

Trends in the social and interpersonal relations of young people and digital natives in the Web 2.0

Patricia Núñez-Gómez [[CV](#)] [pnunezgo@ccinf.ucm.es

María-Luisa García-Guardia [[CV](#)] [mluisagarcia@ccinf.ucm.es

Lourdes-Ainhoa Hermida-Ayala [[CV](#)] Student - Director of the iS+D Foundation for Advanced Social Research. Ph.D. student at the School of Information Sciences of the Complutense University of Madrid / ahermida@isdfundacion.org

Abstract: The development of the Web towards a Universal Digital Network entails a change in the behaviours, uses and competences of internet users. There are new forms to access, manage and design information and they are generating different behaviours in the management of such information and in social relations. Those who make greater use of such new resources and services are the so-called “digital natives”. The purpose of this research is to evaluate and analyse the socio-communicative behaviours and competences that young people and “digital natives” are developing in the Web. This phase of analysis is purely qualitative so the conclusions are only about trends. The results show that there are clear differences in the online behaviours of two age groups: the “digital natives” (14 to 17 year-olds) and the “digital immigrants” (18 to 35 year-olds).

Keywords: Social relations; web 2.0; network; digital tools; young people; digital natives.

Summary: 1. Introduction. 1.1. Theoretical framework. 1.2. Objectives. 1.3. Hypothesis. 2. Method. 2.1. Fieldwork. 3. Results. 3.1. Social relations of young people in the Web 2.0. 3.2. Conclusions. 4. References. 5. Notes.

Translation by **Cruz-Alberto Martínez-Arcos**, M.A. by the University of London

1. Introduction

The evolution of the network towards a Universal Digital Network (Sáez-Vacas, 2004) and the consolidation of the phenomenon known as Web 2.0 are modifying the behaviours, uses, and competences of internet users. This process is most pronounced

among the so-called “digital natives”, especially teens and young people. In this context, the systems of social collaboration facilitate the shared creation of information (creation and publication of still images and videos, weblogs and podcastings, shared creation of content in wikis, syndication of digital content, etc.), knowledge management (use and participation of search engines 2.0, social bookmarking, information customising systems, ranking systems, social directories, content geo-positioning systems, etc.), and social relations (active participation in networks and virtual communities, multiplayer environments, networked communication systems, etc.).

One of the pillars of the web are the services that allow formulas to create, modify, share, tag, organise, relate, and distribute open digital services and contents, both in relation to the content itself and the meta-information associated to it, which enables the shared management of knowledge in the web.

As a result, there are new forms to access, manage and design information which, from a socio-communicative perspective, may be generating and/or promoting different habits and behaviours, innovative uses, and specific and differential socio-communicative competences. It has been said that the media generate the social reality, but at this time the new media of the Universal Digital Network are also building this social reality with the productive contribution of the *Homo noosferensis* (Sáez-Vacas, 2004).

The theoretical references and the previous research on this field indicate that the “digital natives” (the digital generation) are those that make greater use of such resources and services, and leave their mark on the construction of the social reality of young people. Therefore, the object of the research is the assessment and analysis of the socio-communicative behaviours and competences that the “digital natives” are developing online, through the use of open digital services and contents, and how these behaviours and competences influence young people’s construction of social reality.

As Berger and Luckman (1991) and Searle (1997) have stressed, in general, the media build the social reality and respond to the worldview they transmit, to the way users perceive it, and to users’ experiences, of which the media is part, and which also reverts in the construction of social reality, so that there is a constant feedback effect. Lev Manovich (2005) considers that, in the digital age, the new media is creating a new language through images. As it happened with the traditional media, they are also building social realities, through the principles of numerical representation, modularity, automation, variability and transcoding. And according to the author, the new media do so in a very special way, by building new modes of representation of

social reality for and by users, and by using, among other things, the interface, whose end result is a “language of the cultural interfaces”.

Mark Tribe, founder of Rizome.org, recalls how Manovich finds the origins of the aesthetics, and who says aesthetics also says language, in painting, photography, film and television, and studies the digital image, hypermedia, video games, composition, animation, telepresence, and virtual universes, and highlights the route and the traces left by these media in the new media. In other words, Manovich highlights the extent to what the discourse provided by the new media is a memory of the discursive experience and its impact on the universes they generated. Theory of media encapsulation (Hughes, 1995) has an impact in the creation models of the new media and in how they generate their structures from the reformulation of those models.

However, the new media not only promise and favour, but also promote the exploration of new paths of experiences of realities that are on the verge of the represented experiences of the subjects. This author has studied how the vital direct and interrelated experiences are, on the one hand, memories of the culture and, on the other hand, new modes to interact with the digital objects and the other participating subjects, sharing not only interrelations but also collaborative and individual productions, through the communication tools (like email, forums, chat, and IRC). This creates a vital space that overcomes the limitations of time and space and is located in the experimentation line of interpersonal relations, and the new forms to create personal universes. This space activates the changing possibilities of the contents, services, relations, and experiences that take place in the Web, especially for teens and young people, and gets intertwined with other worlds that are on the web and are not fully controlled by the traditional social agents, but are self-managed by the users themselves.

Thus, internet users are feeding on the contents of the Web, using its communicative offers, managing information and communication, and shaping modes of knowledge appropriation. They construct their reality, their social reality.

The social reality is not the only thing that is being changed directly by the influence of the new media, among other elements. The way in which the new generations operate is also changing due in large part to the transformation exercised by the ICTs, especially the Internet, which enables simultaneous and deferred communication, abolishes space-time distances and enables free interaction between subjects with the most diverse socio-cultural, economic, and ethnic backgrounds, and with different ways of being, thinking and acting. This creates a new society that is not only an Information Society, but also a more interlinked society, according to the idea of James Martin (1980), who imagined a new society that amplifies its educational, economic, cultural, and labour possibilities.

This is the context examined here by the Socmedia research group the Complutense University of Madrid. Its members believe that young people are carrying out online activities that not only influence their behaviour within the web but also their interpersonal relations outside the web.

1.1. Theoretical framework

Behaviours, habits and competences of young people and teens in the Web:

We all own and use screens. This affirmation is confirmed with data provided by the field of sociology of consumption on the implementation and use of ICT. The consumption of the audiovisual and multimedia content in advanced contemporary societies affects a significant number of people, and is undergoing a significant transformation in quantitative (number and types of media) and qualitative (reception and emission modes) terms.

Consequently, the effects of the media and the Internet on the socialisation of young people have been studied for years. In any case, surveys on the behaviour of users (including the ones conducted by Spain's Centre of Sociological Research, aka CIS) have changed their structure to reflect the new configuration of the information society. Thus, people are no longer asked whether they have a TV at home, but instead about the existence of a second TV or other media and entertainment devices (DVD, computer, broadband Internet, etc.).

The available data on the provision of technological resources in households show a significant penetration in our country, Spain, with high levels of intensive and dependents users (RED.es). It is very important to obtain quantitative (linked to indicators) and qualitative data on the characteristics, conducts, motivations, and positive and negative consequences of ICT use. Sáez-Vacas (2004) defines the quantitative data through Metcalfe's Law (network quadratic utility), and the qualitative data through the Law of quadratic complexity. In other words, the author highlights how the exponential value of the Universal Digital Network expands positive components (cooperation, participation, democratization, etc.) as well as negative (intimacy intrusion, dependency, crime, etc.) components.

The analysis of the competences of teens and young people is immensely important at the moment. Studies carried out by the Scans Commission (The Secretaries Commission on Achieving Necessary Skills) of the U.S. Department of Labour, the European Council of Amsterdam (1997), UNECLAC, and UNESCO have all shown the importance of seizing the opportunities of the ICT to enhance, what they call, the "key competences". In the European case, the projects Eurydice and Tuning, among others, have created a map of those competences, which include, for example,

competence in personal autonomy and initiative, social and civic competence, competence in information treatment, and digital competence. The opportunities of the Web favour these competences and, in the case of the Open Digital Services and Contents, they encourage the competences related to learning and interrelations, among others. However, authors such as Roszak (2005) highlight the importance of considering the negative “hidden curriculum” of these media.

Configuration and construction of the Digital Generation or the “digital natives”

The term “digital native”, coined by Mark Prensky (2001, 2005), is now part of the collective imagination of our society, to refer to the sector of the population (essentially young people and teens) that has grown up in a digital technological framework (computers, Internet, mobile phones, MP3, etc.) and whose uses and competences in relation to these media is completely naturalised. We could say that the discrete and digital domain of technology has become “transparent” in favour of a holistic user experience.

Uniquely, as Rosnay (1996) indicates, in the Universal Digital Network the “digital natives” live at the same universal time (entropic) as well as in different *sybionomic* times, a “fractal temporal bubble” that configures the interrelation models of these internet users. And, as Jeroem Boschma (2007) points out, for contemporary teens the computer is not a technological machine but a social machine. The Einstein generation, as they called it, is characterised by their breaking of all boundaries: “anywhere, anytime, anyplace”. They have a great capacity for communication, they need to express what they think and feel and aspire to change the world, which will require the paradigm of the technological transformation and innovation.

Likewise, the theory of digitalisation-based regeneration and transformation (Manovich, 2005) helps us to explain that the processes of information conversion in discrete models is one of the main drivers of change and transformation, and to understand the extent to what the “digital natives” (digital generation or Einstein generation) optimise the possibilities of a discretised world to the maximum.

The theory of the audience stages (Tapscott, 1997) offers references to the phases of construction and definition of the audience in relation to the social penetration, uses and experiences of the user in these new media.

Models of construction, nature and characteristics of the Open Digital Services and Contents in the Universal Digital Network.

ICT enables the full and expansive use of the concept created by McLuhan (1964) to refer to the value of the media as extensions of the human capacities, and which other

authors in the field of the Universal Digital Network, like Echeverría (1999), have called “protesicidad” (literally prothesisity or prothesisness), which consists in widening people’s senses, calculation capacities, memory, and communication skills, which combined with the Web’s properties of potentiality, intangibility and ubiquity, pave the way towards powerful prostheses integrated in the bodies and in their artificial wrapping. In addition, Echeverría considers distancedness, representability, reticularity, mobility, instantaneousness, multisensoriality, interactivity, neurality, intellectivity, tightness, discontinuity, virtuality and feudality as significant features of the nature of this Universal Digital Network.

Furthermore, there are also the theories related to the web’s systems of social construction (especially those concerning the production of content and services through peer-to-peer and similar systems) and the development of models of Educational Digital Services and Contents, which are known by UNESCO (2002) as the Open Educational Resources (OER).

The technology itself determines the type of cultural product, its organisation, its emerging genres and its contents (Manovich, 2005: 93). Thus, the technological convergences have activated not only the web’s possibilities of action, but also new expressive convergences that are mediated by the agents as they act in different ways (García-García, 2006). The implementation of various theories, like Coase’s (1960) and Raymond’s Bazaar model (1998), to analyse the phenomenon of peer-to-peer production has facilitated the understanding of the basis of the production models of the existing Open Digital Services and Contents. And it is that, the Bazaar production model allocates more efficiently the human capital which is really captivated under subtle conditions of remuneration by indirect incentives from a very large, wide and dispersed set of talents. The power and ease of the networks do the rest, allowing the access and communication in this virtual *adhocracy* of cooperating nodes (Sáez-Vacas, 2004: 88).

Now, the construction of the texts and discourses in the Web occurs cooperatively. Users require texts and contents with a high level of quality that is characterised by reliability, reuse, sharing, cataloguing, recognition and utility (Gértrudix *et at.*, 2007). Users have appropriated the production means and, as Gértrudix *et at* (2007: 64) point out, the end user is part of the entire network of supplies. Now, we are all suppliers and customers at the same time: all for one and one for all. Almost everything turns into a network. Montgomery and Gottlieb-Robles (2007) agree that the “digital generation” participates increasingly more actively and is the creator of this new form of cultural construction, through the development of content, the design of personal websites and the launch of their own innovative networked enterprises. According to the Socmedia research group [1], teens and young people know how to take advantage of the opportunities that these media provide for their own construction.

García-García (2007) highlights that the potential of some contents, like video games, is activated through one of the possible actions taken by the gamer. Once a decision has been taken, the mode goes from potential to actual, but at the same time, proposes a new action either in relation to the gamer's previous participation or to another gamer's action. This is one form of being interactive and productive.

But the “digital natives” not only receive and produce digital content, but are also part of the network of people that oversees the management of information in the Web as well as the actions of internet users in the interrelations developed across different media. The folksonomic model of information organisation, management and labelling provided by the Web to users, reminds us to Negroponte (1995) who said, when wondering whether the nature of a medium can be reproduced in another, that *“the answer is to create computers, classify, select and manage multimedia contents for their own benefit; computers able to read newspapers and watch television for us, and able to act as editors when we request so”*. This is projected over the predictions that authors such as Spivack (2007) and Castells (2005) have granted to the semantic web.

1.2. Objectives

- To describe young people's use of open digital services and contents.
- To determine the way in which young people and digital natives are interacting with other people through the use of open digital services and contents.
- To identify the emerging models of social relations.
- To identify the behaviours and competences that young digital natives are developing in the Web 2.0.

1.3. Hypothesis

The initial hypothesis is that the way in which teens and young people use the web, through open digital services and contents in the Universal Digital Network, is changing their socio-communicative and interpersonal relations, in so far as they are open, active, global, immediate, and little controllable by other social agents (like family and educational and institutional agents).

2. Method

The universe of this research consists of male and female digital natives and digital immigrants between 14 and 35 years of age.

The parameters initially considered were those related to the object of study and the hypothesis:

Table 1. Definition of the parameters of study

PARAMETER	DEFINITION
Agents	People or groups of people with whom a subject communicates
Frequency	Repetition degree of the online communication
Mode	Way in which the communication is established between subjects: in terms of the physical presence or distance between agents
Use	Type of socio-communicative behaviour
Device	System through which subjects communicate with other people

The focus of this phase of the research was the social relations and behaviour of the digital natives in the web 2.0. For that reason, in addition to the agents, the rest of the parameters respond to this priority: frequency of communication/social relations, the way in which social relations are established, the device used, and the use made of the web 2.0.

The methodology used in this phase has been qualitative. Firstly, we conducted a literary review of the different aspects of the research object. Afterwards, we carried out focus groups sessions with teens and young people that were part of the universe of study. The sample was divided in three age groups: 14 to 17, which corresponds to the digital natives; 18 to 24, which corresponds to the so-called digital immigrants who are closest to the digital natives; and 25 to 35, which is the group of young people that is the further away from the digital natives.

The methodology consisted in the conduction of focus groups that allowed us to get closer to the social reality of young people through discourse analysis, which allowed us to penetrate into the inner layers of human thought and to see what is not perceptible to the naked eye. After the qualitative data have been extracted, one should examine their extension and representativeness. Therefore the research has different phases to exploit its potential and to make valid and reliable generalisations.

The development of the three focus groups is aimed at obtaining information from the interaction between participants around the subject of study: social relations produced through the use of new ICTs.

The discourse analysis is intended to identify the characteristics of the social relations that are established through the web 2.0. The selection of the focus groups participants

followed a typological and socio-structural representation, according to the purpose of the research and the contingencies of time.

Table 2. Script for focus groups

VARIABLES	CATEGORIES	QUESTIONS
Agents	Family Friends Mates Acquaintances Strangers	Communication mode with each of the agents Do they communicate with strangers?
Frequency of communication	Daily Weekly Monthly Annually	Frequency Reason of the frequency
Communication mode by agent	Virtually Non-virtually	Communication type with family and friends Communication type with acquaintances and strangers Communication type with mates and friends
Communication mode by frequency		How often do they use these tools to communicate?
Medium	New technologies: phone, Internet Directly or through other people	In what cases and with what people do they use these media?
	Device type	Type of technological devices: mobile phone, PDA, computer, etc.
Use	Reason for use	Information retrieval, sharing, or exchange Social relations Entertainment
Differences	Virtual and non-virtual use	Different communication Differences History of the virtual communication Order of use (if there are several new technologies) Experienced sensations

2.1. Fieldwork

Field work began in 2009 and the focus groups were conducted between January and February 2010. For the collection of the information we formed three focus groups of young people representing the three age sections. The total number of participants was 27.

Table 3. Information of the focus groups

FOCUS GROUPS	
Universe	Persons aged 14 to 35
Number of groups	3 in total for the following age groups: 14 to 17; 18 to 24; and 25 to 35
Field work dates	Group 1: 11 January 2010 Group 2: 5 February 2010 Group 3: 13 February 2010
Size of groups	1: 13 people (8 women and 5 men) 2: 14 people (9 men and 5 women) 3: 8 people (6 men and 2 women)
Selection of participants	Men and women from the Community of Madrid and aged 14 to 35 years
Place of execution	2 groups at the Foundation headquarters and 1 at the Rey Juan Carlos University

The only requisite for the selection of focus groups participants was that they had to belong to the age group needed in the universe of study. Without being a prerequisite, gender representation was also taken into consideration for the selection of participants, however gender equality was difficult to achieve in the 25-35 age group which was composed of 2 women and 6 men.

The size of the groups ranged from 8 to 14 participants. Since there were numerous variables of interest for the study, it was considered essential to create larger groups to ensure the dynamics and a large number of interventions. A minimum of two participants were taken into account for each variable value.

We avoided including participants who knew each other in the same group because the aim was to collect independent discourses that could be generated and contrasted at the time of the discussion. It was essential to try to establish the group's dynamics at the time of the discussion –not to observe an already established dynamics- and to orient it towards the collective memory. In addition, the moderator was given specific

instructions about the *modus operandi*, the performance protocol, as well as the attributes of high interest for the study, in which it was essential to establish the importance given by participants.

The data corresponds to a non-probabilistic sample of young people divided in different age sections. Therefore, the conclusions will refer only to this sample, and will not be used to make inferences about the population sectors the participants represent. In other words, the sample is not representative in statistical terms. What can be detected by this technique are the trends emerging in the new forms of social relations through the ICTs.

3. Results

The literature review confirmed that the focus groups would provide information more or less spontaneously as the variables under study define the social relations of any person. When asked to describe their social relations, participants immediately gave information about the type of people they communicate with, the frequency and the mode of those social relations, as well as the medium used to establish them. On the other hand, the “use” variable allowed us to know the range of possibilities found by people in the Web 2.0” and to know how they perceive their life in relation to the web.

Table 4. Study variables

STUDY VARIABLES
Agent: person or group of people with whom communication is established
Frequency: number of times ICTs are used during an interval of time
Mode: way in which social relations are established in terms of the presence, or lack thereof, of the agents involved
Device: system through which the communication with other people or the access to online content is established
Use: reason why ICTs are used
Place: space where ICTs are used
Socio-communicative competence: skill, aptitude or suitability to communicate or interact with other people or media
Perception: sensations related to social relations through ICTs
Digital content: any digital document that is accessible and exchangeable

3.1. Social relations of young people in the Web 2.0.

After establishing the differences across age groups we identified their main features and the general trends across variables.

A) Results by age group

-Group of 14 to 17 year-olds

Regarding the “agent” variable, the first social relation to which these participants referred to were classmates and friends. After some silence, they mentioned other agents such as family and strangers. This group pointed out that they do not usually maintain communication with their family through online media. Regarding the relations with strangers there are two groups: a minority who claims to interact with people they do not know in person; and a majority who made clear they do not talk to strangers.

The frequency of communications among the different agents is shown in the following table:

Table 5. Frequency of communication in the 14 to 17 age group

FREQUENCY OF COMMUNICATION	
Classmates	Daily or almost daily (many of them are friends)
Friends	Daily
Family	Direct family: every day (at home)
	Distant family: several times a month, or a year
Strangers	Do not speak with strangers: a very large part of the group say they never talk to strangers, but sometimes do add and talk to their friends’ friends.
	Speak and communicate to strangers but not very often.

Participants in this group said they frequently talk to acquaintances, mainly to friends and classmates, and very rarely to strangers.

Regarding the “communication mode” variable, participants in this group claimed to prefer face-to-face relations, although the number of hours in which they communicate through virtual media is very high. Participants in this group usually have a face-to-face communication with classmates, although occasionally they use telephones and computers to communicate (e.g. to exchange class-related information).

Although they do not see them every day, participants in this group communicate with friends daily via social networks like Tuenti, or telephone, which in this group is preferred exclusive by females.

Regarding the communication with the family, participants in this group claim not to use virtual media. Most participants in this group deny communicating with strangers, except in certain cases: in the social networks when strangers are their friends' friends, in online games where they play interactively with other people, and/or in online chats.

The use of new technologies in this group can be summarised in the following way: the totality of the group admits owning a phone since they were 8 years old, email since they were 10, in average, and an account in social networks since they were 10 or 12. They claim to use these devices constantly. In fact one of the participants said she never leaves her mobile phone alone. Participants in this group believe ICTs are needed primarily for parental control and secondly to maintain greater communication with friends and acquaintances.

The system through which they communicate with others varies depending on whether it is weekdays or weekends. In the first case they say that the communication with classmates and class-friends occurs during school hours and that once at home they use Tuenti and telephone (mainly landlines). In the case of family, the communication is mainly direct, while the distant communication (mobile phone) is used when it is necessary to communicate something short and specific (e.g. *"I'm going to be late or I need you to pick me up"*). During the weekends they maintain face-to-face communication and complement that type of communication with friends with social networks to make plans or talk about what they did.

-Group of 18 to 24 year-olds

Regarding the "agent" variable, the first mention is for classmates, followed by friends and family.

Participants in this group spontaneously claimed to communicate with their family mostly via phone and face-to-face. The mode by which they prefer to communicate is face-to-face, but the time they communicate via virtual media is very high and even greater than face-to-face communications.

Participants in this group claimed that they normally communicate face-to-face with their classmates, but occasionally use the telephone and the computer to communicate (e.g. to make plans and to exchange class-related information). They communicate

with friends through networks like Tuenti, or by phone, which is exclusively preferred by the female subgroup.

They claimed the reason why they use ICTs is because they are fast, immediate and offer greater possibilities (in terms of reach), but their use depends on the preferences of specific people for a virtual or face-to-face method. The face-to-face method is chosen for social relations with close friends and colleagues.

Table 6. Frequency of communication in the 18 to 24 age group

FREQUENCY OF COMMUNICATION	
Classmates	Daily or almost daily (many of them are friends)
Friends	Daily
Family	Direct family: every day (at home)
	Distant family: occasionally
Strangers	Do not tend to talk to strangers. Only do so in rare occasions or when they are introduced by known people
	They connect with them through interactive games or online chats

With regards to the medium, the social networks is currently their preferred platform to communicate with friends, classmates, but rarely to communicate with relatives and their “friends’ friends”. They claimed that they almost never use the social networks to talk to strangers.

-Group of 25 to 35 year-olds

The first agents mentioned by this group are co-workers and friends. Apart from friends, they increasingly talked about social communication with strangers, which was motivated by the exchange of information and common interests. Communication with the family occupies a third place in importance as the contact is reduced to once per week. The frequency of their communications is summarised in the following table:

Table 7. Frequency of communication in the 23 to 35 age group

FREQUENCY OF COMMUNICATION	
Workmates	Daily or almost daily, direct communication at work, and (according to participants) in rare occasions the communication is maintained outside the labour context.
Friends	Several times a week. In the case of friends that use social networks (mainly Facebook, or networks specialised in certain topics), email and telephone.
Family	Direct family: once a week or once a month, direct relation or through telephone
	Distant family: several times a year and normally direct.
Strangers	Frequently

In terms of communication with strangers, participants in this group expand the horizon of social relations when pursuing common interests and exchanging information. They continuously use forums and thematic chats. They even claimed to maintain greater social relations with strangers (which sometimes cease to be strangers) than with family and friends

They claim to prefer face-to-face relations, but the time they use ICTs is very high. Their ICT use is mainly related to work, since they spend many hours in front of the computer and that facilitates virtual communication, against face-to-face interactions, which are often reduced due to the little free time of participants.

With workmates, participants in this group usually have face-to-face communication, which is rarely complemented with web 2.0 communication. Although they do not see their friends every day, they communicate with them regularly by phone or email, and less frequently in person.

The type of use and the reasons for using ICTs is summarised in their ease and speed to communicate. Although we detected certain refusal to use the new technologies, participants in this group claim to use the ICTs continuously for work, entertainment and information. A large number of participants admit using the computer several hours a day to play online games.

The systems through which they mainly communicate with other people are email, social networks (Facebook) and specialised chats. However, they claim to prefer face-to-face communication and to dislike the kind of social relations young people

currently maintain, because they believe many young people have certain addiction to the new technologies. This theme came out spontaneously on numerous occasions throughout the conversation.

B) Results by variable of study

- Place

In relation to the place from which the groups mostly access the Web 2.0, the 14-17 and 18-24 age groups do so from school and home, while the 25-35 age group do so from the workplace.

- Socio-communicative competence

There were big differences in relation to this variable across the three groups: the group of 14 to 17 year-olds mentioned their ability to do many things at the same time and to increase their social relations; while the group of 18 to 24 year-olds talked about learning and strategy (in games) abilities; and finally, the group of 25 to 35 year-olds highlighted their business and technological competences.

- Perception

This is a very complex variable because the extracted categories talk about people's feelings when communicating through the new technologies. This can be summarised in two more extensive categories:

a) Positive group: formed by the 14-17 age group and the youngest members of the intermediate age group:

Positive feelings:

- Ease to establish social relations
- Protagonism
- Ease to express intimate thoughts
- Volume of information
- It makes life easier
- Globalisation
- New forms of social relations

Negative feelings:

- Lack of interest / strangers

b) Negative-nostalgic group: formed by the 25-35 age group and the older members of the intermediate group, despite being the group that uses ICTs the most.

Negative feelings:

- Social fear
- Mistrust
- Reliability of the information
- Excess
- Addiction
- It influences the personality
- Dependence
- Resistance to change
- Protagonism
- New forms of social relations

Positive feelings:

- Volume of information
- It makes life easier
- Globalisation

What the youngest participants find positive is usually considered negative by older participants and vice versa. The perception is directly related to the age of the group: the digital natives show the internalisation of the new model of social relations, while the digital immigrants maintain a nostalgic aptitude with regards to the traditional social relations.

Special mention deserves the perception of loss of privacy by the oldest participants, who consider that they are exposed to greater social visibility. In contrast, the youngest participants can manage what they consider intimate and public information at the same time and see the new forms of social visibility as more natural.

-Digital content

Younger participants focus their attention on the social networks, video websites (like Youtube), and online games. In contrast, participants in the 25-35 admitted to use the social networks but to a lesser extent, and claimed their ICT-use was focused on email and access to topics of interest and concrete and specific information related to their professional and recreational interests.

3.2. Conclusions

The results obtained at this stage indicate that there are totally different perceptions among the so-called “digital natives” and “digital immigrants”. Youngest participants consider that the social relations they maintain through the use of the new ICTs are very positive, and perceive some resistance to change from people who were not born with Internet. They insist on the parental control as proof of adults’ distrust towards the ICTs and claim to be able to control these technologies in a precise and adequate ways.

Meanwhile, the oldest participants, including those from the 18-24 and 25-35 age groups, offer a fateful vision and feel the need to control younger people who they consider to be unaware, irresponsible, and faced with too many possibilities for their “awkward” age.

From the clash of opinions we can draw two types of subjects: the integrated and the nostalgic. The integrated subjects are those in the 14-17 age group and the youngest members of the intermediate age group (18 to 24 year-olds), although they show certain mistrust towards the ICTs.

Both groups talked about control. The 14-17 age group talks about control towards the medium (as a competence) and sometimes as the parental control they claim to face. Meanwhile, the oldest group, which includes a large part of the intermediate age group, talks about the need to control the minors who use technologies as the natural medium of communication.

KEY TRENDS

Age is directly related to the reasons why people get connected to the Internet. The two main reasons given by participants are: older people are more interested in searching for information; while younger people give more importance to entertainment.

The changes produced by the new technologies in the social relations are clear for all the age groups, but the youngest participants perceive these changes in a clearer way.

There has been a change in the concept of agent, from the moment in which the “virtual stranger” acquires connotations that are different from the “traditional stranger”.

As people age they show an increased sense of vulnerability produced by changes in the referents that used to allow the separation between the private and public spheres.

ICT-mediated social relations are essential for 14 to 17 and 18 to 24 year-olds, as ICTs are the meeting point for their friends and peers. For participants in the 25-35 age group these types of social relations are second in importance but they are maintained very frequently. The research indicates that the frequency of the social relations has

been modified towards greater immediacy and that the social relation mode of each agent has boosted the ease and is more open and wide, according to all the groups, which see this as an advantage. However, there is some mistrust in the 25-35 age group, whose participants believe younger people should be restricted.

The place from which the Web 2.0 is mostly accessed is the school and the home for the groups of 14 to 17 year-olds and 18 to 24 year-olds. However, the main place for the 25-35 age group is the workplace.

The competences 14 to 17 year-old participants claim to have are related to the ability to do many things at once and to maintain a large number of social relations. In contrast, 18 to 24 year-olds speak of learning and strategies (in games); while the 25-35 age group mentions competences in business and technology.

The perception transmitted by the new ICT-mediated social relations is positive for the youngest half participants and negative for the oldest half of participants. The youngest half of participants focused their attention on the social networks, video websites (like Youtube) and games, while the oldest half admit using the social networks, but to a lesser extent, and claimed their use of ICT technologies is focused on email and access to topics of interest and specific information related to their professional and recreational interests.

Finally, the digital natives tend to the “naturalisation” of the new forms and contents of the social relations established through the Web 2.0.

These are the major changes that we believe have been produced in social relations with the use of ICTs.

- This article is part of the R&D project “La construcción de la realidad social en los jóvenes a través de los servicios y contenidos digitales abiertos” (The construction of social reality in young people through open digital services and contents). Reference number: CSO2008-1496/SOCI. Funding entity: Spain’s Ministry of Science and Research, through its General Sub-directorate of Research Projects.

4. References

Berger, Peter; Luckmann, Thomas (1991): *La construcción social de la realidad*.

Buenos Aires: Amorrortu

Boschma, Jeroen (2006): *Generación Einstein*. Bilbao: Gestión 2000

- Buckingham, David; Willett, Rebekah (eds.) (2006): *Digital generations: Children, Young People, and New Media*. New Jersey (USA): Erlbaum.
- Bustamante, Enrique (Coord.) (2007): *Cultura y comunicación para el siglo XXI. Diagnóstico y políticas públicas*. Tenerife: Cabildo Insular de Tenerife.
- Castells, Manuel (2001): *La galaxia Internet. Reflexiones sobre Internet, empresa y sociedad*. Barcelona: Plaza y Janés.
- Castells, Pablo (2005): “La web semántica”. In C. Bravo Santos and M. Redondo Duque, *Sistemas interactivos y colaborativos en la web* (pp. 195-212). Cuenca: Ediciones de la Universidad de Castilla-La Mancha.
- Cerezo, José Manuel (coord.) (2006): *La blogosfera hispana: pioneros de la cultura digital*. Madrid France Telecom Foundation.
- Coase, Ronald. “The problem of social cost”. *Journal of Law and Economist*, vol. 3 (October 1960) pp. 1-44. Retrieved on 25/03/2011 from:
<http://www.jstor.org/pss/724810>
- De-kerckhove, Derrick (1999): *Inteligencias en conexión. Hacia una sociedad de la web*. Barcelona: Gedisa.
- Dirección General de Educación y Cultura. Unidad Europea de Eurydice (2002): *Las competencias clave: un concepto en expansión dentro de la educación general obligatoria*. Madrid: MEC. Retrieved on 11/01/2008 from:
http://www.eurydice.org/ressources/eurydice/pdf/0_integral/032ES.pdf
- Domínguez, Mario; Sádaba, Igor (2005): “Transformaciones en las prácticas culturales de los jóvenes en España” in *Revista de Estudios de Juventud*, 70: 23-38.
- Echeverría, Javier (1999): *Los señores del aire: telépolis y el tercer entorno*. Barcelona: Destino.
- Edmunds, June; Turner, Brian (2002): *Generations, culture and society*. Buckingham: Open University Press.
- Facer, Keri; Furlong, John; Furlong, R. & Sutherland, R. (2003): *Screenplay: Children and computing in the home*. London: Routledge.
- Flichy, Patrice (2003): *Lo imaginario de Internet*. Madrid: Tecnos.
- Fumero, Antonio; Roca, Genís and Encinar, Jesús (2007): *Web 2.0*. Madrid: Fundación Orange.
- Gallego, Domingo (2002): “Globalización, TIC y ocio digital”, in Aguiar, M. V.; Farray, J. I.; and Brito, J. (coords.). *Cultura y educación en la sociedad de la información*. A Coruña: Netbiblo.

- García-García, Francisco “Videojuegos y virtualidad narrativa”, in *Red Digital*, nº 8 (2007): *Videojuegos: aplicaciones sociales y educativas*. ISSN 1697-8293 [http://www.icono14.net/revista/num8/index_num8.html]
- “Contenidos educativos digitales: construyendo la sociedad del conocimiento”, in *Red Digital*, nº 6 (2006): Contenidos multimedia educativos al servicio de la educación. ISSN 1696-0823 [<http://reddigital.cnice.mecd.es/6>]
- Gertrudix, Manuel; GÁLVEZ, M.C.; Álavarez, S.; Galisteo, A.; Gertrudix, Felipe (2007): “Acciones de diseño y desarrollo de objetos educativos digitales en el marco del programa Internet en el Aula”, in “Monográfico Contenidos educativos en abierto”, Revista RUSC of the Open University of Catalonia. [http://www.uoc.edu/rusc/4/1/dt/esp/gertrudix_alvarez_galisteo_galvez.html]
- Gordo- López, Ángel J. (2006): “De los chats al Messenger. Tecnologías de comunicación emocional”, in F. G. Selgas and C. Romero (Eds.). *El doble filo*. Madrid: Trotta.
- Hughes, Kevin (1995): *From the Webspaces to Cyberspace*. Available at: <http://www.eit.com> (March, 2011)
- Icono 14 Revista de Comunicación y Nuevas Tecnologías. [www.icono14.net/revista] (2007): nº 9: *Radio y TV al Servicio de la Sociedad* - (2007) nº 8: *Videojuegos: aplicaciones sociales y educativas*. - (2006) nº 7: *Educación y nuevos medios*.
- Joyanes, Luis (2004): “Las redes sociales: de la mensajería instantánea a los weblogs”. *Sociedad y utopía: R.CC. Sociales*, 24, pp. 93-122.
- Kress, Gunther (2005): *El alfabetismo en la era de los nuevos medios de comunicación*. Granada-Málaga: Aljibe.
- Lacasa, Pilar (2004): “Creation: A shared adventure”. *Mind, Culture and Activity*. 11 (1), pp. 82 -87
- Lorente, Santiago; Bernete, Francisco and Becerril (2004): *Jóvenes, relaciones familiares y tecnologías de la información y de la comunicación*. Madrid: Instituto de la Juventud.
- Lucas, Antonio (2006): *Sociología: una invitación al estudio de la realidad social*. Pamplona: Eunsa.
- Manovich, Lev (2005): *El lenguaje de los nuevos medios de comunicación*. Barcelona: Paidós.
- Mainer Blanco, Belén (2005): “Ciberjuego y sociabilidad: Relaciones y efectos en los usuarios de juegos online (Word of Warcraft)”, Revista Espéculo nº 31, School of Information Sciences, Complutense University of Madrid.

- Martin, James.; Ollero, Julio.; Ramos, M. Rosa (1980): *La Sociedad interconectada*. Madrid: Tecnos.
- Mcluhan, Marshall (1964): *Understanding Media: The Extensions of Man*. New York: New American Library
- Montgomery, Kathryn (2004): *Youth as E-Citizens*. Retrieved on 11/01/2008 from: <<http://www.centerforsocialmedia.org/ecitizens/index.htm>>
- Montgomery, Kathryn (2007): *Generation Digital: Politics, Commerce, and Childhood in the Age of the Internet*. Cambridge, MA: MIT Press
- Negroponte, Nicholas (1995): *El mundo digital*. Barcelona: Ediciones. pp. 16
- Nie, Norman H.; Erbring, Lutz (2000) *Internet and Society. A preliminary report*. Stanford Institute.
- O'Reilly, Tim (23/02/2006): Fórum Fundación Telefónica. Retrieved on 26/10/2007 from *Qué es la web 2.0. Patrones de diseño y modelos del negocio para la siguiente generación de software*:
<http://sociedaddelainformacion.telefonica.es/jsp/articulos/detalle.jsp?elem=2146>
- Piscitelli, Alejandro (2005): *Internet, la imprenta del siglo XXI*. Gedisa.
- Prensky, Marc (2001): “Digital Natives, Digital Immigrants”, from *On the Horizon*. NCB University Press, Nol. 9, nº 5.
- Prensky, Marc (2005): “Listen to the natives”, from educational leadership”. ASCD. Retrieved on 10/01/2008 from:
http://www.ascd.org/cms/objectlib/ascdframeset/index.cfm?publication=http://www.ascd.org/authors/ed_lead/el200512_prensky.html
- Raymond, Eric (1998): *La Catedral y el bazar*. Retrieved on 20/03/2011.
<http://biblioweb.sindominio.net/telematica/catedral.html>
- Rheingold, Howard (1999): *La comunidad virtual: una sociedad sin fronteras*. Barcelona: Gedisa.
- Revuelta D., Francisco Ignacio (2004): “El poder educativo de los juegos on-line y de los videojuegos, un nuevo reto para la psicopedagogía en la sociedad de la información”, *Revista Teoría* Vol. 13, pp. 97-102.
- Rosnay, Joël (1996): *El hombre simbiótico. Miradas sobre el tercer milenio*. Madrid Editorial: Cátedra
- Roszak, Theodore (2005): *El culto a la información. Un tratado sobre alta tecnología, inteligencia artificial y el verdadero arte de pensar*. Barcelona. Editorial: Gedisa
- Sáez -Vacas, Fernando (2004): *Más allá de internet: la Red Universal Digital*. Madrid: Editorial Centro de Estudios Ramón Areces.

- Searle, John R. (1997): *La construcción social de la realidad*. Barcelona: Paidós.
- Scolari, Carlos (2004): *Hacer clic: Hacia una sociosemiótica de las interacciones digitales*. Barcelona: Gedisa.
- Spivack, Nova (2007): *Radar Networks*. Retrieved on 26/10/2007 from:
<http://www.radarnetworks.com/>
- Tapscott, Don (1998): *Growing up digital: The rise of the net generation*. New York: McGraw-Hill.
- Trejo, Raúl (2006): *Viviendo en el Aleph. La sociedad de la información y sus laberintos*. Barcelona: Gedisa.
- Wolton, Dominique (2000): *Internet ¿y después?* Barcelona: Gedisa.
- (2000): *Sobrevivir a Internet: conversaciones con Olivier Jay*. Barcelona: Gedisa.

5. Notes

1. Website of Socmedia research group: <http://www.gruposocmedia.es/>

HOW TO CITE THIS ARTICLE IN BIBLIOGRAPHIES / REFERENCES:

Núñez-Gómez, P.; García-Guardia, M.-L. and Hermida-Ayala, L.-A. (2012): "Trends in the social and interpersonal relations of young people and digital natives in the Web 2.0", *Revista Latina de Comunicación Social*, 67, pages 179 to 201. La Laguna (Tenerife, Canary Islands): La Laguna University, retrieved on ___th of ____ of 2_____, from
DOI: [10.4185/RLCS-067-952-179-201](https://doi.org/10.4185/RLCS-067-952-179-201)

Article received on 10 February 2012. Submitted to pre-review on 13 February. Sent to reviewers on February 17. Accepted on 29 February 2012. Galley proofs made available to the authors on 7 March 2012. Approved by authors on 9 March 2012. Published on 12 March 2012.

Note: the DOI number is part of the bibliographic references and it must be cited if you cited this article.
