtual world is that it is not completely bad. We can learn with the use of this form of communication because the most important consequence of it, is that we can search information to learn, and besides being readers we are also co-participants of new knowledge that is being created. We probably have heard at some point that when someone is sick, they consulted "doctor internet" where a lot of information is contained and knows more information that a person could ever know. We can find experiences, studies, experiments and illness cases as well as the corresponding treatment.

The internet is part of our new reality. It lets us live in new worlds that are built and formed by virtual communities that have their own culture. Those communities can become a virtual world, that is, a cluster of virtual communities or cities that are tied together through optic fiber.

Globalization is the name we can give to this new virtual world where human beings deal with their own existence or reality. A world with its own culture that allows us to belong and participate in this new virtual reality.

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VIRTUAL COMMUNITIES

Nowadays the relationship between people and the way information and knowledge are spread happens through nonstandard forms of media that did not exist 10 years ago. Websites such as Facebook and Twitter are clear examples of what a virtual community is and how important they have become. Such websites have allowed the creation of the term “virtual communities” as an evolved version of a traditional community and at the same time it has allowed the birth of new terminology to talk about their components, such as “cyberculture” which is an extension of culture. All these changes have instigated a drastic change in human relationships and the creation of new entities inside and within cyberspace where the concepts of time and space are completely different from our real life perception and as a result, anyone with internet access can be part of a virtual community no matter where they are or what time it is where they are just by using a smartphone.

What is a community?

Community is a concept (Pozas, 1964) that is used to address social units with certain characteristics that organize them within a limited area.

It is a group of people that are subjected to the same rules to live their lives. As an example we give the communities of the Catholic Church or a professional condition.

A more restricted concept of community refers to the close and long lasting coexistence of a given number of people who are in a constant interaction and in mutual comprehension. The individuals that live in the community coordinate their different activities by creating social structures to satisfy their needs e.g. family, work teams, political parties, etc.

Each community is integrated by the following parts:

1. A group of individuals with a common past from which they developed relationships and behavior norms with common interests.
2. The group that forms a community occupies a determined area.
3. The human group that constitutes a community satisfies basic needs such as food, dress, housing, safety and recreation.
4. The conversation and reproduction of human life in the community happen in an organized way.
5. There is a marked separation in layers or classes.

The UNESCO defines community in different ways depending on the language:

1. From the Latin *comunicas, atis* derived from *communis*, common, a quality of the common.
2. Common uses: The word community in the Spanish language has the same semantic content as in other languages. This means that community as a word has a different meaning, depending on the science in which is used; thus in sociology it has a determined meaning that is different from the one it has in education.
3. Scientific uses: From the latin *communitas-atis*.
 - a) The international community: Beyond every State, we have humanity. The common well-being that the State provides is aimed at that social group within and yet solidarity, humanity, efforts and needs demand that such well-being is distributed among all the components in an equal manner.
 - b) The community in the civil law. By community we understand “the attribution of several subjects to one or more rights”. This doctrine has sometimes been confused with the terms of community and co-property. J. Castlán claims that “even if both terms have some coincidences since they both manifest the

phenomenon of the plurality of subjects or holders of subjective rights, they are different because of their diverse uses since community is referring to the genre and the co-property refers to the species- which is a real right, or more objectively, an element of the property.

- c) Religious communities. They are the society or congregation of people that live under certain status quo, institutions or rules, such as monasteries where they are set to reach a religious objective through common life.

1) From the German Gemeinschaft

The term community has been the accepted translation. First by scholars and then in the Spanish version of the book, from the term Gemeinschaft according to the work of F. Tönnies in his book *Gemeinschaft und Gesellschaft* (Loipzig 1887).

The concept of community, according to Tönnies,

On the concept of community, Tönnies quotes L. Recasens: “the community whose typical example are the family and the country, is a group that has not been formed through careful thoughts, nor by the decision of their elements, but by spontaneity. Their elements are not introduced by their own decision. They find themselves in such communities without any will, living in it and from inside of it they develop their minds and they are chained to it by a solidarity that was not chosen freely (Tratado general de sociología, México, Ed. Porrúa, 1956, page 336).

Based on the contraposition written by Tönnies and re-written by Scheler of community (*Gemeinschaft*) and society (*Gesellschaft*), A. Poch y G. de Caviedes have characterized those terms again with the objective of establishing a difference between an international community and an international society. For Poch, this contraposition is established like this: 1) A community is always a natural and spontaneous unit, a society is a somewhat artificial unit. 2) A community is a way of being or acting for those within it, a society is a way of existing in a place. 3) The

ontology of a community is symmetrical and organic, there is no sum of elements but an integration of them and this does not happen in a society. 4) In the axiology of a community, the value of punishment rules, while in a society, it is the divergent values that rule. 5) In a community, ethics are above the legal, whereas in a society the legal is what matters the most. 6) in a community, collective justice is under the legal system, and in a society, its is commutative justice that rules, defines and models the system. ("Comunidad Internacional y sociedad internacional", Revista de Estudios Políticos, VI, 1943, pages 349-354). 2) From the English Word "community".

The definition that R. M. Maclaver has given to the English word "community" has been incorporated into the Spanish vocabulary for the Social science through the translation of one of his books (Comunidad, estudio sociológico, Buenos Aires, Ed. Losada, 1944. Translation by J.prados Arrete). L. Sánchez narrows this conception this way: (Maclver) defines a society as an organized group for the pursuit of an interest or a group of interests in common and considers the capacity of a community of allowing the development of all social interactions in it as a distinctive criterion. A society or an association is an organization within the community. A community can be defined by its plurality of goals, its organic and natural character and the consensus that sets a sense of solidarity. An organization has only one or a few limited objective, it is artificial and reflexive, and it is built on a contract and tends to be unifunctional or with very limited functions. (Lecciones de derecho político, Granada, 1959, p. 120).

According to the previous definitions it seems as if there was not a united concept of community. This happens because the bases on which the definitions are made are not the same. There are definitions made from the biological-ecological similarities, or from socio-cultural or territorial backgrounds, etc. It is important to know that the concept is also different because of the language in which it is being used. You can say that a community is different from a "local community". A local community belongs to the German term Gemeinschaft as defined by Tönnies.

R.Koening claimed that” a local community (Gemeinde) can constitute a Gemeinschaft, although not necessarily. (R. Koening: Grundformen der Gesellschaft: Die Gemeinde, Rowohlt, Hamburg, 1958, page. 20).

Recasens has elaborated the concept of “social community”, trying to fit in the formulation Tönnies had made from the point of view of human ecology. This is how in the definition of “local community” we have to integrate the following elements:

1) The social process, relationships and social constellations and collective behavior models. 2) The territory or community in which that community has established. 3) The population in said territory.

Regarding the first element, Recasens concluded that “in a local community there are communitarian and associative aspects mixed together (understanding both aspects as described by Gemeinschaft y Gesellschaft by Tönnies). The other two elements will have to be analyzed by the light of the continuum that goes from the town to the big city. The continuum will set the degree and origin of the communitarian and associative aspects of the local community. (tratado general de sociología, México, Ed. Porrúa, 1956, pages. 438-450).

In other definitions, etymologically, Foster (1997) claims that the term community comes from a direct line of the word "communication" and at the same time, Merrill and Loewenstein (1979) say that communication "comes from the latin communis (common) or communicare (the establishment of a community)" (Foster, 1997 page 24). The author warns that even though communication is fundamental for a community, both terms must not be confused since an individual is capable of communicating with another without having to belong to the same community.

Semantically, a community could be defined as "a meeting or congregation of people that live together and that are submitted to the same constitution and rules". (Sopena, Diccionario Enciclopédico Ilustrado, 1965, page 874).

Wilbur (1997) mentions that the term is also derived from the notion of the common and therefore, its essence consists in being referred to a group of people that share objects in common, such as ideas, properties, identities, qualities, etc. sharing the same space.

This is how only by mentioning the term "community" provokes a spatial notion of the geographical location in which the people that integrate it live. The author makes the distinction between this colloquial use and its etymological meaning, saying that a community does not refer to a physical space in which the members get together, but to a quality of these congregations for sharing common goals.

For Nuñez, a community is a "group of people that participate in the same or similar socio-historical and symbolical context, where they share objectives, goals and common problems, which motivates them to generate communities or groups that can help to achieve satisfaction both personal and collective, generating a feeling of belonging, subjective interrelations and organization. The feedback is on a group and personal level".

Through a study conducted by some students (Nuñez et al., 2013) and having a direct relation with the community of Alcoholics Anonymous with which they were collaborating, some concepts were incorporated and later used by authors such as Krause, Mariane, y Geertz, Clifford.

Relevant concepts: Sense of belonging, interrelations, common culture.

Definition of those relevant concepts by their author(s).

- Sense of belonging: "that the member of a community feels that they share certain values, ideas or problems with other members, or the purposes or goals of the community..." (Krause, Mariane; p. 55).
- Interrelation: Some aspects worth considering in an interrelation "are the mutual dependency and influence. Conceptually speaking, each participant of a community depends of the others to form a community (...) mutual influence, I understand it simply as a coordination of meanings" (Krause, Mariane; p. 56).
- Common culture: According to Geertz, Clifford (1987) "culture as a net of shared meanings"(Krause, Mariane; p. 56).

By being able to formulate a new definition of community with such relevant concepts as the previously presented, we can relate them directly to what we have visualized all along. While working with the community of Alcoholics Anonymous we can see that each member represents both the community and the members because by being a part of it they are capable of overcoming difficulties step by step, since the problem of alcoholism is both collective and personal and together they are facing the same issues and working towards the same objective which is overcoming the addiction.

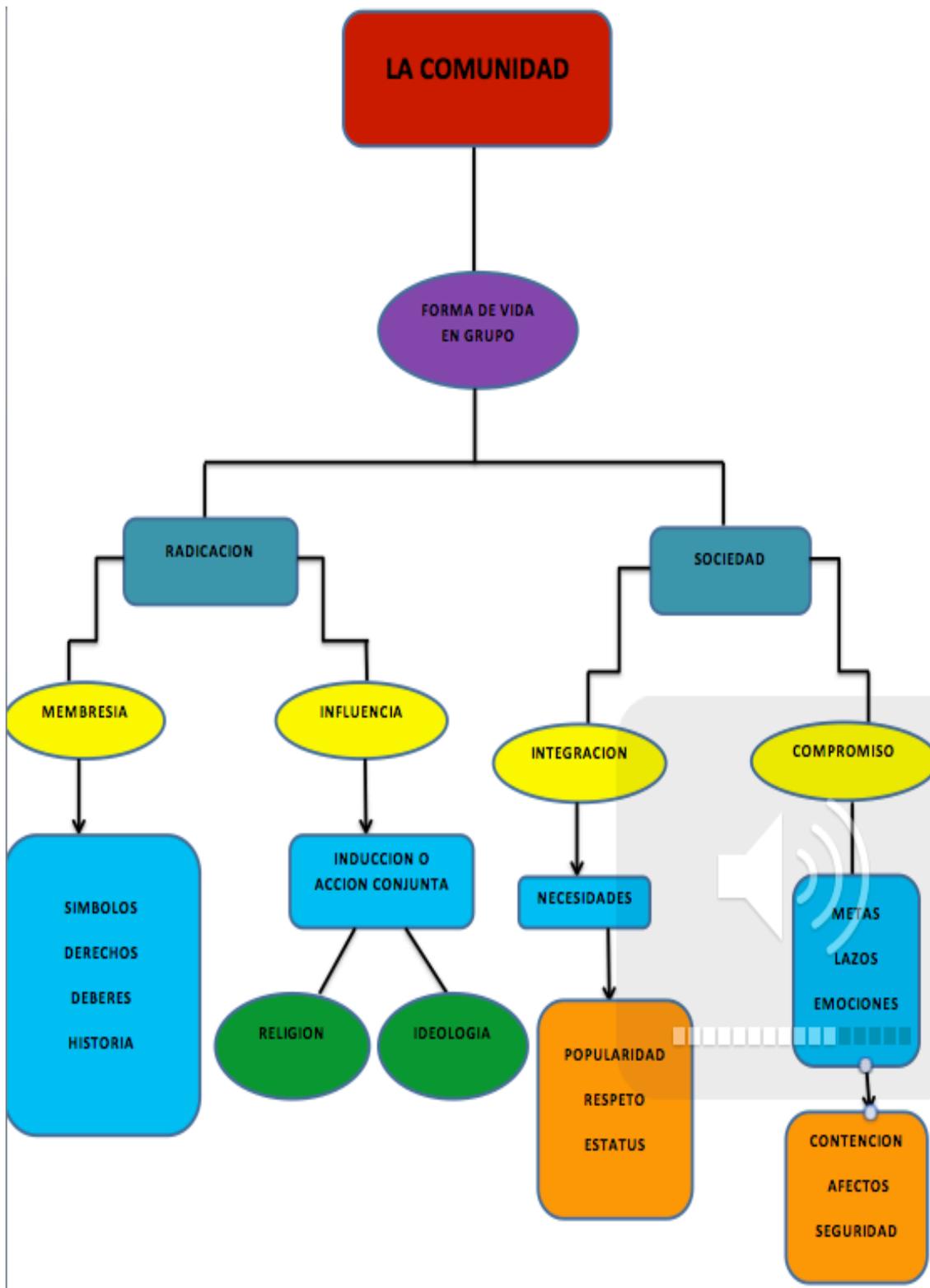
As far as the interrelation, this is visualized in each session that this community holds. There is a big influence from each member through their experiences, and by sharing them they influence the other members, getting feedback in that way. Lastly, we refer to a common culture and relating this to what was described by the author ("culture as a net of shared meanings "; Geertz, Clifford, 1987), we mention that as a community they have a common language in the topic of problems that cause and the consequences it brings to be an alcoholic, establishing shared meanings.

Therefore we can say that a community is a group of people that share a territory and that have the same needs. The human group of a community satisfies its basic

needs by using the experiences that are materialized on skills such as hunting, fishing, farming and cattle breeding, industry, and a large numbers of tools and machines. All of these makes up the technical resources of the community that are fundamental for the development of the community in which the safety of the group ensures the safety of the community.

In almost all the communities there are layers in the population. Therefore, the community can have different shapes, sizes, looks and locations. There are not two alike. And more importantly, a community is not just the people that make it.

Generally speaking, a community already existed before any of its current residents was born and will continue to exist after they are gone. It is something that foes beyond its elements, residents or members. It is a group of interactions, human behaviours that make sense and expectations of the members.



CULTURE

In the dictionary of the UNESCO we find two definitions of culture:

1. Etymology: from the latin *cultura* and this from *coloi* which means cultivate, inhabit.
2. Concept: The concept of culture used nowadays in the social sciences, is the result of a process whose outbreak comes from the latin word "cultura", in its old meaning of cultivating and breeding that still survives in words such as agriculture, horticulture, cult, cultivated, etc. Its application to human societies and to History is relatively new, after the year 1750, and it was first used in the German language.

In English and the romance languages, "civilization" was used since the first moment as a word to describe improvement and progress. That word came from the latin *civil*, *civiles*, *vivitas*, *civilitas*. The term civilization does not appear in the classic latin, it is a later acquisition from another romance language during the renaissance, probably from the French and as a derived of the verb *civiliser* which means to achieve or teaching refined ways to live.

Both terms culture and civilization, started out with a specific meaning related to the idea of progressive improvement towards perfection that still stands today. However, in general science and social science in particular, the word culture has got a new meaning (sometimes similar to civilization) that point out to the attributes and the products of the human societies that cannot be explained by biological inheritance. This concept of culture does not seem to have existed in any European language before 1750 and it is until 1850 when it appeared in Germany although not in an explicit way and always linked to the old meaning regarding cultivation or progressive improvement. It was not until 1871 that the connotation we are familiar with appeared as defined by the English anthropologist E. B Taylor.

The French age of enlightenment had given the word culture a very specific meaning. Tonnelat in his contribution to the book *civilisation: Le Mot et L'Éidée* (Pag. 61, published by the Renaissance du Libre, Paris, 1930) said "the writers of the XVIII century such as Vauvernargues y Voltairres were the first ones to use the word culture in a somewhat absolute way, substituting the meaning it had "shaping of the spirit".

Voltaire in his work *Essai sur le mores er l'Esprit des Nations* institutionalized his thoughts on "the spirit of the towns which leads to the birth of the history of humanity based in the idea of progress". Around this time new authors rose in the public scene, such as Isaac Iselin who published *History of mankind* in 1768 and the lessons in *Philosophy of the Universal History* by D. W. Hegel whose first edition was published in 1937.

The work of Voltaire led to another development wave more similar to the latest definition of the word culture and the use of it. Gustav Klemm acknowledged that Voltaire was the first that looked away from the monarchy and famous battles, to look for the essential, the culture as it was manifested in traditions, beliefs and governments. He set his attention on the "moeurs", the traditions that vary from town to town and whose appreciation has to be based on the experience of them. Eduard Sapir has commented that a custom is a concept of common sense that has served as a base for the scientific development of culture.

The most famous figures of the enlightening movement are Johann Christoph Adelung, 1732-1806; Johann Gottfried Herder, 1744-1803 and D. Jenish, 1762-1804. The orientation of their work is fundamentally historical and somewhat ethnographical, and they tried to cover all the ideologies and traditions of the world they knew. Herder's culture was defined as a progressive cultivation of human faculties and as an improvement or refinement of those by Delung. But in both author's work we can see in many occasions the word culture as it is conceived

nowadays because of the plural and historical approach that they made on the human species.

The intellectual movement that these authors represent experimented, half a century later, a kind of rebirth because of the work of Gustav Klemm (1802-1867), in 1843 we had *Kultur Geschichte of the Menschheit* and in 1854 *Allgemeine Kultur-Wissenschaft*. The abilities of Klemm to generalize and make theories were limited. He was more interested in what we could call information. He described rather than narrate. In his hands, History became pure ethnography, but in Klemm we have the impression that culture means the organization of towns, customs, utensils and abilities, domestic life, life in war time, life in peace time, religion, science and art.

The old meaning of culture as a progressive cultivation of human capacities caves in front of a more static perspective of those, in spite of his work being full of references of the different stages that human culture has had to go through.

This means that Klemm gave a meaning to culture which was more descriptive to the concept. Said definition is still being used, but we must not forget that the first person to conceive this concept in a structured way was E.B. Taylor.

Klemm's work can be considered as the starting line from which the scientific concept of culture became possible. After him and Jacobo Burckhardt in 1860, and then a long list of historians, philosophers, antropologists, etc., -Hellwald, Lipper, Rickert; Frobenius, Lamprecht, Vierkannt, Siemmel-, there is no doubt that in an implicit or explicit way, the concept of culture as we know it was born in Germany.

However, in the German language there have been three attempts to establish a clear contrast between culture and civilization. Such event did not extend to other European languages where choosing between one or another term or word seems to be a matter of personal choice.

The first of these attempts was Wilhelm Von Humboldt's idea, and then carried out by Lipper and Barth. In this attempt, it was established that culture was a reference to the technical-economical activities, and civilization was the spiritual enrichment. Such conception had a repercussion on American Sociology. The next attempt was by Oswal Spengler that understood civilization as the final phase, not creative of a culture. Finally Alfred Weber identified civilization with the technological aspects, necessary materials for the survival of the society and the culture with the spiritual, emotional and ideal aspects of the same religion, philosophy and art. Civilization for A. Weber, is accumulative and irreversible, culture is highly variable, its products are unique, plural and they tend to have an external outcome. This point of view has had an echo, although modified, in the work by the American sociologists Maclver, Odum and Merton.

It was out of the German language where the term culture got to its scientific meaning. E.B Taylor (1832-1917) admitted his debt to G. Klemm in regards of his use of the word culture. In his *Research into the early history of mankind and the development of civilization*, published in London in 1865, he used the word culture in various occasions, although the word civilization was more frequent, but in 1871 his main work *Primitive culture* he starts by defining for the first time in an explicit way the term culture as "culture or civilization"- It is a complex everything that includes knowledge, beliefs, art, law, moral, customs, and any other capacity or habit acquired by men as a member of a society.

The formulation made by Taylor took some time to be adopted in his own country and language. The Oxford dictionary did not include the term until the 1933 edition. Although it seemed to have an influence on men who were considered as exponents of modern anthropology. For example, A. Lane-Fox, Pitt-Rivers who applied the term of culture as defined by Taylor, in the years of 1874 and 1875 (Ref. *Evolution of culture and other essays*, edited by J. L. Myrex, Oxford, 1906).

In general, the term culture has had poor luck in England. In France, the resistance has been greater and it is usual that in both countries the term social is applied for both social and cultural. The reason behind it is Emilio Durkheim (1858-1917) and his school that grouped in the magazine *L'Année Sociologique*, which appeared for the first time in 1989, based the orientation of their work on the concept of society. However, we could say that the category of society in Durkheim and his school is nothing more than a greater radicalization from a scientific point of view of the contents elaborated by E.B. Taylor and his definition of culture.

It is of mayor significance the success that the expression "social anthropology", coined first in the English language by Sir James Frazer in 1909, has had in France and in England for naming the studies oriented towards a scientific knowledge of the towns. It is as if the virtual possibilities of the concept of culture created by E. B. Taylor had developed up to its limit in an unitarian discipline to serve a double movement: the one represented from a technical point of view by the French school of Durkheim and the development from the perspective of the experimental test of a field research carried by the English school of anthropology and B, Malinowski y A. R. Radcliffe-Brown.

The ulterior development of the so-called social anthropology in both countries just confirms the last statement. That is how England, Malinowski is and Radcliffe-Brown's disciples have worked on developing the theoretical postulation of the school of Durkheim, from the perspective of the "fieldwork", reaching a maturity in the work of the professor Sir Edward E. Evans-Pritchard that has no match. In France, the disciples of Durkheim and Marcel Mauss, are centered on a speculative tradition and have remained loyal to the requirement of scientifically data demanded by Durkheim for the study of human societies, taking advantage of the experimental contributions of their colleagues in the construction of a theoretical corpus that when linked to social anthropology as an academic science, demands for the precision and exactitude seen in the natural sciences, as claimed by professor Claude Lèvi-Strauss.

In North America, on the other hand, it seems as if the term culture has had more success in the common school use than the term society. Such preference, which could just be a matter of terminology, has become since it was first used by the founders of the American school of the so-called cultural anthropology (Franz Boas, Edward-Sapir y A. L. Kroeber) something that is beyond its lexis, to become a distinctive of said school in front of the English anthropological tradition or the one derived from the teachings of E. Durkheim and Marcel Mauss in France.

The term culture as it is used in North America is a reference to the values of a determined place rather than a reference to the social ties that give organic consistency to the place. This has as a consequence that people understand culture as they way of living and conceiving the existence of a determined group from what we can call their level of consciousness. Such specific content for the term culture makes the comparative method still valid, unlike the English and French schools that say that every community has their own concept of culture that is very similar due to the geographical closeness between them although it is no way the same.

It is no coincidence that the term "cultural relativism" has been formed in this area and that its most representative followers (Melville Herskovits, Ruth Benedic, Margaret Mead, among others) have insisted so much in the singular aspect that every human group considering the terms of which they consider and understand for culture.

There is no question that also from the specific content of the word culture, the American school and the cultural relativism has an echo of the definition given by E. B. Taylor.

It is important to point out that since long ago, since the definition first appeared, there have been many attempts to characterize and settle the meaning of culture since the most varied theoretical positions and from various angles.

This is why many essays about the definition have sprung. So much that Leslie A. White has been able to count over 300 in the analysis she made of A. L. Broeber and C. Kluckhonn's "Culture: a critical review of concepts and definition" published in the American Anthropologists magazine number 56.

Thus we can conclude that culture is something that is provided, not susceptible to being explained in the terms of biological inheritance, but transmitted in what we have called "external tradition" and to what human beings cannot aspire to freely.

Culture of the masses

1. Vulgar use: The term refers to the cultural products that are consumed by the generality of people, registering a pejorative connotation,
- 2, Use in the social science: In addition to being a system of norms and values, the term "culture" in culture of masses, talks about cultural products. On the other hand, the phrase "culture of masses" admits to many different meanings that make sense out of the definition given to "masses",

In general, we can distinguish the group of people that supports and the group that refuses the culture of masses in the following sociological culture:

- 1) Refusers: Leon Bramson discovered in the origins of this group a romantic liberalism that embodies both the left (Marxism) and the right (aristocracy) (Ortega). The common denominator is the protest against the new forms of society, industrial societies, that were destroying the old ties of the Feudalism (Marx) and the elitist culture empire (Ortega). (cfr. Leon Bramson: El contexto político de la sociología. Instituto de estudios políticos, Madrid, 1965, chapters 1 y 6).

We can then explain the origins of the European lineage of many of the critics of the society of masses and of their own culture in the American sociology. For example: L. Lwenthal, Gunther Anders, T. W. Adorno, Max Horkheimer, Erich Fromm, que tantos seguidores tuvieron en el nuevo continente: D. MacDonald, Bernard Rosenberg. C. Greenberg, D. M. White, etc.

D. Macdonald considers the culture of masses as a degradation of the "high culture" (cfr. "A Theory of Mass Culture" in B. Rosenberg y D. M. White: Mass Culture, Glencoe, 1957).

H. Arendt talks in a similar way about the expansion of the general culture since "all of it leads to an unavoidable relaxing of the norms and a popularization of its content "(Reflection on Little Rock en Dissent 1959). The real culture takes place in an elevated zone, where generalized culture is corny, "kitsch", a mere substitute or "Ersatz culture" whose destiny is the consumerism by the culture of masses ("Avant-Garde and Kitsch" in B. Rosenberg and D. M. White, o. cit.).

The refusers to the culture of masses denounced the moment of unidimensionality, alignment and manipulation - for example, through the media of masses- of which culture is a victim.

2) Supporters: It is strongly denounced the ideological charge of those who attack the culture of masses. E. A. Shils sees in that " a product of those who were letdown, political prejudices, vague aspirations of an accessible ideal, resentments against the North American society and in fact, a disguised romanticism in the language of sociology, psychoanalysis and existentialism. ("Daydreams and nightmares; reflections on the criticism of mass culture" in the science review, VOL. 65, number 4, Pages. 587-608).

Some of those prejudices have been denounced by John Fisher ("The Mases and the Arts", in Yale Review 1957, pp. 114-115): 1) the real culture is the product and the property of an intellectual elite. 2) The intellectual has a defined and special, as well as privileged, position as the guardian Sheppard of the high culture. 3) The moment in which the masses stumble upon culture, they make it dirty and they commit blasphemy, getting closer to the holy object without the permission of the priesthood. 4) Anything that is popular by definition is wrong (cited in L. Bramson, *loc. cit.*, pág. 159).

Because of the strong ambiguity of the term we are discussing and according to the ideology of whomever is using it, its utility is questionable. However, it is the respective attitude that is adopted which confers utility and interest to said concept, as told by Lewis A. Coser (J. Gould y W. Kolb: A dictionary of the social Sciences, The Free Press, Nueva York, 1969, pág 412), cited by R. Wolheim (Socialism and culture, Fabian SOciety, Londres, 1961, page 8).

In general and from the anthropological point of view, the romantic notion of culture designates the pre-modern world, the spirit or genius of the European towns as well as, from the anthropological perspective, non-occidental societies, which are different from the other and oppose to civilization.

Therefore, in the delimitation of the characteristics of culture, its cohesive, totalizing and non-contradictive aspects are emphasized, and related to the deep integration and constancy of the cultures and the harmony and communion that is established among the members and the nature which are all characteristics that we cannot find in a civilization. This definition takes the second place when compared to more positive definitions.

In such definitions culture is indeed conceived in a broader image compared to the nature category. This could be to confirm its narrow relation to continuity or to contrast them by emphasizing the characteristics that make culture what separates

men from animals. In this case, culture is no longer a notion that takes us back to the mere reality of primitive societies, but to a common quality in every society. The opposition civilization-culture, that restricts the first definition, disappears and culture becomes a concept that understands and adapts to all the societies. The primitive and civilized are contrasted within a common and homogeneous frame and become a variety of culture.

Finally we have a third definition to the concept that emphasizes the differences between each culture in particular, rejecting any attempt to compare them to each other and instead of talking about culture, it talks about the cultures as configurations of unique social lives.

In each case there is a constant element to the definitions of culture and that is the idea and symbolism of it, and the internal coherence that makes culture a unified totality. That is because the only question that gives anthropological theories any sense is the one that asks about the meanings of customs and the nature of societies that are different from ours.

Perry Anderson (1980)

The UNESCO, in 1982 declared that "the culture gives men the capacity to reflect about themselves". It is what makes us beings specifically human, rational, critic, and ethically engaged. Through culture we differ in values and contemplate options. Thanks to culture men can express their thoughts, be self-aware, conceive their lives as an unfinished project, wonder, look for new meanings and create transcendental work.

There are plenty of definitions of culture. Herskovits (1967) accepts in general that culture is learned. That is allows men to adapt to their natural environment and to material objects. One of the best definitions of culture, although ancient, is E. B. Taylor's: "A complex everything that includes knowledge, beliefs, art, moral, laws,

customs, and all of the other dispositions and habits that is acquired by men as a member of society". Culture, tradition and civilization are synonyms, but their use has different meanings and different qualities.

A brief definition that can be useful in this concept is the one that says culture is what is in men's environment. This phrase recognizes that human life still happens in a double frame: one is the natural habitat, and the other is the social environment. This definition also shows that culture is more than a biological phenomenon. It includes all the elements of character of a grown man that unconsciously or consciously learned from his group and some other different elements through a process of packaging: technical, social institutions and raw materials. The resources that the natural world offers are for satisfying needs.

It is barely necessary to establish a difference in the concept of culture that works as an instrument for the study of men and the general acceptance that we give to the terms "culture" and "grow". However, for those that are not familiarized with the ethnological terminology, it may seem strange that the concept of culture can be applied to a pot or a recipe. The idea that we get when hearing the word culture in many circles, evokes an academic meaning and makes it a synonym to the term "refinement". This definition implies that a person of culture is capable of handling more easily situations that are linked to being "prestigious". In fact, those who master these aspects are the people who find learning enjoyable.

On the eyes of anthropology, a "cultivated" person in the common sense of the word, has a defined knowledge of our culture and therefore they move closer because of the great quantity of technical knowledge they possess, such as: an engineer, a doctor, a worker. A basic Economy, religious rites, or simple tales are also part of a culture. The comparative study of border customs shows this clearly. In small and isolated groups whose economical activities are primitive and whose equipment is poor, are not the proper environment to produce "cultivated" people. They lack the essential resources needed to develop their aspirations and their

taste. Melville J. Herskovits (1950) (las bases de la antropología cultural page 102).

In order to understand the essential nature of culture, first we have to solve a series of apparent paradoxes. They are subjected to different expressions but we are going to present them next:

1. Culture is universal as a human acquisition but each of the local or regional event can be considered as one of a kind.
2. Culture is stable, but it is dynamic and it shows a continuous and constant change.
3. Culture is carried within all of us, and in a great measure it determines the course of our lives, but it is hardly ever necessary for our conscious thinking.

It wasn't until the end of this volume that we cling to the fundamental importance of the formulas for our problems and the difficulty to reconcile those apparent contradictions. We have to consider all implications. It is here where we can see where we can apply those implications when facing the reality of culture.

1. The fact that men is defined often as a "creator of animal culture" also indicates that they recognize the universality of culture. It is an attribute of all human beings, independently of the place they live and of all human beings mostly. This universality can be described in specific terms. All of the examined cultivated things, from an objective point of view, possess a limited number of aspects that can be distinguished to make the study easier. Let us quickly see all the different aspects of how the concept of universality of culture is broad enough to include all the subdivisions of our human patrimony.
2. If we compare the stability and the change that is produced in culture, we have to admit that in the beginning everything shows the dynamic of culture. Those cultivated things that are absolutely static are only those that are dead. It takes a

quick look into our own experience to find that the changes that occur to us, past and present, often happen so slowly that we don't have the opportunity to notice them. An old photograph from some years ago show us the changes in fashion. I don't believe this will change since that is the prerogative of our own culture. The same observation can be made on other people, disregarding their number, isolation and simplicity of their customs. Change can be what is manifested - a small detail- of its culture. For example, a change in the style of ornaments or a new approach to an old recipe. These changes would be even more notable if we were able to observe a company for a while, or how archaeology teaches us about the past, or if we could compare our neighbors and the groups that have been exposed whose culture is similar to theirs but with some variations in details.

3. Our third paradox. Culture gets in our lives without us noticing. It is different from precedents because it includes something more than an alternative. Here we deal with problems that are mostly psychological and philosophical. We must try to solve the psychological problem and discover how human beings acquire their culture and act as members of society, and the philosophical issue of whether or not culture is a function of the human mind or if it exists for and by itself. (Herskovits, 1950).

In conclusion

Culture is a group of customs, norms and laws besides dress codes, religions, and behaviors. Also, we could say that culture are all the forms of information and abilities that a human being possess and that are fundamental for disciplines. Cultures are responsible of the studies of every aspect of a society: knowledge, laws, customs, etc. that provide the student with a distinctive character and a personality.

In the context of behaviorism, culture is defined as the sum of beliefs, values and customs acquired and transmitted from generation to generation, that regulate the behavior of a determined society. The importance of the culture in society is so natural that we do not even take notice of how it influences our behavior although it is very obvious because it dictates an order, directions and a guide for the members of said society in every stage of their lives. Culture changes because it adapts to every kind of society.

CYBERCULTURE

As we have seen before, culture is the transmission of values and they are transmitted from generation to generation. Generations nowadays are 15 year longs though, due to the fast and accelerated growth of technology and especially to the internet. Internet life (understanding life as the time spent online doing any activity or just seeing things) has become more accessible to everyone in the last 10 years and now more thanks to the use of smartphones, especially the iphone, which revolutionized the way we communicate since this device is not only a telephone but its closer to being a computer where the user can use what they need, from a phone to a video editor.

"Life" in a virtual community happens at a different pace, sometimes faster or sometimes slower. The information share, however, does happen at a much faster speed. News do not take longer than seconds to spread around the world. Another example are movies, which used to take a long time to edit and now with cyberculture it is easier and faster. That is why a generation, in cyberspace terms, changes rather sooner. We can talk about 4 or 5 years for a change of generation. However, this parallelism can cause a controversy, for example when comparing the number of generations that exist at the same time. We see that out of cyberspace we don't usually encounter more than three generations coexisting at once but in cyberspace we can coincide in a community which can be made by 2 up to 200 million people or more. This helps us establish links with people that

have different culture or thoughts from a previous generation where the transmission of knowledge is immediate but the learning is not. In this new type of cyber-spatial culture we do not have to follow a rigid scheme. This possibility enables a greater cultural enrichment when comparing points of views or degrees of knowledge, with very little chances that such knowledge will be lost during the process.

Cyberculture is the culture of the younger people that are being born, the culture of the use of computers as a mean to new techniques of information and knowledge such as the internet.

It is the technologies of information and communication that have generated a great revolution in the way of accessing, using, transmitting and modifying and/or improving the quality of the information, generating new social, political and economic developments, which is what people commonly interpret as cyberculture.

The social impact that has derived from this new technology goes from the artificial intelligence up to where cyberculture is perceived as a digitalization process, that is, where everything is in binary language, just zeroes and ones. This new logic has allowed changing the cosmovision of the planet, as well as new possibilities for new connections between human beings, nature and machines. Young people of this culture have stopped going to libraries because they use the internet as a virtual library. Besides, the traditional concept of the catholic religion where believers think and get to conclusions without reading, they become graphic, but absorb less knowledge and by letting go of their traditions they lose the values the family has taught them. This way we can realize that we cannot tell yet if cyberculture is benefiting or harming people in a way that it is degrading values, customs and traditions.

VIRTUAL COMMUNITIES

Now that we have the concepts of community, culture and virtuality we can understand what a virtual community is. We have to look at some definitions by some authors to have a better understanding of the concept.

Virtual communities are a fundamental element in the analysis of the diffusion and appropriation of interactive media. The term "virtual community" is integrated by a group of people that form a net and who have common interests among the members and a common code for communicating. This community happens via electronic link and graphic displays such as icons, texts, images, diagrams. Virtual communities have a level of conscience therefore, in a cultural level: the community, as well as a small, individual group, gives sense to information (Harvey, 1995).

Internet is not essential to the creation of a virtual community. This can exist as its name indicates it, virtually, where each individual of the community has a level of conscience that allows him to be part of that community through icons, texts, images, etc.

Courcelle (2009) shows us a series of mechanisms and rules of the virtual groups that share some corollaries as seen in traditional groups. Those corollaries are:
A virtual group only exists when taking a risk and developing an important facilitation and social animation. Virtual socialization is no longer restricted to the proximity of individuals but by an explicit desire to connect with information service providers.

A virtual group exists because of a psychological contract based in the creation of a virtual culture, that is, a group of meanings that can be exchanged between the members of the group, as well as the mutual adaptation of behaviors.

In a telematic environment, the area is identified as the behavior of the members and not as a geographic space. The latter might be the best definition of what cyberspace is. This exchange is possible thanks to the use of telecommunications in its different forms, which is responsible for the cohesion of the virtual group. In fact, it is a system of institutionalized expectations where norms, values and metaphors are vital.

Limits. The development of the virtual group is based upon its capacity of absorption and it is much greater than in traditional groups. Virtual communities can become a wide exchange of systems that have strong ties and low cohesion in between them where the difference in the categories of groups is in the degree of fusion of the member and the identity of the group and also, in the density of the participation of each member.

The culture of the virtual communities is a collaboration culture and an exchange of information. For all these reasons, the diffusion mechanisms of strategic planning for new technologies, is only based in hypothesis about the communication of masses which is plagued with problems and the modernization of operative politics that probably explain the many failures of telematics.

Table 1: The focus by objective levels of the plan 2000

Individual experience	Living things	Dominant values	Economic life	The game and challenge of power.	Global dimension.
Value of	Family	Traditions	Liberalism	Authority	Authority

personality, safety and solidarity.	Community Association Regions	Imagination Creation Planning	Ecology Direction	Self- employment Consultation Democracy	Self- employment Consultation Democracy
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Michel Cartier UQAM believes that the hypothesis of the careful study and calendar of the previous chart allows us offer the concept of multiuser communication.

These public spaces require their own architecture and must develop their own content and service methods of the media. The content of information becomes that function, including the levels of the society of which they are a part of and of the groups that decode said information. The multiuser communication allows to break down of the information in social levels and in exchange, they canalize the participation of the society in these levels. (Courcelle, 2009).

Table 2: The levels of society online (after Michel Cartier, 1990)

Individual	Informal group	Formal group	Society
1 or 2 people	1 to 20000	20 000 to 1M	2M to 200M
individual Couple Personal, vernacular culture.	Family Village District Vehicular language Popular culture	Metropolitan zone Language Official referent Culture	Megacities Empire Nation Mythical Language Culture

It is important to observe the size of virtual communities because they depend a lot on the quantity of people that are in it. We can see that in these communities there are informal groups that are not larger than 1000 people, unlike the big systems of social networks. Facebook is good example of said systems of social networks

because it has over 200 million users that are divided in small groups but they all belong to Facebook.

So we can separate virtual communities in three categories:

- Communities that are formed because of the internet, which enables the creation of a virtual world.
- Grouping of people that have a common objective (not necessarily on cyberspace).
- Communities that are formed by grouping the ICT's.

Communities formed through the internet (which allows the creation of a virtual world)

Virtual communities are spaces in the internet that are aimed at facilitating the communication among members of a same group and that are located in different geographical locations. Members collaborate through distribution lists, news groups, chat rooms, instant messages and other shared resources like libraries, games, documents, etc. In virtual communities there are two types of roles for the members: one are the administrators that manipulate and coordinate information and the other is the participants who use the resources shared by the administrator (Díaz, 2006).

It seems like when we talk about virtual communities we are dealing with two opposite terms. The noun "community" talks about a consistent and real existence of a concrete relationship between people in a determined physical space. The noun "virtual", on the other hand, it is used for things that are not real, and it is understood as something fake and unreal. Then, the existence of a community of people that is at the same time virtual sounds very contradictory. This contradiction might come from having taken the term of virtual reality, which is a type of artificial

reality generated by computer programs, as a type of reality that only exists when a program is running. A sort of reality that exists as long as the servers that are creating it are working. Using special devices (helmets, glasses, gloves) men can even interact in this reality and feel that they can manipulate it (Valiente, 2013).

A variety of social groups are interacting via internet. A vital part of the web 2.0 are: Chats, forums, IM, blogs, tags, etc." Argüello, 2013).

Grouping people with a common objective (not necessarily on cyberspace). A virtual community for learning consists of an space to meet up -in virtuality- where different members gather to use different types of structures -folders, modules, etc- created to contain and shape the communicative action with and interactive character in an organized way and according to the learning objectives and goals they want to reach. Although virtual communities are fundamentally relevant for distance education, from a personal point of view, they do not have a life on their own because they need the specific activity and dynamism from the members of the learning virtual groups online that are part of such communities (ILCE, 2004).

A virtual community forms when on the virtual world there are social congregations that emerge on the net when a large enough number of people have public discussions for a long time with enough human feelings to form personal relationships online (Rheingold, 1993: 5). In this definition we find three basic elements: interactivity, affective component and interactivity time, as conditions for the existence of virtual communities and even as characteristics of general communities (Valenzuela, 2012).

Often a community is understood as a group of people that keep a characteristic in common. Said characteristic usually is the life in a same geographical space, having common interests, doing similar activities, etc. However, in Wenger and Snyder's (2000) work, community is much more than that. It is the group of people that interact in an engaging way in activities and discussions, helping and sharing

information. It is important to analyze the concept of virtual communities because it is confused with formal team work sometimes. Unlike formal team work, a community, as Wenger and Snyder say, maintains a sense of belonging and an interest to stay in community, and for the benefit of whomever is part of the group (Valerio, 2013).

People group in a virtual community because they wish to acquire and exchange knowledge on a topic of their interest (a need for self-realization), but at the same time they need to relate and establish friendship with other people who share the same interests (a need of belonging), and all of this can be combined with the necessity to be recognized by their intellectual work by a social group (a need for esteem and recognition).

Which of these needs is a priority? That will depend of the situation where they insert the conduct of the person, their interests and the characteristics and dynamics of the community. What is certain is that a virtual community can very well satisfy the needs that human beings have according to Maslow's pyramid on different levels, and the satisfaction of one does not require the satisfaction of a need of a higher level at the same time. Harvey points out the existence of a new necessity for telecommunication that has surfaced since the development of communication through the computer as one of the motivating factors in the participation of the human being in virtual communities. This need for telecommunications is a mix of various types of necessities for interaction and in different proportions according to the person and community we are talking about (Harvey, 1995).

It is necessary to establish a definition to the concept of community. Such concept has been traditionally associated to anchoring to a territory, that is, the members of a community would belong to a specific physical territory. However, we can show that in the actual context of the society of information, the creation of strongly consolidated communities that do not share any type of territory. It is necessary to

consider three elements so these human groups can be seen as communities: 1. belonging: "feeling you are a part of" and "identified with". 2. Interrelation: communication, interdependence and mutual influence among the members. 3. Common culture: the existence of shared meanings. (Rojas 2006).

Salinas (2003) says that "(...) while physical communities have determined relationships, virtual communities have a different type of logic and another kind of relationships but are still considered communities. They generate sociability, human ties, behavior norms and mechanisms of organization..., although they do not coincide in many aspects with physical communities".

Virtual communities have their own characteristics for functioning since the member are not there physically (Daele, 2004). When we try to define what a virtual community is, we will find a double problem: on one hand, defining community itself, and on the other hand, the reference to virtual. On the first case, as Baym (2002, 55) shows, the term community is too complex to define "since it has got descriptive, normative and ideological connotations and includes both material and symbolic dimensions". To say this in another way, its definition is not univocal and can be obtained from different perspectives, either pragmatic or technical, and even religious (Cabero, 2006).

A community formed by grouping ICTs

In this third category we find that a community is created by one or several users, and that with the use of information and communications technology, groups, chats, forums and other learning objects are being created so the users can utilize them in the virtual world.

Next, we can see some definitions about the concept where there is an emphasis on the use of technology, as Johnson (2001) points out that: "virtual communities

are communities in the net that overcome time and geographical barriers. The net technologies, especially the internet, allow these communities to exist".

According to Marcotte (2003), a virtual community is both virtual and a community because it was developed by interactions via net.

A virtual community is definitely the experience of sharing with other people we cannot see in a space of communication. The internet is a very wide net of computers that give each of the users an equal voice, or at least an equality on the opportunities to talk and participate in a community. The attraction to the net and for participating in this kind of experience comes from the ability of the technology to publicly legitimize self-expression and the freedom from the time and space obstacles (Salinas, 2003).

We understand virtual learning community as a space where face to face education and education from a distance are merged to support teaching processes -learning through technologies that allow communication among students and professors in the best way (Mora, 2008).

For Coll (2004), virtual communities are "(...) groups of people or institutions that are connected through the net, that have learning as an objective. The Virtual learning communities (VLC) are characterized by the existence of a community of interests and by the use of ICTs with a double purpose: as an instrument to facilitate the exchange and communication among the members and as an instrument to promote learning. It is important to say that the mere use of ICTs by a group of people or institutions is not enough to make that group work automatically as a learning community".

According to Coll (2004), learning communities may increase their efficiency when they use digital technology to consolidate the interaction and communication nets and to promote and maximize the learning in the members. The virtual interaction

dynamic, when creating a new communicational context, is different than the dynamic of face to face interaction (Dillenbourg and others, 2003). "These specifications on virtual communities (...) might create a different social dynamic from the one in co-present ones, but in the end it is about a context in which emotionally charged interactions take place, between humans that adapt their interaction methods to the context (Dillenbourg, 2003).

Finding others, discovering things in common, exploring connections, defining efforts, negotiating, community, participating in joint activities, creating artifacts, adapting to ever changing circumstances, renewing interests, commitment and relationships. Staying in touch, communicating, having meetings, asking for advice, collecting memories. Time, traditional community, use ICTs for sharing resources but discuss face to face what brings you together. Supporting both of said elements, interaction, and the use of resource banks are essential characteristics of a tool that supports virtual communities. Working technology is not enough to guarantee the success of a virtual community, but without it, the technological limitations and eventual failures in the operation of systems may block or even finish a virtual community (Leal, 2009).

For Dillenbourg and others (2003) and Marcotte (2003), the virtual community refers to any group that interact through the internet, with more or less social dynamic. The communities can be completely or not virtual as the physical and non-physical interactions are leveled out. It is not only technology that creates the community, but it is what modifies and makes space and time relative which modifies the relationships between people. Virtuality characterizes communication but does not characterize the community.

Pazos and others (2001) also consider virtual communities as environments based off the web, that group people related to some topic in specific. These communities will have more success depending on how much they worked on the assignment.

Cabero (2005) refers to virtual communities as "(...) communities of people that share some values and interests, and that communicate through different tools for communication that are offered by telematic nets, whether they are synchronized or not.

The importance of communities seems evident now in the process of education and formation. In studies of online communities there is a consensus about the importance of the creation and development of those learning environments and the role they have in the success of the participants (Wallace, 2003).

In spite of the study of communities, they constitute an important field for research and it is convenient to say that most of it is related to long distance team work. There is heterogeneity in investigations related to synchronic, asynchronous and online communication, the analysis of interaction on the net and virtual spaces that in spite of being a team work, it does not fit in the functioning of learning communities (Meirinhos, 2009).

A virtual community presents as its attributes or main features that it is only real on cyberspace and that its organization model is typically horizontal. Let's explain that virtual communities are only possible as long as its members, independently from their geographical location, their nationality, their culture or their age, they all share a space created with and from electronic resources and even if it doesn't have a physical space, it makes communication possible between them (Dozal, 2002).

The concept of community can be extended to virtual nets that are made from diverse interests and stories and/or common stories not only in the organizations but in different spaces such as ex-classmates, professional contacts and friends and family. Relationships that are kept for a long time despite of not having a physical encounter, even for those relationships in which there has never been a physical meeting. People publish in real time- as things are happening- and

interact with other people on their social network. The information that is exchanged is varied: personal, from work, consumerism (Budiño, 2011).

What sets a virtual community apart from a traditional community is the use of computer and communicational systems that support and act as moderators for the people involved (PREECE and MALONEY-KRICHMAR, 2005). Mediating the interaction with ICTs becomes the key element in a virtual community. People deal with situations that are similar without the benefit of a shared practice. Consolidation. The members are reunited and recognize their potential. It activates. The members are involved in developing a practice. Disperse. The members are involved with less intensity but the community is still alive. Memorable. The community stops being central, but people still remember it as a significant part of their identities. Stages of development. Typical activities.

The concept of virtual communities has been frequently used in the theorization about the apparition of new ways of sociability linked to the use of ICTs, especially the internet and computers. In general, virtual communities are defined as social groups emerged and supported through the use of Computer Mediated Communication (CMC) (Ardèvol, 2002: 10). In this sense, we can consider that one of the principal objectives of the investigation on virtual communities is to distinguish what we do when we are using the internet, and how we do it. It is there when we have to use anthropological and ethnographic knowledge to understand social behavior in two circumstances: when being online or offline (Ardèvol, 2002: 14) which correspond to virtual space and physical space respectively (Sandoval, 2002).

Virtual communities are considered as social congregations that emerge on the web where there is enough people to carry on different activities that allow the creation of a shared experience and where the collaboration is the fundamental principle from which two or more characters interact to create a shared knowledge that could not have existed in any other way. On this scheme we find examples of

expressions of said communities as new groups or some types of chats where they discuss a topic in particular. In general, they are not communities with a complex internal structure but in which it is possible to develop some of the aspects of the Schrage model to highlight the importance of collaboration, such as creating and manipulating shared spaces and the elimination of the need for physical presence in the same place in order to perform activities (Ramirez, 1999).

Virtual communities appear as the result of a continuing practice in the 80s, or even before, when communicative technologies allow interconnecting a large number of users in a common space for exchanging messages. Communities such as UseNet, with millions of users, or Minitel in France, or Well in the USA (Reinghold, 1996), are well documented examples. The following technologies are prior to the development of the internet, starting with emails, and later on publicity, forums, websites, and so on until the most recent diaries or weblogs, wikis, and other more specialized Rodriguez, 2007).

Virtual communities are characterized because members feel part of a social group. There is a web of relationships among the members. There is a flow of exchange of contents that have value to the members and those relationships last in time, creating shared stories (Figallo, 1998). Besides, the members of a virtual community maintain some motivations to shape and feed it, such as (Hagel and Armstrong, 1997) their interests and objectives, the desire to share a story or establish social relationships, etc.

In a virtual learning community, either you share knowledge on a topic and gaining some more, or the community is specifically structured as a nucleus of learning developing activities and initiatives with this purpose. However, in a virtual learning community the exchange of knowledge and experiences and team work often happens simultaneously (Tirado, 2007).

Virtual learning communities establish a figurative abstraction that let us understand the present communication against long distance communication, through nets that are configured so a group of people establish a set of common objectives, for those who think participation is a key element when making decisions. Virtual learning communities will incorporate new commitments, new ways to perceive relationships and common aims towards the objective to reach, knowing the process is multidirectional (O. Mas, 2006).

In conclusion

Nowadays, men are multidimensional. He moves within objective, subjective and subjective realities, but one reality we are starting to notice more is virtual reality., that is, where he moves in a space (in this case cyberspace where there is no space or time, or where they rather exist in a different point of perception). This new space has a special influence that is constant. The idea of time not existing varies, that is, what gives a historic past if kept online or has not been disconnected or deleted, is a server and a sense of future. The activities of each individual may be or not linked to a real society where it belongs and identifies with the rest of the members to collaborate in the maintenance and continuity.

Cybernauts are not the only ones. Every user on cyberspace is reflected on space and time. Many of them form companies, to which adapting is a constant event. What sets a cybernaut apart from other human beings is the way they live their social lives, how they are part of virtual communities. That is cyberculture. That tendency to develop new ways of association in cyberspace act on the man who enters this new environment as a part of this new society in which everyone plays a part, individually or in masses, but with a global conscience. The past of the group and its social relationships that happen inside, allow the creation of affective and cooperative links that we do not see in a normal society. Cyberculture includes all these factors and therefore forces men to use this media to adapt themselves to the complexities of the world.

As we have seen, the definitions for virtual communities are abundant, but we can say that a virtual community is learned. It allows men to adapt to his/her virtual environment in cyberspace and it is different from what we see in the real world. It manifests in real or virtual institutions, ways of thinking and material objects.

A definition of virtual community we can conclude is, that it is a complex everything that includes knowledge, beliefs, arts, morals, laws, customs and all the dispositions and habits acquired by men as a member of a society in a mediated environment and/or the use of ICTs where tradition and civilization join to build it, but that its use implies different types and qualities of traditional behavior.

Another definition can be that a virtual community is what is in the middle of cyberspace and that men has built with the use of ICTs and where men can live a double life: natural habitat and the environment created by cyberspace. Where men or cybernaut, consciously or unconsciously, learned from his group and some others do it by a different process such as technical or social institutions because they are filling an existential void or because they feel as if they did not belong into a group and so they satisfy their needs of external behavioral manifestations.

It is barely necessary to establish a difference between the concept of culture and virtual community, or cyberculture, which serves as an instrument for the study of men and the general acceptance given to the terms "culture" and "grow", but it may seem strange that the concept of culture is applied to a plant or a recipe. Cyberculture is part of a new culture from this millennium, but it is not stray since a person of "culture" is capable of handling some aspects of our civilization that give prestige or statue with relative facility. The mastering of this aspects is a characteristic of the people that have the pleasure of learning.

A person that has read a little fragment of our culture, can move closer to those that have an enormous amount of technical knowledge, and so an engineer, a

doctor or a worker, the economy, religious rites, a simple story, etc. They all are part of the culture, but not of cyberculture. We can say that cyberculture is part or is included in culture and the fact that a person is part of a virtual community does not mean he or she are cultivated.

To understand the essential nature of the virtual communities, first we have to solve a series of questions or ideas that are subjected to different expressions:

1. A virtual community is universal and global as a human acquisition, but each even can be considered unique.
2. A virtual community is stable, but dynamic and it shows the continuous and constant change.
3. A virtual community is full but open and in a great deal determines the course of many cybernauts, but most of the time, it is part of our conscious thoughts.

Nowadays we can say that cyberculture is linked to the concept of virtual community in which communication, information and knowledge are part of this community that creates a new type of social relationship through interpersonal synchronization, creating a cyber-space connection through the distributed information by communitarian communication.

It is where human knowledge is shared through cyberspace with the use of technology and other new forms of communication around the world. The knowledge called information is transmitted by a graphic and physical representation of each idea that integrates art, language, and everything that can be perceived through the senses. It is where human interaction transforms information into active knowledge.

Society is in constant change and movement, and that is why cyberspace is the place where we have to develop a culture whose main objective is sharing knowledge or ideas for the common good.

As we can observe, in these days the concept of virtual communities is based generally in the use of ICTs which hooks us to a virtual system, in this case cyberspace and allows us to forget time and space and travel to a place where personal relationships change greatly in an opposite way because the people are not shy. When they enter this world, they feel as if nobody could see them but they can see their opinions.

The positive side to these virtual communities is that they help the elements of the community, Cybernauts, to share their spirit of cooperation and collaboration, as we can see in forums on the web.

There are some learning objects that are widely used today, such as blogs, forums, social networks, wikis, etc. Where millions of people share what they know.

Not everything is positive. Some of this same communities turn against their own elements as we see with bullying using videos, pictures, words, symbols, etc. That are posted on webpages. This is called cyberbullying. This is a cultural problem, not a problem from or of virtual communities. It affects communities in general and society when people try to blow some steam using the media not by attacking a person in specific, but the whole society.

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