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Techno Society: The role of ICT in the social relationships

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Abstract

Introduction: Wellman, in his model of “networked individualism”, describes how, since the industrial revolution, the growth of public transport and telecommunications systems have allowed a change in the nature of social relationships. In this context, social networks are presented as three distinct models: with the same nature of personal relationships; as a complement to direct communication; or with differentiating characteristics. **Methodology:** The objective of this paper is to analyze the extent to which communication through ICT (Internet and mobile telephony) influences the type and intensity of direct personal relationships between young people today. For this purpose, the questionnaire was used as an instrument for collecting information with a sample of 430 first-year university students. **Results and conclusions:** The results show that young people maintain stable networks in their social relationships and use ICT to increase the frequency and intensity of their interactions with their inner circle (friends, family and classmates). Therefore, social networks act as a complement to direct personal relationships.

Keywords

ICT. Networked Individualism; Computer Based Communication; Social Media.

Contents

1. Introduction. 2. The role of ICT in personal relationships. 3. Objectives. 4. Methodology. 4.1. Tools. 4.2. Sample. 5. Results Analysis. 6. Discussion and conclusions. 7. Bibliography. 8. Institutional affiliation of authors.

Traslate by **Julie Echeverria Way**,
Trading Traducciones

1. Introduction. The context of networked individualism

Mobile communication, due to its ubiquity, accessibility and adaptability, is affecting all aspects of life. Its diffusion has raised a whole series of concerns, ranging from anxiety over the fast pace of life, questions relating to public conduct, the breaking down of boundaries between public and private matters and between work and personal life, right up to the health implications and risks of using wireless technology (Castells, 2007: 185).

Among these concerns, particular mention should be made of how it is linked to the loss of personal relationships, as already mentioned by critical writers in the nineties. These investigators associated Internet with loneliness and depression (Kroker & Weinstein, 1994; Stoll, 1995; Turkle, 1995; Kraut et al. 1998; McKenna y Bargh, 1998; Rierdan, 1999; Shapiro, 1999, Nie y Erbring, 2000) and with lower interdependence, commitment and permanence (Parks y Roberts, 1998). At present, a wide range of authors are still relating the use of Internet with a crisis of values and social integration: *“Its members get the satisfaction of feeling integrated, however integration in one of thousands of social micro-groups says little or nothing about their integration in society as a whole; and, in many cases, it is a form of segregation”* (Bernete, 2010: 113).

We do not seek to take the opposite stance to these authors, who have unquestionably helped to enrich the analysis of the effects of Internet, but to put these issues in the specific social reality and to analyze the growth of ICT not as a cause but as a consequence of social transformations, in an environment with new, geographically dispersed interpersonal interactions, with less time for the development of stable relationships and with fewer possibilities of maintaining the traditional models of friendship and family.

This changing context is creating a demand for new communication media that make it possible to improve the possibilities of interaction, with asynchronous models and over long distances. A demand that started decades before the advent of Internet.

These new social needs are structured around the *networked individualism* model which Wellman conceptualizes as the deterritorialization of communication, whereby sociability has gradually abandoned public and semi-public spaces, to increasingly withdraw into the intimacy of the home, and finally placing the individual himself in a central position (Wellman et al., 2003).

This author describes how the industrial revolution, the growth in public transport and the telecommunication systems have permitted a change in the nature of social relationships. In this way, computer based communication (CMC) represents the consequence of these changes, not the cause as argued by critical writers.

The *networked individualism* model offers at least three important characteristics (Wellman y Boase, 2006):

Relationships are both local and at a distance. Unlike the small town communities of pre-industrial society, relationships in modern societies can be maintained even over great distances.

Wellman originally argued this point in an article published in which he emphasized how the majority of the relationships maintained in an urban area of Toronto were with people living outside the neighborhood. This study found evidence that community relationships were not located in a specific geographical place, instead the city's inhabitants maintained their personal communities by travelling to make in-person visits and by contact by phone. Although it is true that neighborly relationships still exist in the neighborhood, these only cover a relatively small part of a person's total social network.

Personal networks tend to be sparsely knit, although they do include more densely knit groups. Wellman indicates that current relationships are not based on a specific group of individuals maintaining densely knit relationships. Instead, many relationships are with many small groups or with a multiplicity of individuals. The majority of its members either do not know each other at all, or only partially know each other through a specific area of their lives (affinities, professional interests, hobbies, etc.)

In this respect, each individual has his/her own personal community, given the fact that it is rare for two people to have exactly the same set of relationships. Even among married couples, husbands and wives will tend to know different groups of people, either at their workplaces or in other areas of their lives.

Relationships are more easily formed and are also more easily abandoned. Many relationships are transitory. The high divorce rate in industrialized countries indicates that, even the most stable relationships, which the couple vowed to maintain throughout their lives, often fall apart. Individuals often create different relationships throughout their lives, which disappear as easily as they appear.

At present, networked individualism can be extended to include new factors, such as:

Firstly, there are increasingly more relationships between people from different social backgrounds. Simmel (1903) and Coser (1975) all claim that the interaction of people from different social classes has become a fundamental part of life in contemporary society, and this is particularly true for the inhabitants of urban areas and for those with a high socio-economic status. In order to adjust to the diversity of interactions, people have developed a complex set of roles that they use in their daily lives, switching from one to the other according to the type of interaction.

Secondly, many of these relationships tend to be weak, in the sense that they tend to lack emotional intimacy and to be temporary in nature. In this way, the switch between the different roles and social networks provides members with greater access to new ideas and information (Granovetter, 1973).

Interactions become weaker and more volatile in the setting of a liquid society (Bauman, 2005b) in which most people are not so limited by time and space.

2. The role of ICT in personal relationships

In general, there are three approaches with regard to the link between virtual relationships and face-to-face social relationships (Ángel and Alzate, 2015):

1) Virtual social relationships are of the same nature as face-to-face social relationships.

To support this idea, a number of studies (González y Hernández, 2008: 17; Herrero, Meneses, Valiente and Rodríguez, 2004: 456), indicate that virtual social relationships are characterized by having a participation and involvement that is similar to that occurring in face-to-face social relationships. Villena & Molina (2011: 170) add that "adolescents consider that they behave in a similar way, whether forming relationships through virtual social networks or through in-person contact, given the fact that, with both types of relationship, they experience affectionate and emotional interest". Finally, López (2014: 3) points out that "the virtual sociability of young people in the age range of secondary and high school students, is centered on interactions with people who are personally known to them".

2) Virtual social relationships are complementary to in-person relationships.

Solano, González & López, (2013: 24) expand on this approach by pointing out that "young people use the Internet, and specifically the communication tools to complement in-person communication, and their network of face-to-face contacts largely matches their network of virtual contacts".

The study "Connected Lives North (The Chappleau Study)" (Behrens, Paul and Wellman, 2007), shows that when Internet becomes "normalized" in their personal lives:

-Its use acts as a complement to social interaction and to social engagement alike. Internet users enjoy greater in-person contact than non-users.

-Moderate users of Internet are more likely to belong to an NGO. Internet acts as a catalyst for engagement, facilitating the scheduling of face-to-face social activities.

In the study "Small Town in the Internet Society: Chappleau Is No Longer an Island" (Collins and Wellman, 2010) the findings substantiated that CMC facilitates communication with friends and relatives, both locally and at a distance.

The essay "Immanent Internet Redux" (Hogan and Wellman, 2011), shows how the trend in Internet is not to draw us away from everyday life but quite the opposite, tending towards greater engagement in social affairs. Over the last few years, this trend has intensified with the diffusion of social networking sites based on real identities, with a high level of mobilization of political and altruistic groups.

In the report on "Social Connectivity in America: Changes in Adult Friendship Network Size from 2002 to 2007" (Wang and Wellman, 2010), the authors show how the results of national surveys show that the number of friendships continues to be very high between American adults aged between 25 and 74 years and has increased between 2002 and 2007. This trend is similar between all Americans,

regardless of whether or not they are connected to the Internet. Heavy users are particularly active, as they have friends both inside and outside the network.

Similar results are obtained for studies on mobile telephony, which also shows a greater association with family relationships, as a continuation of daily interactions. Thus, Castells describes this process and its role in family communication: "as contemporary families often exist as micro-distributive networks across multiple sites with translocal and sometimes transnational reach, mobile technologies have been widely adopted in the family setting. It should be emphasized that the demand for mobile communications has long existed, as family members always want to stay in touch and adjust their activities to ensure the functioning of the family unit. Thus, while the new technologies bring new means of coordination and of family support, they are appropriate in a way that strengthens existing family relationships..." (Castells, 2007: 142-143).

The mobile phone is used, above all, to chat with friends, to get in contact with relatives and friends, and to communicate with other acquaintances. One of the basic factors of the socializing role of mobile technology is its permanent and ubiquitous connectivity, allowing users to get in touch at anytime and anywhere. Ito affirms that, in the case of Japan, this type of connectivity through the *keitai* (mobile phone) is different from that achieved through the Internet because it is a "*seeping membrane between the real and virtual, here and elsewhere, rather than a portal of high fidelity connectivity that demands full and sustained engagement.*" (Ito et al., 2005).

The habitual use of mobile phones confirms what Matsuda terms the "*full-time intimate community*" (Ito, 2004: 11). According to a survey conducted in Japan, those who use the mobile Internet most frequently also spend more time physically with friends; from this it can be deduced that "*the mobile Internet serves distinctly different social functions than the PC Internet*" (Ishii, 2004: 57). In general, mobile phone users in Japan are more sociable than non-users (Hashimoto et. al, 2000) and the use of e-mail via the mobile phone enhances sociability among university students (Tsuji and Mikami, 2001).

However, although the increased communication facilitated by the mobile phone may strengthen intimate relations (often ritualistic greetings and repetitive expressions of affection), on other occasions, the intensive use may lead to the weakening of communal ties beyond the most intimate group of friends (Ito, 2004: 10-11). Habuchi describes this phenomenon as "tele-cocooning", implying the production of social identities in small, isolated social groups through mobile communications (Ito, 2004: 11).

This functional differentiation between social networks and the mobile phone can be seen in an investigation conducted in the Autonomous Community of La Rioja - Spain (Sabater, 2014) between young people aged from 14 - 20 years, determining that:

1. Social networking sites and text messages (both SMS and e-mail) help to maintain and strengthen direct personal networks. Only 9% have contact with strangers or with Internet acquaintances on their social network. Furthermore, priority communications are directed at arranging personal meetings and the sharing of day-to-day activities.
2. Distinct communications networks are maintained, depending on the means and the language used:

- Whilst in the most popular social network (generally Tuentí) all young people have personal friends, only 37% have an adult family member among their contacts. Therefore, social networks help maintain contacts among peer groups rather than the family environment.

- However, all young people have the mobile phone numbers of their parents and other family members in their agenda. The contact frequency with mothers is greater than 80% - which increases to 90% for girls aged 14-15 - while this drops to 67% in the case of fathers and, for relatives of the same age (brothers, sisters and cousins) it is over 58%. The mobile phone represents a "full-time intimate community" that helps maintain and strengthen social and family bonds.

Family communication is based on daily matters (errands, news) and is basically made through mobile phone conversations, while communication with friends tends to be more linked to arranging meetings (more than 90% of young people use their mobile to arrange to meet up), sharing their activities and with expressions of affection (particularly with couples and with the closest friends). Communications take many different forms, based on a greater variety of languages (oral, written, audiovisual).

Along these lines, Ángel and Alzate (2015) point out that, at a statistical level, there are no significant trends that reveal negative impacts of social networking. However, qualitative data indicate the existence of positive aspects in family relations, such as greater communication with the extended family (García 2009: 36) and the peace of mind of parents, because their children are at home; and negative aspects such as less communication and shared time with the close family, failure to comply with rules (homework, domestic chores, unauthorized use of the social networks) and misunderstandings.

With regard to social relationships, the VSNs (virtual social networks) are considered to be an extension of face-to-face social relationships, and it thus follows that most contacts are in some way friendship-related; likewise, the groups to which they belong are related to school, study, neighborhood, tastes and preferences. With regard to the positive aspects, recognition is given to the communication potentiality of the VSNs, which make it possible to form friendships, to keep up-to-date with friends' activities, and to create links around topics of common interest. With regard to the negative aspects and potential conflicts, factors are identified such as: difficulties communicating with friends, fewer in-person social activities, invasion of privacy, aggressiveness and the encouragement of rivalries, and the generation of conflicts between couples.

3) Virtual social relationships offer a number of differences in relation to in-person social relationships.

In this respect, for virtual scenarios, Bauman (2005a: 13) proposes the term "connections" instead of relations, which is more fleeting and temporary in nature.

In their article "The networked household", Kennedy and Wellman (2008) argue that individuals, rather than family solidarities, have become the primary unit of household connectivity. The interviews and surveys conducted in 2004-2005 in East York (Toronto, Canada) show that households remain connected, but as networks rather than solidarity groups. Networked individuals bridge their relationships and connect with each other inside and outside the home. ICTs have allowed household members the ability to go their own separate ways while remaining densely connected by the new and old means of communication – by mobile phone, email and instant messaging, as well as by traditional

landlines. In such ways, rather than pulling families apart, ICTs often facilitate communication, relationships and functional integration.

Christakis (2010 cit. in Oliva, 2012: 6) asserts that, in virtual social networks, relations "tend to be cumulative, given the fact that, in the virtual world, people tend to add connections and not to cut them". Studies centered on social networks show how the time spent by adolescents on the network, can detract from communication and affection in the close family environment (Echeburúa and De Corral, 2010: 4).

3. Objectives

The investigation aims to explore the role of virtual relations, to determine whether they share the same characteristics as personal relationships, whether they are complementary to these relationships by broadening the contacts with the closest circle, or whether they are of a different nature, such as more fleeting connections that are against the continuity of direct communication.

The aim is to determine whether virtual relationships represent a continuity of personal relationships of a similar nature, extending and intensifying the density of contacts with people who are known, or whether they are new communication channels to establish new relationships or to create more sporadic forms of communication that lessen direct communication.

4. Methodology

4.1. Tools

For this investigation, we used the questionnaire as a data collection instrument, considering it to be an appropriate strategy in order to quickly and accurately obtain data for the specific purpose of the study. The questionnaire was designed by Haya Ajjan, Elon (University, USA) ; Richard Hartshorne, University of Central Florida, (USA) ; Yingxia Cao, University of La Verne, (USA) and Raul Santiago, Dept. of Educational Sciences - University of La Rioja, (Spain) and which has been validated and used in investigations of a similar nature (Time Flies When you're on Social Networks: Cognitive Absorption and University Students' Academic Performance (Ajjan, H., Hartshorne, R., Cao, Y. & Santiago, R. (2013). Time Flies When you're on Social Networks: Cognitive Absorption and University Students' Academic Performance. In R. McBride & M. Searson (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2013* (pp. 1988-1989). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

The questionnaire is organized into five sections:

1. "Use of Social Networks", this section analyses the type of social network(s) used, the reasons for using the network, in addition to the commencement and the amount of time dedicated in hours / day.
2. "Analyzing the impact of the use of social networks I", in which there are questions on emotional perception with regard to utilization, the consequences of use, not just from the young person's point of view but also from a social and family perspective.
3. "Analyzing the impact of the use of social networks II", this section specifically analyses the respondent's perception of the use of social networks in relation to his/her social activity

4. "Analyzing the impact of the use of social networks III", the usefulness and improvement of relationships.

5. General information, in this final section the respondent is requested to provide general information on age, filiation etc.

4.2. Sample

A total of 617 persons started the survey, but it was completed by 430, representing a response rate of almost 70%. This 30% drop is attributed to the excessive duration of the survey. Almost 80% of the respondents completing the survey were first-year university students. 65% of respondents were in an age range of between 18 to 35 years. It should come as no surprise that there are first-year students aged up to 35 years, given the fact that a large number of respondents were from distance learning universities. 96% of respondents were Spanish.

The survey was conducted throughout 2012.

5. Information analysis

Personal sociability is highly rated amongst the younger population. The importance of social relationships is valued by a large majority of young people: 90.5% consider that it's a good idea to maintain good relations and 88.3% that it's a good idea to maintain friendly relations with their peers and classmates. More than half (62.8%) like getting to know new people and 53.6% usually speak in the presence of other people.

Table No. 1. Rate your level of agreement / disagreement with the following statements on your sociability.

Response options	Strongly disagree	Disagree	In-between	Agree	Strongly agree
I think that it's a good idea to maintain good relations with my peers and classmates	0.24%	0.00%	9.29%	35.48%	55.00%
I think that it's a good idea to maintain friendly relations with my peers and classmates.	0.00%	0.48%	11.22%	38.42%	49.88%
I love meeting new people	1.44%	4.56%	31.18%	35.49%	27.34%
I don't usually talk in the presence of other people	22.25%	31.34%	31.82%	11.24%	3.35%

Source: compiled by author

Personal interaction through the social networks is a basic aspect for young people, as they seek to make new contacts and to maintain present contacts in their social environment:

In the comparison of the search for friends, it can be seen how the percentage using the social networks to find old friends (35.8%) is significantly higher than those seeking new friends (10.4%) and those using the network to hook-up (1.85%)

Along these lines, 66.7% highly values the possibility of keeping in contact with family and friends, which becomes the main reason for use, and 47.2% for keeping in touch with classmates. It can be seen how virtual relationships are an extension of personal relationships for a significant percentage of young people.

Table No. 2. Aims in the use of social networks Finding and maintaining contacts.

Response options	Very rarely	Rarely	In-between	Fairly frequently	Very frequently
Do you search for old friends?	15.46%	18.40%	30.33%	24.27%	11.55%
Do you search for new friends?	50.80%	20.32%	18.53%	7.77%	2.59%
Do you search for "hook ups"	84.60%	11.29%	2.26%	1.64%	0.21%
Do you keep in touch with your family or friends?	5.39%	6.99%	20.96%	31.14%	35.53%
Do you keep in touch with your classmates?	12.40%	16.00%	24.40%	25.00%	22.20%
Do you keep in touch with your teacher / work on the contents of the course?	44.06%	19.72%	18.91%	11.27%	6.04%

Source: compiled by author

In the opinion of the majority of the young people, virtual relationships do not replace personal relationships: only 3.7% stated that they had developed stronger virtual relationships than those in real life and to feel greater satisfaction and happiness with virtual contacts. All the young people stated that they had not lost touch with the people around them, due to the use of social networks, while 99.3% considered that no social commitments had been lost for this reason. Although 3.1% stated that their environment (family and friends) complained that they spent too much time social networking and 9.4% preferred to use the networks when feeling lonely.

It is true that a significant segment of young people (13%) highlighted the functional aspect of the social networks in strengthening personal relationships and making them more attractive, enjoyable and exciting (12.1%). However, the fact that 62.1% stated that the networks are essential for staying

in touch with friends and family, reveals that virtual interactions are frequently an extension or enlargement of real-life interactions.

Table No. 3. Rate your level of agreement / disagreement with the following statements on the quality of your virtual relationships and their influence on your personal relationships

Response options	Strongly disagree	Disagree	In-between	Agree	Strongly agree
I've developed stronger virtual relationships than real life relations	78.90%	10.77%	6.59%	2.86%	0.88%
I lose part of my social engagements due to my use of the social networks	89.96%	8.30%	1.09%	0.66%	0.00%
I feel happier and more satisfied with my virtual contacts	68.20%	11.18%	16.89%	2.85%	0.88%
The contacts made in social networks have made me lose touch with the people around me	93.19%	6.59%	0.22%	0.00%	0.00%
My family and friends complain that I spend too much time on the social networks	77.90%	12.47%	6.56%	2.19%	0.88%
I prefer to use the social networks when I'm feeling lonely	59.21%	16.67%	14.69%	6.36%	3.07%
Social networks allow me to establish strong relationships with other people	23.10%	30.71%	33.17%	10.57%	2.46%
Social networks offer me the possibility of maintaining attractive, enjoyable and exciting relationships	27.23%	27.97%	32.67%	10.40%	1.73%
Social networks allow me to stay in touch with my family and friends	2.96%	7.14%	27.83%	35.47%	26.60%

Source: compiled by author

Interaction in social networks has a moderate rating, given the fact that most respondents are either indifferent or in disagreement with the questions that interaction is personal, close, warm and emotional. It is possible to assert that most users do not feel a great deal of emotion and affection for network relationships.

Table No. 4. Rate your level of agreement / disagreement with the following statements on the type of interaction on the social network

Response options	Strongly disagree	Disagree	In-between	Agree	Strongly agree
In a social network, there is a personal interaction with other users	9.55%	21.75%	43.77%	18.83%	6.10%
In a social network, there is a warm interaction with other users	18.09%	30.59%	39.10%	11.17%	1.06%
In a social network, there is a close interaction with other users	16.40%	30.42%	38.36%	13.76%	1.06%
In a social network, there is an emotional interaction with other users	20.16%	29.57%	41.40%	7.80%	1.08%

Source: compiled by author

6. Discussion and Conclusions

The theoretical starting point (Wellman's networked individualism) considers the general changes in social relationships within the social context, in which CMC appears as a consequence of the changes, not as a cause.

This author describes contemporary relationships as physically distant, sparsely knit, transitory, socially diverse and weak. Internet is geared to maintaining social ties through factors such as its capacity to communicate with one or more individuals, the ease with which relationships can be abandoned, the arrangement of personal meetings and to the fact that less cognitive effort is required to adopt the appropriate role in each particular situation.

However, at the other end of the spectrum, it may have adverse effects on social integration due to its difficulty to incorporate feelings and emotions, the possibility of becoming cocooned in one's own private world, and because it centers the communication possibilities on the individual.

Based on the findings of the study conducted, the following trends can be observed:

- 1) The importance of social relationships is valued by the large majority of young people.
- 2) Personal interaction through the social networks is a key aspect for young people seeking new contacts and maintaining contacts in their social environment, given the fact that the main purpose for using the social networks is to keep in contact with the family, friends and classmates.
- 3) In the opinion of the majority of the young people, virtual relationships do not replace personal relationships, given the fact that they all stated that the use of social networks has not meant losing touch with the people around them.
- 4) In the opinion of the majority of users, social networks do not carry a high emotional charge.
- 5) Virtual interactions are frequently an extension or enlargement of real-life interactions with friends and family.

We can conclude that social networks are not of the same nature as personal networks and cannot replace them, given the fact that personal networks are the origin of relationships of trust, affection and friendship. Social networks play a complementary role, serving to strengthen already existing personal relationships and/or as a facilitator of past relationships resumed by an individual through this medium. This is evident in the fact that people continue to maintain face-to-face relationships which they experience as more associated with affection and emotional charge. Networks have a positive role within this framework, serving to intensify the ties with close friends.

In general, scientific investigations are based on the model of a networked individual, however there is a need to broaden the studies in order to analyze the nature of the relationships formed through the ICTs, the different roles of each medium and the psychological effects of networked individualism. It is considered that broader approaches should be taken, in order to analyze negative aspects such as over-stimulation and isolation, together with positive factors such as cognitive flexibility, opening up to new cultures and relationships and increased tolerance.

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