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Belonging to a community: the mediation of belonging

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Abstract

This paper introduces the concept of belonging and discusses it in the context of online social networking experience and community experience considering social capital and user's activities as nuclear concepts to understand collective actions and social relationships mediated by social media. The paper presents an empirical approach based on the study of two local communities and analyses whether interactive social technologies promote greater social involvement and higher production of social capital and participation, that results in a greater sense of belonging within communities. The results indicate a positive relationship between the use of social media and the increase of social capital and sense of belonging. Our work discusses the role and influence of social media in communitarian practices and the relevance social capital theory has as an outcome of media technologies use that result in a greater sense of belonging to a community.

Keywords: social capital, sense of belonging, social networks, community

1. STATE OF THE ART

1.1. Introduction

This paper presents the findings of a research project conducted with two different communities located in Portugal, introducing the concept of social capital as a valuable concept to understand the contemporary experience of internet use and to explain the relevance and consequences of the use of online social technologies in the social dynamics of communities. Contemporary debates on the technological landscape (Rheingold, 1993; Dutta-Bergamn, 2005; Blanchard, 2007) affirm that the modifications that our social and cultural contexts are undergoing have no comparison with other patterns of change that occur in the past. Some refer to a digital revolution far from being over, bringing to the center of analysis the emergence of the internet as a helpful contemporary artifact, along with some other technological innovations, that are shaping society, partly transforming most forms of social organization within it.

It is often mentioned that technology, and in particular the internet, is playing an increasingly relevant role in the information exchange and production process, besides also actively contributing to increase the levels of social interaction and participation in communitarian live. Our study emerges from this socio-

cultural background and deals with the study of communities and their related online experience. The framework we suggest puts at its core the activities community members perform via different social technologies and the transformations their relationships and their communities undergo on the grounds of the introduction of these social technologies. The problem addressed concerns the way new forms of social and interpersonal interaction happening on the internet are reshaping our traditional conception of community and producing original social configurations that mix both online and offline forms of communication. The hypothesis put forward proposes that this context results from the new interactions the internet allows users to engage in, possibly boosting the levels of social capital shared within a community, since it offers the opportunity of keeping in touch and maintaining communication beyond the traditional methods. Our study explores the relation between online technology and social relationships introducing the concept of social capital as a way to examine the contemporary experience of internet use and to understand the potential of the internet to create, maintain or reinforce connections among subjects over time.

1.2. Belonging to a community and the online social experience

The concept of social belonging can be understood as an experience of social connectedness, of building and maintaining bonds to other people in the same group or community. It refers to the social and emotional dimension of all human beings and the essential and basic need of social contact, interaction, support and affective exchange they all experience and express during their developmental process and throughout their lifetime. The sense of group belonging is a psychological construct that is related to the affective aspect of group belonging, including feelings of being a valued group member, being proud of one's group, of belonging to something and as having something to belong to, representing the most internally consistent aspect of group membership (Newman, Lohman & Newman, 2007).

The concept of belonging merges two different perspectives. First, one can understand belonging as an experience of being part of a group or community, which offers the subject a sense of personal continuity of self and an involvement in a larger social context involving others with whom he or she shares something in common (Jansson, 2002). It is this perceptive, that focuses on the development of a sense of belonging to a group or community, that point to the fact that the concept of "sense of belonging" concerns how one builds up and maintains an identity with which one identifies him or herself with. Secondly, one can approach belonging as a perception of possession or appropriation (Jansson, 2002). Belonging means something that belongs to someone. From a social network perspective, if one belongs to a network, if one is part of it, then that network also belongs to that subject. As a member of a social group, the subject also gains outcomes and advantages, whether social, cultural or economical, that

derives from the position he or she occupies in that groups' network. These two ways of scrutinizing the concept of belonging should not be separated to fully understand the concept in a comprehensive way. Sense of belonging is closely associated to the concepts of social networks and community. Within society, we are connected to each other via a web of social ties and bonds that offer us a sense of who we are and to whom we belong to (Kerstetter, Yarnal, Son, Yen, & Baker, 2008). This web that links our ties is called a "social network". Groups or communities within society are constituted by social networks or, in other words, by links and connections between actors that participate in the same social group. This social network offers members affective and supportive bonds that have relevant influence across individuals' lives, promoting the development of a sense of belonging. A social network is a regular aggregate of ties within a group having some influence on the social and affective behavior of the people involved. This aggregate represents the group of people one maintains contact with and has a common bond – the group to which one belongs to.

Theoretical and empirical studies about communities and technology usage found the distinction between face-to-face and virtual communities to be pertinent (Kollock & Smith, 2002, Blanchard, 2007) since technology, particularly the internet, is playing an increasing role in social life and social forms of expression, contributing to the development of communities with no pre-physical contact. Several authors (Rheingold, 1993; Kutti, 1996; Ling, 2008) have considered this topic in contemporary debates by analyzing the implications technology holds for society and the way new media artifacts are transforming and shaping the social organizations we know as communities. The debates discuss themes such as the changes in existing social contexts regarding the levels of social participation, autonomy, social engagement amongst other factors, facing the consequences and the outcomes of the introduction of those artifacts in everyday-life. Face-to-face communities are those whose members interact mostly through direct communication, without the mediation of technical devices; and virtual communities are groups of individuals that sustain social relationships through computer-mediated-communication (Blanchard, 2007; Chavis, 1986). This distinction between virtual and face-to-face communities is made focusing only on the type of communication used to interact. However, a community is much more than the form of interaction mostly used by participants to cooperate - a community is a social group of people that interact together, share common symbols and references to external facts acquired through continuous social contact (Joyce, 2004; Kollock & Smith, 2002). MacMillan and Chavis (1986) introduced the concept of sense of community (SOC) as an attribute of the community, capable of providing a framework to dinguish between a community and a group, concluding that a group only becomes a community from the moment that its members share a SOC, regardless of their form of communication. According to McMillan and Chavis (1986), SOC refers to an individual sense of being part of a group and

sharing with others a specific and common need based on four operational dimensions – membership (feeling of belonging that develops emotional safety and personal investment in the group), influence (a bidirectional action: the individuals influence the group and the group influences the individuals, group pressure to conformity, social cohesiveness), fulfillment of needs (positive reinforcement) and shared emotional connection (quality of interaction, shared events, values and emotions, social support). These authors were amongst the first approaching this concept by developing a measure that assesses the sense of community within groups or communities (*Chavis Sense of Community Measure* - 1986). Given the emergence of new forms of technology-based communication and the so-called virtual communities above mentioned, some authors felt the need to transfer the concept of sense of community to a virtual dimension (Blanchard, 2007; Blanchard & Markus, 2004; Postmes, Spears, Lee & Novak; 2005; Koh & Kim; 2004; Tonteri, Kosonen, Ellonen & Tarkiainen, 2011), developing a new original concept – sense of virtual community - that refers to the individual feeling of belonging to online social groups and a new measure to assess it (Blanchard, 2007 - SOVC). This new measure is based on the original Chavis measure, but defines sense of virtual community as a member's feeling of membership, belonging, identity and attachment to a group that mediates its interactions through technological tools. The new measure seeks to address new dimensions related to virtual communities and to clarify the construct of sense of community building on a three-factor structure: sense of virtual community, exchanging support and identification. Koh and Kim (2004) also analyzed virtual communities and the sense of belonging within those communities, arguing that the sense of virtual community is affected by some features of virtual communities such as: leaders' enthusiasm, perceived similarity, off-line activities, and playfulness.

Virtual communities represent a new type of social formation on the internet (Blanchard, 2007). They expand the power of technology to connect individuals by providing unprecedented opportunities of social interaction and relationship development among people with shared interests regardless of geography and time.

The previous discussion focused on the distinction between face-to-face and virtual communities but such discussion fails many times in moving beyond the communicative facets of communitarian life. Some authors have been focusing on other aspects beyond communication (Blanchard, 2007; Dutta-Bergamn, 2005; Kutti, 1996; Rheingold, 2008) such as geographical space, groups of interest, forms of interrelation, mediation activities, or technology. Studies that focus on technology (Blanchard, 2007) base their approach on the main forms of text-based computer communication, the type of message (synchronous or asynchronous), the method of access, and the types of servers or platforms. Although we could characterize our communities using those differentiations, we are not interested in concrete technologies but in the relationships and the activities that happen within the community through the use of technology.

Considering the activities performed by community members as an essential factor when analyzing a community, we introduce in our analysis the theoretical framework of Activity Theory. This theory, grounded on the Russian cultural-historical psychology perspective (1920/30), established a dialectical view of the collective practices regarding human development as a product of interactions between people and artifacts in an everyday life contexts (Vianna & Stetsenko, 2006). The artifacts are social and cultural objects that mediate interactions within a community and in the world, developed and transformed according to the social needs and values of a certain community. This theory's main assumption relies on the transformations of the context and subjects through the activities performed and the objects introduced in those activities. The subject-community relation is regulated by rules (Kuuti, 1996), and it assumes that each community has to be managed. The usage of a tool by community members depends on effort, time and engagement. We assume that the particular tool to be chosen by an individual or a group firstly depends on the cultural, technological and political contexts. Without a particular combination of those conditions there is no access and no usage. Kaptelinin and Nardi (2006) introduced this theory as a basis to understand human relationship with technology in a social context. In the particular case of media studies, activity theory is a valuable tool because it includes local activities that use social and cultural objects (artifacts) as mediators that are transformed by their evolution and circulation throughout the different generations. In this work, we are concerned with the relationship between subjects that occurs mediated by internet related technologies like social network sites. If we respect the activity theory assumptions, this relationship is based on a dialectical and dynamic relation in which social media (websites, platforms, social networks) are used within the context of collective and individual interactions, resulting in collaborative activities that involve the subjects within a particular environment (the community). Reporting to the hypothesis in this study, we assume that activities and relationships mediated by social technologies can explain changes in social capital within a community. We propose that such changes have no direct relation with virtual settings and the specific possibilities of the device but with the uses people make of it.

1.3. The value of social capital in communities

The fundamental idea of Social Capital Theory (SCT) is relatively simple: *relationships matter and people's social networks count* (Field, 2003). Foremost, they matter for the people who are engaged in the relationships, developing social and affective bonds through them. They matter here in a subjective way, though they also matter in a collective way for society as a whole in which people are involved. Burt (2005) defines social capital as the advantage created by the position of an individual in a relational structure: the more relationships he establishes, the higher his social capital is and the easier it is to get information or to accomplish what he pursues in that particular social network. Thus, the connections people maintain in a

social network can contribute to their success in an individual way. The idea is that collective actions and commitments contribute to subjective achievements – social relationships offer people the possibility of achieving things they could not achieve by themselves or that would be of great difficulty to achieve on their own (Hampton & Wellman, 2003). However, some authors (Lin, 2001) point out the importance of not simplifying the issue of social capital as an antagonism between collectivism and individualism in the context of social networks but rather as a marker of cohesion and strength within a social system.

The concept of social capital has acquired a prominence that few scientific concepts had in the past, being applied in a variety of domains such as information systems, economy, politics and social science. However, the application of the concept in the current study is more related to the social domain and its implications on the organization of social life. When we say *capital* we mean a resource investment on a particular historical and social context. *Social capital* is then a relational resource, not material or economic capital, but a social type of capital that results from the constant effort of an individual in order to maintain and increase his or her own number and quality of relationships inside a network of interconnected ties that needs continuous commitment. The value of social capital is related to the explanation it provides to the basis of social cooperation and social cohesion – why people collaborate with each other in social networks (Hampton & Wellman, 2003). According to the foundations of the social capital theory, the concept of personal satisfaction is essential to explain why people cooperate (Field, 2003). According to Bourdieu (1980), social capital is the amount of resourcees resulting from a social network where interactions are maintained on a common daily basis, this being the reason for that continuous effort to maintain relationships that meet a personal need or profit. Later, Coleman (1994) introduced the Theory of Rational Choice (TRC) in the theoretical framework of social capital by emphasizing the idea of satisfaction as a stimulus for social cooperation. The TRC proposes that all behaviors and actions are a consequence of individuals following their own best interests (Field, 2003). Although this theory seems, to a certain extent, egocentric, it is well-grounded and respects the foundations of the social capital theory.

The basis of the SCT is that the maintenance and reproduction of social capital depends on the social interactions that the members of a network support. This view implies a non-deterministic interpretation of technology. Although the issue of media and technology is not clearly present in most of the work on social capital, the importance this theory gives to the subjective components of social interactions allows us to interpret the notion of technology as having a secondary position, advocating that any result is not a consequence of technology's intrinsic properties, but an outcome of the relationships established within a particular network. As a practical concept, the notion of social capital appears to have a unique potential to facilitate the understanding of social relationship processes in networks, and thus in online networks,

regardless of their nature or historical moment, emerging as a valuable concept also for communication and media studies.

Social capital is also directly related to the concept of activity, since it is in the activities of individuals independently motivated that we locate the motives for diverse technological mediated social interactions. In other words, the relationships and the activities performed within a social network, whether online or not, are more relevant than the process of mediation and the mediators themselves. Studies examining the relationship between media and social capital present diverse perspectives marked by a strong ambivalence. Putnam (2000) was one of the first authors who approached this relationship, assigning responsibility for a decrease in the levels of social capital to television usage in America, stating that television alienates people from social participation. Several studies followed Putnam's work and current ideologies (Katz & Rice, 2002) assert that there is no evidence that the new technologies, particularly the internet, contribute to a decrease in the levels of social capital produced within a community. Yet, the same authors also say that there is no evidence, so far, that the use of a particular technology is able, by itself, to influence the levels of social capital shared in a social network. Other studies on the social consequences of internet use found the existence of a relationship between the activities conducted online and offline in face-to-face communities; however, they did not verify the existence of a negative relationship between the levels of social capital produced within a particular community and the activities members of the community conducted online (Katz & Rice, 2002; Blanchard, 2007). The results achieved in this area are complex and ambivalent, calling for deeper research and analysis of the relation between the production of social capital and the uses of different media technologies as mediators of social relationships.

2. METHOD

2.1. Empirical study

The study we present in this section deals with two particular communities – a college community and an alphabetization class community - and the uses they make of online social technology to keep contact and maintain the community relationships over time when direct relation is not possible or is not accessible. The purpose of the study was to investigate the usage of online media devices by individuals in communities as a communication mediator capable of allowing further and efficient interactions among community members, exploring if it is possible to improve the levels of social capital, civic participation and engagement in a particular community through the introduction and inclusion of an online tool for communication. As referred before, the central hypothesis of the study proposes that the use of online social media devices for communication, information sharing and content distribution and production can

lead to the improvement of communication dynamics and foster the levels of social capital produced in a particular community. This hypothesis is based on the contribution of previous studies that emphasize the importance of social relationships to the production and analysis of social capital and civic engagement (Field, 2003; Putnam, 1995; Coleman, 1988) as well as similar studies conducted in the past on virtual communities as a place for informal sociability, relationships and connectedness (Steinkuehler & Williams, 2006; Scott & Johnson, 2005; Joyce, 2004; Wellman & Gulia, 2002). For instance, Field (2003) centred his analysis of social capital theory on the relationships people in a social network established, stating that interactions are also a "kind of capital" that is shared by individuals that belong or participate in common communities. Coleman (1988) added an important view, saying that those social networks where people participate generate shared understandings, trust and reciprocity, promoting a collective action and collaboration of mutual benefits and satisfaction with the community they participate. Also, Putman (1995) introduced a relation between social capital and media usage, claiming that the social capital erosion in the USA could be explained, among other factors, by the experience and uses of social media devices. He contests the view that considers technological trends as privatizing or individualizing devices. Steinkuehler and Williams (2006) explored to what extent virtual communities are similar to "third places" in terms of sociability, interaction and social capital production associating the participation in this type of communities with the bridging type of social capital. Scott and Johnson (2005) also studied four active and non-commercial virtual communities from different backgrounds, analysing the relationship between virtual and face-to-face communities and how they influence collective action. Other authors such as Wellman and Gulia (2002) argued that online activities performed by members of a particular community can reinforce the community and even give rise to new communities or social networks where new bonds can be made between subjects with common interests or goals. More recently, the 2007 edition of USC-Annenberg's Digital Future Project (2006) found that 43% of internet users who are members of online communities claimed that they felt as strongly about their virtual community as they do about their real-world communities. Another conclusion from this USC-Annenberg study was that the involvement in online communities leads to offline actions: 20.3% of online community members take actions offline at least once a year that are related to their online community.

The two communities studied in this project vary greatly in relation to new media usage and forms of communication. Some have an average knowledge of new technologies, using them as a form of interaction in some specific cases; others don't have any knowledge about them, facing difficulties in moving the mouse, turning the computer on and off or using the keyboard. The two communities were chosen by a convenience sampling procedure, though we tried to fulfil some specific features that were not profoundly addressed in the previous studies mentioned, as well as to go further and attempt to respond to

some of the raised questions within those previous studies. The communities chosen for the study were initially face-to-face communities with no pre-virtual contact and the development of their virtual place (their virtual community social website) was part of this project's objectives. Most part of the studies performed on this matter analysed existing online communities which makes it very hard to address the relationship between face-to-face and virtual communities, as people in these communities often have no physical or face-to-face contact. The communities analysed within this study were initially face-to-face based communities. Several participative design sessions were conducted with these communities' members in order to develop a social website platform that met their interests and needs for a virtual place. Also, both communities are learning-based communities from different backgrounds – a primary college and an alphabetization class community. In each community we felt the need to develop workshops for teaching ICT and how to use the computer or internet so that a social website for communication could be positively introduced. These classes were taught during approximately one year, initiating before the development of the communities social website platform. The study of communities with different backgrounds is essentially to understand in a deeper way the influence of online social technologies on social relationships and on communities' collective action since we cannot generalize results achieved with communities where age and some other demographic features were not analysed to communities composed by children (the first community we present in this study) and communities where the vast majority of the members are aged over 55 years (alphabetization class community). This project presents the analysis of these two particular case studies with very different features and structurally different from the communities previously approached within the literature on this topic.

2.2. Research Design

As a way to test the hypothesis proposed, we designed a longitudinal and exploratory study based on four main stages. The first stage began with an exploratory and descriptive approach based on ethnographic techniques in order to describe the communities under study and classify the tools they already manipulated. The following stage was based on the construction and development of online platforms for information production, distribution and associated functionalities of communication and discussion for each community, respecting the information gathered about the communities in the first stage. Once the platforms were constructed, the goal was to introduce in them each community in a monitored way, allowing the community to use it as they intended to, developing the activities they perceive as useful to them in an individual and collective way. The platform usage lasted approximately from 6 months to one year, depending on the community. In the third stage, we analyzed the transformations and changes that occurred with the introduction of the online platform for communication within the communities, using both

quantitative and qualitative methods of analysis – observation of the online platform manipulation, focus groups, measure of web content produced on the platform, application of the *sense of community measure* and of a social capital inquiry. These measures were applied before and after the platforms' introduction. Then we used comparative methods of analysis aiming to examine the differences between the levels of social capital and sense of community felt before and after the introduction of the platform and also the community skills and empowerment for handling the online tool. In the final stage we evaluated how the activities conducted by the community members had restructured the community social life and if that was stimulated as a consequence of the use of the online platform introduced.

2.3. The measures

During this study two measures were used: the sense of community (SOC) scale and a social capital inquiry (SCI). The SOC scale allowed the quantification of sense of community in a range from 1 to 12 values, including twelve statements to which community members should answer with "true" or "false". Twelve statements with "true" as an answer correspond to the maximum value of sense of community measure. This measure includes four sub-dimensions – shared emotional connection, influence, reinforcement of needs and membership. The SCI consists of fifteen statements which the community members should answer on a scale ranged from 1 to 5 (varying from strongly disagree to strongly agree) depending on their level of agreement with the sentence. The SCI was constructed distinguishing between structural and cognitive social capital (networks and norms) and focuses on the concept of bonding social capital (Putman, 2000), analyzing the relationships and the links established inside a community. Different approaches to the social capital theory bring up several dimensions of the concept according to the concept multi-dimensional nature. The inquiry developed is based on five sub-dimensions, respecting the literature: feelings of trust and safety (Field, 2008, Cox, 1997; Coleman, 1988), tolerance of diversity or difference (related with solidarity from Harpham, 2003; Farrel, Collette and Tennet, 2002; Collier, 1998 among others), participation in community activities (being active in the social network and being engaged in the community civic affairs from Putman, 2000; Harpham, 2003), intra-community connections, related with the social interaction and the social network links (Collier, 1998; Filed, 2008; Putman, 2000); and altruism or solidarity (Harpham, 2003; Narayan & Cassidy, 2001). Since social capital is considered a multidimensional concept, our study appealed to a multi-strategy approach based on different methods, both qualitative and quantitative. This inquiry is just one example, to which follows other qualitative techniques such as focus group discussions and participative observation. However, in this paper we will only present the results concerning the social capital achieved through the inquiry application. The following sections present a general characterization of the communities under study, the platform

constructed for each community and the results achieved through the application of the measures mentioned above.

3. RESULTS

3.1. The College community

The children community is a school community in general, and it aggregates in particular two fourth-grade classes, including 30 pupils between 8 and 9 years old (average age = 8.5) with a medium/ high socio-economic level, having computer and internet access at school and at home. The community members have great knowledge of digital technologies and their behavioral patterns are based mainly on the teaching-learning process and on the relationships established between the students and the entire community.

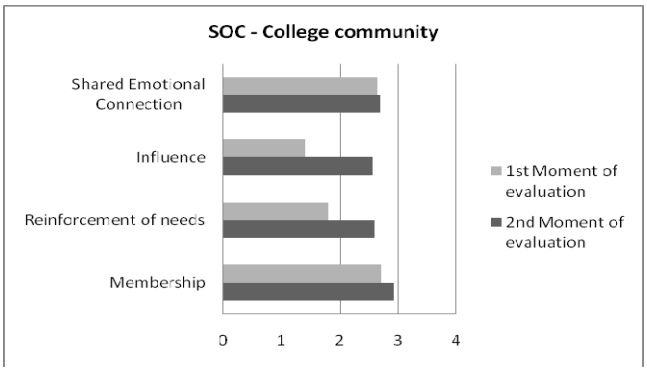
The platform developed for this community included different contents and was constructed in a collaborative way through several sessions of participatory design. The final platform is related with school activities and has contents of curricular and extra-curricular areas providing a mail, a place to leave messages or posts, a place to recommend things such as links and other interesting sites, a forum and a chat, links to other Portuguese sites for children and a place called *Challenge of the week* where the researchers placed activities, inquiries or questionnaires and proposed challenges to the children

Sense of community

The sense of community scale was applied in this community before and after the introduction of the online platform with the intention of identifying whether there were differences in the sense of belonging to a particular community that could result from the use of the platform and the support for communication that it offered to its users. In the first and second application of the measure, the results pointed out a strong feeling of sense of belonging felt among this community members, noticing an increase from the first evaluation moment (before the online platform introduction) to the second evaluation moment (after the online platform introduction and use), possibly indicating that the online platform has contributed to that rise. The first application obtained 74% of items with positive answers, a mean of ten positive answers for each element and a median slightly higher (11), the data dispersion in the positive answers being minimal, varying from just 8 to 12 (percentile 25 = 8; percentile 75 = 12). The second data collection obtained 90% of positive answers, an average of 11 positive answers for each element, the data dispersion being minimal as it was in the first moment of data collection (percentile 25 = 10; percentile 75 = 12). Reporting on the SOC sub-dimensions, the first data collection showed as the stronger dimensions the following:

membership, satisfaction of needs and shared emotional connection. On the contrary, the influence dimension showed relatively close values of positive and negative answers. The second moment of data collection showed an increase of the values obtained in all dimensions, being the dimensions which showed a larger rise influence and reinforcement of needs. However, the membership dimension prevailed as the strongest one. Figure 1 shows and compares the values obtained in the two evaluation moments.

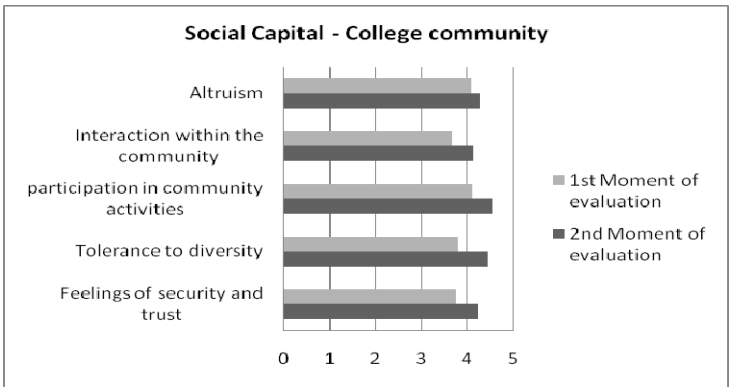
Figure 1: Sense of community sub-dimensions in the two moments of evaluation



Social Capital

The social capital inquiry was applied before and after the online platform introduction within the community. The results achieved in the first data collection pointed out a high level of social capital between members of the college community, with a mean of 4.04 and a median even higher (4.2). Although the data dispersion in the nine sentences varies between all scale values (1 to 5), the mode in the vast majority of the sentences is 5, the highest point of the scale. The second data collection presented a mean of 4.43 and median slightly higher (4.47). Regarding the sub-dimensions included in the inquiry, it is possible to observe in Figure 2 a slight increase from the first data collection to the second; the strongest dimension in both moments of evaluation being the participation in community activities.

Figure 2: Social capital inquiry sub-dimensions in the two moments of evaluation



3.2. The Alphabetization Class Community

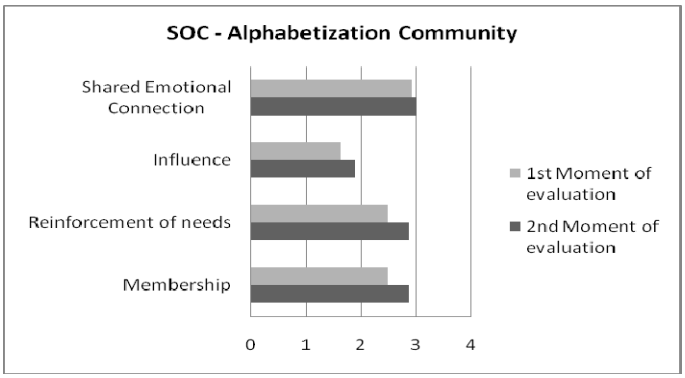
The alphabetization class is a face-to-face community. This face-to-face community is part of a project of an urban community development program located in Lisbon. The community is constituted of 36 women of Portuguese, Angolan and Cape Verdian nationalities, aged between 18 and 77 years old (mean age of 46). All community members have a low socio-economic level and also a low level of education with no knowledge of new technologies. Most of the students were currently working in the basic care area (for the elderly or children), cleaning, embroidery or ironing. The community works as a school year, initiating in September and ending in July, the present group being formed in September 2007, although some new students have joined the group since. The community maintenance relies mainly on the teaching-learning process and the activities are based on the literacy process – reading and writing.

The online platform for this community is based on simple words and images throughout the website as an attempt to meet the community members' needs, respect their limitations and motivate them for the platform usage and dissemination. The platform contents are distributed on two main dimensions: learning content - including reading and writing exercises; and entertainment content - issues about television series, cooking activities, photos and e-mail. The introduction of the platform and its use was closely monitored by the research team. It was necessary to introduce the community to the new technologies, from how to turn on a computer, how to use the mouse and the keyboard, to the understanding of what are computer programs and applications as well to the internet and social networks and their inherent logic and functionality.

Sense of community

The results of Chavis' measure in the alphabetization class confirm a strong sense of belonging between community members, showing in the first moment of evaluation 79% of items with positive answers and a mean and median of nine positive answers for each element. The second moment of evaluation showed 89% of items with positive answer, an average of eleven positive answers for each element. Regarding the measure's sub dimensions, it is possible to observe an increase in the values of all sub-dimensions, the strongest one in both evaluation moments being shared emotional connection, also influence appears to be the one with the lowest intervention in the intra-community relations, as it is possible to observe in Figure 3.

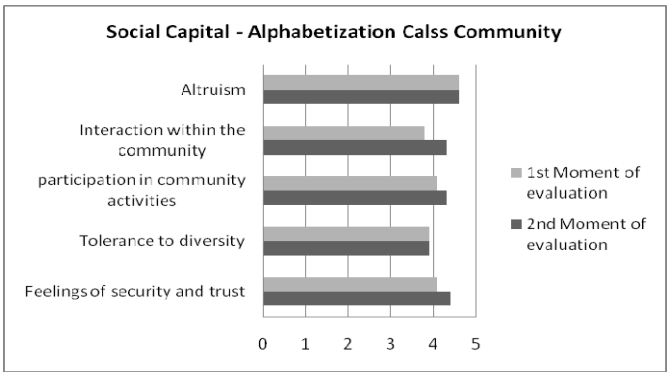
Figure 3: Sense of community sub-dimensions in the two evaluation moments



Social Capital

The social capital inquiry applied before and after the online platform introduction, presents an increase of the values from the first data collection with a mean of 4.10, to the second data collection, with a mean of 4.53. Both values correspond to a high level of social capital since the answers ranged from 1 to 5. Regarding the sub-dimensions included in the inquiry it is possible to observe in Figure 4 an increase of the values in the membership, reinforcement of needs and shared emotional connection dimensions from the first to the second moment of data collection.

Figure 4: Social capital Inquiry sub-dimensions in the two moments of evaluation



4. CONCLUSIONS

4.1 Conclusions and discussion

Research results point to a positive relation between the use of an online media device that provides original ways of interaction within a particular community and the increase of the levels of sense of belonging and social capital shared and produced within the community. Apparently, the use of an online tool for communication, after its positive dissemination, is able to improve a community's dynamics in what concerns members' linkages and participation in community activities, allowing for new possibilities of inter-relation and communication in a more constant manner and contributing for the strengthening of social bonds.

The monitoring of the platform usage during the year in which the communities have used the platform as part of the research project, as well as the usage of some more qualitative techniques of analysis based on interviews and observation that are not totally approached in this paper, drew attention to the importance of the activities performed over the kind of devices used to communicate to influence the levels of social capital or SOC. The data collected and field observation conducted indicates that, although SOC and social capital were somehow related with technology usage, they were not automatically a result of that use but a consequence of the interactions within the community that were facilitated via the technology. Participants revealed (in interviews, during the monitoring of the platform, during classes or group discussion) that it was not exactly the use of the technology, but the interactions they were able to establish via the platform, that motivated and boosted them to maintain an interest in using the technology and to keep contact with others via that platform, when direct contact was not possible. Therefore, if a community expresses a need of continuous bond and interactions among all members and if an online tool

can offer a space for those interactions to happen, it is then therefore possible to say that the levels of SOC and social capital can increase by introducing that online tool in the community's dynamics. However, it seems that it is not the technology itself which is able to promote SOC or social capital, but rather the interactions, relationships and activities shared between community members. These results revealed the importance of analyzing community's activities and relationships, how they are related to the community goals, how they were maintained throughout time and if they influenced the community's social structure.

The usage of the technological devices was motivated by individual's personal goals. Community members interacted with each other according to their needs in a particular environment as a way to solve their problems or to pursue what they sought. It seems that, as social capital and activity theory postulate, the use of a tool at a social and cultural momentum and the collaborative actions that occur within a community are related with the advantages one can get within the community and the personal or collective satisfaction of pre-existent needs. According to several authors, social networks are one of the most important components of social capital (Coleman, 1994; Putnam, 2000; Lin, 2001), however there is some disagreement related to which type of social network would be more advantageous to produce higher levels of social capital. The two communities presented in this paper can be considered as closed social networks, as they are characterized by strong ties among members inside the network and weak ties to the exterior of the network. This type of community is commonly called dense network in social capital literature (Glanville & Bienenstock, 2009). As it was observed during the research project, the social online tool introduced in each community was used only within the community, reinforcing existing bonds and helping to maintain them through time. These results show that the interactions among strong and supportive communities are not favorable to bridging links, but rather to reinforcing existing ties between members of a particular network where homogeneity is preserved, since those networks are characterized by a strong closure to the exterior. On the other hand, there are the so-called dispersed networks (Glanville & Bienenstock, 2009), where bridge ties to diverse social worlds are encouraged, characterized by a heterogeneous background of their members. Social capital literature has presented both networks as having positive outcomes to their members and to the production of social capital, however with some differences. Some authors pointed out as beneficial and richer the bridge type of ties since it links different environments and thus enlarge the type of resources associated (Lin, 2001). The communities of study did not present, almost, any of this type of ties. Therefore, one can say that closed communities, where members know each other for a long time and share strong bonding ties are not prone to develop the bridging type of social capital, our view being that a set of strong ties closely associated is positive but it is also positive to have some bridging ties, since those are the ones that can give access to a greater diversity of social resources.

The results also indicated that online activities lead to offline actions and outcomes, strengthening face-to-face relationships and promoting the exchange of information and participation in intra-community activities. The data collected and the relationship established with the community revealed that the common differentiation between face-to-face and virtual communities is not as linear as the literature exposes, rather being a narrow barrier in which those two concepts are embedded in each other. Once again, the form of communication used by a particular community or the types of support used to communicate are not the best way to describe a community. This practice leads us to envision these types of communities, or from a different perspective, these types of communication, as having an intimate relationship that is dialectical and complex, where those concepts are interrelated, not allowing to determine where one ends and the other begins, but rather enabling to understand them fully by envisioning them as a whole.

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