Online Social Network Sites and Social Capital:
A Case of Facebook

Samaneh Naseri

Department of Sociology, University of Bielefeld, Bielefeld, Germany

Abstract The present study is a theoretical and literary review of online social network sites and their impact on social capital. In this review, the Facebook is selected as one popular and important online social networking site in the world today. To This end, first two main concepts of social capital, bridging and bonding social capital has been provided. Next, the concept of online social networks and the impact of FB on social networks are discussed.

Keywords Facebook, Social capital, Online Social Network Sites, the Internet

1. Introduction

Surprisingly, within the last ten years; the Internet has found its place with a rapid pace among humans' lives all around the world. Approximately 361 million users used the Internet in 2000, though this number increased to 2 billion users worldwide in 2010 (Internet World Stats, 2011). At the same time, the use of online social network sites (SNSs) has blasted intensely (400 million active users), began competing with search engines as the most visited Internet sites (Experian Hitwise, 2010). Facebook is one of the largest SNSs in the world.

As such, the ubiquitous Internet and rapidly growing SNSs use have pushed scholars to re-conceptualize social capital in a narrower scale. Despite a large pool of literature on social capital, however, the concept of social capital is very flexible and it simply refers to individual's family, friends, and links the individual can benefit from at time of any crisis, or enjoy being with companions or take advantage of them as a ladder of success and material benefits (Woolcock, 2001). Social capital is a determinant factor of individuals' educational performance, employment success/failure, career promotions, well-being and civic engagement (Portes, 1998; Putnam, 2000; Lin & Erickson, 2008). In point of fact, peoples with stronger social ties have broader access to professional, economic and political opportunities, yet those with weaker ties may have limited chances to gain with no pain (Lin & Erickson, 2008). This persistent application of SNSs have made once more social sciences scholars   conduct precise evaluations of the mechanisms within which SNSs users integrate these tools in

their everyday lives and so can take advantage of this use. Hence, the social scientists need to deal with new concepts of social capital in one hand and the empirical benefits and implications of social capital in the age of SNSs and FB on the other hand. Given that, in the present study I intend to review the broad themes from the existing body of literature on social capital, and so to assess the processes with which social capital benefits are produced in its association with online social networks.

So, first I give an introduction of the notion of social capital and summarize the key findings. Then, definitions and empirical results of online social capital will be provided. Finally, I will zoom in into online social networks / Facebook and social capital literature and research findings.

I plan to explore the fundamental mechanisms that can clarify how social network sites contribute to social capital formation.

2. The Concepts of Social Capital

The concept of social capital comprises a flexible term incorporating various definitions in various fields (Adler & Kwon, 2002). This variety in notion has made social capital either a cause or an effect (Williams, 2006). According to Bourdieu and Wacquant (1992), social capital consists of the sum of the resources, actual and virtual, accumulated by an individual or a collective with respect to belonging to a strong network of institutionalized relationships of reciprocity, companionship and gratitude. Thus, depending on the nature of these relationships, obtained resources can vary in form and/or function.

Huysman and Wulf (2004) define social capital as networks of goodwill, mutual support, common language, common norms, social trust, and a sense of mutual obligations helping individuals to extract values from. Social capital works as a force which sticks social accumulations

together like personal, societal, religious, or national networks.

Adler and Kwon (2002) state social capital associates to different social outcomes including better public health, lower rate of criminal activities, and greater efficient financial markets.

Koput (2010) characterizes social capital in terms of variables like productive resources, an investment, inherent in relationships, and appropriable.

- A productive resource is applied to generate value.
- An investment contains a risk element which is a kind of value is not guaranteed and will be accumulated in the future instead of being immediate;
- Inherent in relationships but not in actors pertains to that feature of not owned by an individual, rather it implies a social structure and cooperative participation;
- Appropriable refers to that sort of relationship peoples hold in order to achieve other goals.

As Coleman (1988) states, social capital is relations among peoples, which essentially is productive and relies heavily on two dimensions of trustworthiness and trust. Accordingly, one can conclude that the purpose of social capital is to take advantage of relationships or ties of personal networks.

Helliwell and Putnam (2004) describe social capital in terms of interpersonal domain of social capital. They assert that social trust and reciprocity are two pivotal elements leading to social capital construction. Likewise, the researchers argue that individuals most likely interact with those whom they consider them trust worthy and reliable. Consequentially, when trustworthiness increases, the likelihood of appearance of social capital rises, as well.

For Valenzuela et al (2009), outcomes of social capital assist scholars to make individuals' well-being and quality of life better.

Lin (2001) views social capital with respect to the general theory of capital. He discusses that social capital can be realized well when embedded resources in social networks are obtained as investment. Lin (2001) categorizes four elements according to them social capital should be regarded as the most vigorous and vital forms of capital. These include information, influence, social credentials and reinforcement. Furthermore, Lin (2001) argues that social capital is useful for benefiting from joining an individual or a collective. In the latter, this tie can happen directly or indirectly via the sum of members' capital in the group. Social capital can even lead to compensation of instrumental actions (job finding) or to keep benefits using expressive actions (emotional support).

Wellman et al (2001) differentiate three types of social capital a) network capital (informal relations among friends, neighbors and colleagues), b) participatory capital (involvement in politics and voluntary organizations), and community commitment (trust and engagement toward the community).

2.1. Bridging and Bonding Social Capital

The two concepts of *bridging* and *bonding* are the works of Putnam (2000). According to him, these terms account for appearance of different forms of social capital when a variety of norms and networks are involved; these concepts are interrelated but are not equivalent (Putnam, 2000).

He explains that bridging social capital is inclusive. That is to say, bridging social capital takes place when social networks are linked via individuals with diverse backgrounds. Therefore, bridging connections may extend social horizons or worldviews of the members. It also can provide individuals with chances of obtaining newer information or resources. Nonetheless, bridging social capital can slightly support the members emotionally.

Conversely, bonding social capital is exclusive. In words, it creates when strong individual ties like family and close friends support each other affectively. We see little diversity and variation among the network members, however. Putnam (2000) further continues that constant reciprocity is the major feature of bonding social capital offering outstanding emotional and practical support and so activates mobilization. But, bonding social capital disadvantage is narrowness and out-group resentment. According to Sherif (1988), immediately after a group shaped, a kind of distrust and aversion against outsiders would grow among the group members.

Putnam (2000) also reviewed the sociological works of Mark Granovetter. Basically, Granovetter (1973) was the first who introduced two notions of weak-tie and strong-tie relationships, which later inspired Putnam's (2000) bridging and bonding social capital. While examining peoples who were looking for employment, Granovetter (1973) realized that the success in obtained job is not the effect of having strongest relationships and friendships, rather, job seekers' success was a variable of their broader weaker ties. This detection is quite in opposition with what Putnam (2000) considers as the major cause of success in employment, i.e. bonding social capital.

Accordingly, the type of relationships individuals hold within networks can be a strong predictor of various forms of social capital. In view of weak-tie networks, these ties correspond to Putnam's (2000) bridging social capital. Because weaker ties are produced by those peoples who do not like the first person and this direct them to link more individuals engaged in different life situations. Thus, most likely these ties bring them more information and opportunities. The *strength of weak ties* is the term Granovetter (1973) assigns to these relationships. But, one point worth mentioning here is that, members of weak-ties relationships are mostly deprived of the advantages of bonding social capital. Consequentially, weak-ties networks less likely provide the members emotional support whereas strong-tie networks receive higher emotional support. Therefore, weak-tie networks yield bridging social capital while strong-tie networks give bonding social capital.

2.2. Social Capital Research

In this section I give a review of some of the recent empirical studies on social capital.

Grassi (2009) conducted a study among 400 young Cape Verdeans and Angolans (18-30 years old) living in Portugal. She found out that the participants' social integration occurs chiefly via informal networks or bonding social capital instead of formal volunteering associations or institutions or civic engagement.

Torres et al (2005) measured social support in social networks. Their findings suggest that members owning less economic capital are those who receive less social support, either. They illustrated that the members with higher education and income have hired someone to take care of their children. Likewise, young, rich, and educated members have requested help in case of financial troubles.

Brooks et al (2011) identified the association between socioeconomic status and three types of social capital which are network size, bonding social capital and bridging social capital. Their results indicate that higher socioeconomic status is connected to larger and denser networks, yet not networks with more branches. As a result, the authors hypothesize that socioeconomic status is not so significant that lead to creation of networks. But, socioeconomic status can help to keep established networks.

In another study, Ellison et al (2007) realized that social capital outcomes are strongly associated to individuals' life satisfaction and self-esteem.

Krämer et al (2014) research indicated that classical supposition; weak ties offer non-redundant information, while strong ties support members emotionally do not match. Conversely, they realized that strong ties can support individuals emotionally or functionally more so than medium or weak ties do. Furthermore, Krämer et al (2014) stated that density of ties providing emotional support can also predict overall bonding and social capital and the participants showed more tendencies to maintenance of weaker ties.

In another research, Vitak (2014) discovered that unlike previous research findings, strong ties offer individuals more emotional support, nevertheless under conditions of more fine-grained communication strategies and affordances. She indicated that weak ties benefit significantly from directed communication and relationship maintenance strategies.

3. The Internet and Social Capital

Nowadays, Internet is everywhere in humans' life. With a range of tools and applications, yet sending and receiving emails have become the most common use of the Internet. Using emails, instant messaging systems or social networks, the online users can easily interact with other online users, either family, friends or strangers and less known peoples. The Internet is essentially a novel and unique means of interaction and socialization with great potential of being a supplement for in-person or telephone conversation communications. Despite its remarkable benefits, however, the Internet may segregate individuals and limit their time spent in face-to-face social activities. This condition becomes more severe if online users are occupied with excessive web-surfing, news readings and so on so forth. Furthermore, online friendliness is not the same as traditional friendliness, since face-to-face communications are customarily more influential and beneficial compared with online interactions. In this case, exploring whether or not online sociability increases or decreases social relationships has significant effects on construction and maintenance of social capital (Goldfarb, 2006).

Haythornthwaite (2002) is the first who explicated how tie strength premise may fluctuate in online and offline relationships. She argues that the newly appeared communication technologies like the Internet are fundamentally beneficial for constructing and maintaining weak-ties networks. However, Haythornthwaite (2002) states that the more centralized connections are the more dependent and fragile weak-tie networks are.

Considering bridging social capital and the Internet, Putnam (2000) discusses that one major cause of decline in social capital is the constant and permanent reduction in number of individuals are willing to join voluntary associations like the Elks club or bowling leagues. Wellman et al (2001) claim that online communications may substitute former relationships were created in voluntary organizations.

Similarly, Resnick (2001) states that because online interactions may be bolstered by some technologies such as recommender systems, distributions lists, photo directories and search capabilities, possibly new forms of social capital and ties could be created in virtual networks like Facebook. This type of interaction hence is in much extent connected to bridging social capital. Online sites like Facebook, which support weak social ties, gives users this opportunity to make and keep broader, and more diverse networks of relationships, from which they are able to benefit from resources.

In the case of bonding social capital and the Internet, Williams (2006) argues that limited research have examined the relationship between the Internet and bonding social capital. But, a few studies have problematized whether the Internet can substitute strong ties. Quan- Haase and Wellman (2004) conducted a review of the available literature on the impact of the Internet and social capital. They extracted three chief arguments a) the Internet changes social capital via enabling users to look for and find other users with similar interests, b) the Internet reduces social capital through making users occupied with online interactions and depriving them from face-to face communications and c) the Internet substitutes social capital by means of supporting current social relations besides facilitating creation of new ties. According to Williams (2006), although scholars have evaluated the probable loss of social capital in face-to-face interactions as a result of growing usage of the Internet, they have remained silent about online benefits that may replace strong networks.

A few other studies have examined the impact of the Internet and social capital. For example, Attewell et al's study (2003) revealed that teens that have a personal computer do less sports or playing in open spaces. Kraut et al (1996) were the first who conducted a longitudinal study and precisely probed the Internet users and the impact of the Internet on them. They understood that the users are at risk of isolation and depression because some users were less willing towards their offline relationships. They concluded that use of the Internet has a correlation with increased community involvement and trust. However, this study was mostly centralized on offline ties and had left the online ties behind.

Nie et al (2002) discuss that the Internet inherently is isolating. They clarify that the entire benefits the Internet users enjoy are subjects of being rich, educated and non-elderly. Nie and colleagues (2002) state that at the same time that the number of online network users grows up, they experience more isolation thanks to offline interactions are forewent that the users spent more time on online communications. However, the Nie et al's (2002) research overlooked the Internet as a potential new site of social activities.

Van Alstyne and Brynjolfsson (1996) claim that the Internet may lead to increased communication separation divided into separate groups having particular interests each also known as cyber-balkanization. Therefore, even though the Internet decreases individual separation, it can increase group separation, simultaneously.

Franzen (2003) investigated the impact of Internet use on social network. He used the number of close friends and time they spend together. He found out that use of the Internet holds no association with increase or decrease of number of close friends. Also, the amount of spent time does not show a meaningful relationship. However, the results suggest that Internet use is effective on reduced time watching TV.

Kraut et al's (2002) results revealed that Internet use increases social communications with friends and kin, yet this works for individuals with considerable social capital.

Shklovski et al (2006) reviewed the literature of 16 studies from 1995 to 2003 on the effect of Internet use and social interactions. They indicated that Internet use shows a minor effect on sociability in longitudinal studies. Whereas, the review results disclosed that in cross-sectional studies this effect is negative.

Katz and colleagues (2001) understood that Internet users get remarkably engaged with voluntary organizations. Besides, long-time time spent on Internet has linked to broader social networks in comparison with those who do not use the Internet or those who have used it very recently.

Above all the negative effects of the Internet on social capital, however, it has some positive effects. To name but a few, the information function of the Internet implies that it simplifies obtaining information about place and date of social events, diminish the costs of reserving different places or tickets for those social events, provide users with information about politics and civic or volunteer engagements, which overlap users' preferences and so on (Pénard & Poussing, 2010).

4. Online Social Networks

Since the early appearance of social network sites (SNSs), MySpace, Facebook, Cyworld, and Bebo, they have heavily drawn the attention of millions of users all around the world. Currently, there exist hundreds of SNSs with a variety of technological facilities and services encompassing users with abundant interests and desires. But, despite a general cohesion, the SNSs use cultures vary considerably. For example, a couple of sites attempt to retain the previously established social networks, while a few others assist the foreigners to get connected immediately after they find mutual interests or activities with the contemporary members. Some sites appreciate diversity, whereas others prefer users with common language, race, sexuality, religious and national identities. Social network sites even show difference in the degree they integrate new information and communication tools together (Boyd & Ellison, 2008). Thus, scholars from different fields have studied SNSs so that they come to a realization about the practices, implications, culture and concepts of sites besides users' occupation with them (Boyd & Ellison, 2008).

4.1. Defining Social Network Sites

According to Boyd and Ellison (2008), social network sites are web-based services enable users to a) create a public or semi-public profile within a bounded system, b) specify a contact log of direct or indirect friends, and c) see and check the list of contacts is created by other friends within the system. The nature and terms applied for these ties may differ in each site.

Boyd and Ellison (2008) explain that despite the term social network sites is commonly used for such systems; one can encounter with the term *social networking sites* in discourses relevant to online relationships.

Haythornthwaite (2005) state that the unique feature of social network sites is that they allow users to make their social ties visible. Within several large SNSs, users are not inevitably networking or waiting to see new members, rather they interact with individuals who presently are a part of their broader social network. In order to therefore highlight this created social network as a vital organizing characteristic of these sites, we call them social network sites.

Sunden (2003) say that while SNSs have applied a variety of technologies, their fundamental feature consists of visible profiles that show the created list of friends who are at the same time users of the system. Profiles are exclusive pages given to each user who can write oneself into being.

4.2. Facebook and Social Capital

Burke and Kraut (2011) classify three kinds of social behaviors in SNSs that can be generalized to Facebook, as

well. The first activity is directed interaction with individual friends comprised personal and one-on-one communications. Comparable to email and instant messaging systems, Facebook offers guided interactions via messages, wall posts, and synchronous chat. Yet, unlike older sites, FB supplies frivolous mechanisms namely "like" button, inline comments, and photo tagging. Doing one of these actions, one friend singles out another friend showing that their interaction is meaningful enough that deserve an action. Directed interactions are able to improve either bonding or bridging social capital for two reasons including the content of the interaction and the strength of the communication with the partner. When directed to a specific others, one-on-one messages are more probably so motivating and rich in content that reinforce the interactions like self-disclosures, supportiveness and positivity (Oswald et al, 2004). Basically, sending and receiving personal information strengthen the relationships (Collins & Miller, 1994). As a matter of fact, giving the connected partner personal information signal trust, incline mutual self-disclosures and make the partner involved in the other friend's some details of everyday life. In addition, directed friendships arouse norms of reciprocity, which may force the partner to obey. The plain availability of the interaction, which to some extent require care and endeavor in comparison with broadcast messages, even indicate the significance of the friendship. Thanks to its content, therefore, directed interactions are likely beneficial for current friendship maintenance as well as encouraging creations of newer ties (Burke & Kraut, 2011).

Conversely, in the second and third activities, passive consumption of social news and broadcasting, the undirected messages are not posted to a particular other. Thus, they are less likely to be rich in friendship-maintenance behaviors that is the central feature of the directed interactions. Accordingly, we call these messages collective flow of information or News Feed on FB (Burke & Kraut, 2011).

Antheunis and colleagues (2015) reviewed the former research works on the association of FB and social capital. They examined the mechanisms through which users interact via SNSs. They concluded that directed communication and public broadcasting vis-à-vis passive communications reinforce bonding and bridging social capital.

Binder et al (2014) and Damian et al (2014) studied the effect of SNSs for immigrants and migrants. Both study concentrated on populations was less examined before.

Binder and Sutcliffe (2014) investigated on the effect of alternating the use of two SNS. They studied Indian nationals either migrating within India or to other countries. Then, they compared these Indians with those who had not migrated or displaced. A disparity between network size of migrants and non-migrants was explicable through alternating SNSs use. That is to say, the disparity of those who used two Indian SNS (Orkut) and FB reduced. For that reason, the results indicated that alternating SNS use is a compensatory strategy migrants use to keep and widen their ties.

Damian and van Ingen (2014) focused on immigrants.

They studied the immigrants in the Netherlands who used FB and Hyves (a popular Dutch SNS). They understood that SNS users owned more out-group relationships among their five strongest ties. Likewise, the frequency of SNS use could positively predict the satisfaction from the communication. The findings further revealed that immigrants who use SNS do not hold broad strong ties rather, they have heterogeneous strong ties.

Moll et al (2014) analyzed the underlying processes are effective on self-disclosure on SNS. They claimed that self-disclosure is a critical process for creation and maintenance of relationships, as it enables users for a particular level of trust that is facilitating for the exchange of social capital.

According to Donath and Boyd (2004) SNSs may not expand strong ties, nonetheless SNSs can considerably increase weak ties due to the fact that the online platforms are designed and shaped so that they promote creation and maintenance of weak ties effortlessly and inexpensively.

5. Conclusions

The present study was an attempt to review the literature and empirical results on social capital and new communicative technologies like the Internet and social network sites (e.g. Facebook). The results showed that social integration could happen mostly through informal or boding social capital (Grassi, 2009), higher levels of education and economic status correlate to higher request and reception of social support (Torres et al, 2005), the denser and larger networks could be the outcomes of higher socioeconomic status (Brooks et al, 2011), life satisfaction and self-esteem considerably influence social capital (Ellison et al, 2007), furthermore, tendency to maintain weaker ties takes place when these ties provide individuals with more emotional support comparing strong ties (Krämer et al, 2014).

Moreover, in this review, I provided two common and publicly known measures of social capital including bridging and bonding (weak and strong ties) as well as introducing some instances of maintenance strategies of social capital in online communications. I also reviewed the research findings on SNSs user's behavior with respect to two forms of social capital. The findings suggest that the Internet use is associated to both increase and decrease in social capital. Additionally, distinct from other offline contexts where individuals are encouraged and supported to create or maintain social capital like social clubs, FB welcomes everybody. Fundamentally, FB is becoming a powerful replacement for a newer form of virtual socializing in which relationships are first created offline, and then move to online space or vice versa, which enable users to keep their ties or broaden them with the help of personal information FB offer them.

Yet, more research efforts are demanded in the area of user behavior and SNS modeling, with a special attention to the definition of social capital. Future research may examine user behavior and SNS modeling using experimental or

longitudinal studies. Scholars need broader understanding of who is and who is not using these sites, why and for what purposed all around the world. Future studies also can conduct a comparative research on gains in social capital from those who use a site over time and those who do not have access to sites.

ACKNOWLEDGMENTS

REFERENCES

[1]   Adler, P., Kwon, S. (2002). Social capital: prospects for a new concept. *The Academy of Management Review, 27(1)*.

[2]   Antheunis, M.L, Vanden Abeele, M.M.P., Kanters, S. (2015). The Impact of Facebook Use on Micro- Level Social Capital: A Synthesis. *Societies*, 5, 399–419.

[3]   Attewell, P., A., Belkis Suazo, G., & Battle, J. (2003). Computers and Young Children: Social Benefit or Social Problem, *Social Forces*, 82, 1, 277-296.

[4]   Bourdieu, P., & Wacquant, L. (1992). *An Invitation to Reflexive Sociology*. Chicago, IL: University of Chicago Press.

[5]   Boyd, D., & Ellison, N. (2008). Social Network Sites: Definition, History, and Scholarship, *Journal of Computer-Mediated Communication,* 13, 210–230.

[6]   Binder, J. & Sutcliffe, A. G. (2014). The Best of Both Worlds? Online Ties and the Alternating Use of Social Network Sites in the Context of Migration. *Societies*, 4, 753–769.

[7]   Brooks, Brandon, Howard T. Welser, Bernie Hogan & Scott Titsworth. (2011). *Socioeconomic Status Updates: Family SES and Emergent Social Capital in College Student Facebook Networks.* Information, Communication & Society, 1-21.

[8]   Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *The American Journal of Sociology, 94*, 95-120.

[9]   Collins, N., & Miller, L. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin,* 116(3), 457-475.

[10]   Damian, E. & van Ingen, E. (2014). Social Network Sites Usage and Personal Relations of Migrants. *Societies*, 4, 640–653.

[11]   Donath, J., & boyd, D. (2004). Public displays of connection. *BT Technology Journal, 22*(4), 71.

[12]   Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook friends: Social capital and college students use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143- 1168.

[13]   Experian Hitwise. (2010). http://www.hitwise.com/us/datace nter/main/dashboard- 10133.html.

[14]   Franzen, A. (2003). Social Capital and the Internet: Evidence from Swiss Panel Data, *Kyklos*, 56(3), 341-360.

[15]   Goldfarb, A. (2006). The teaching role of universities in the diffusion of the Internet, *International Journal of Industrial Organization,* 24, 2, 203-225.

[16]   Granovetter, M. S. (1973). The Strength of Weak Ties. *The American Journal of Sociology, 78* (6), 1360-1380.

[17]   Grassi, Marzia (2009). *Capital Social e Jovens Originários dos PALOP em Portugal. Lisboa: Imprensa de Ciências Sociais.*

[18]   Haythornthwaite, C. (2002). Strong, weak, and latent ties and the impact of new media. *The Information Society*, 18(5), 385–401.

[19]   Haythornthwaite, C. (2005). Social networks and Internet connectivity effects. *Information, Communication, & Society,* 8(2), 125–147.

[20]   Helliwell, J. F. K., & Putnam, R. D. K. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society B: Biological Sciences, 359*(1449), 1435-1446.

[21]   Huysman, M., & Wulf, V. (Eds.). (2004). *Social capital and information technology*. Cambridge, MA: MIT Press.

[22]   Internet World Stats. (n.d.). *Internet World Stats*. Retrieved May 27, 2011 from *Internet World Stats*: http://www.internetworldstats.com/

[23]   Katz, J. , Ronald. E. Rice, & Apsden, P. (2001). The Internet, 1995-2000: Access, Civic Involvement and Social Interaction, *American Behavioral Scientist*, 45, 405-419.

[24]   Koput, K. W. (2010). Social Capital: An Introduction to Managing Networks. *Human Resources Management*, 50(4).

[25]   Krämer, N.C., Rösner, L., Eimler, S., Winter, S., Neubaum, G. (2014). Let the Weakest Link Go! Empirical Explorations on the Relative Importance of Weak and Strong Ties on Social Networking Sites. *Societies*, 4, 785–809.

[26]   Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukhopadhyay, T., & Scherlis, W. (1996). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53(9), 1011–1031.

[27]   Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet Paradox Revisited, *Journal of Social Issues*, 58, 49-74.

[28]   Lin, N. (2001). *Social Capital: A Theory of Structure and Action.* London: Cambridge University Press.

[29]   Lin, N., & Erickson, B. (2008). Theory, Measurement, and the Research Enterprise on Social Capital. In N. Lin, & B. Erickson, *Social Capital. An International Research Program* (pp. 1-26). Oxford: Oxford University Press.

[30]   Moll, R., Pieschl, S., & Bromme, R. (2014). Trust into Collective Privacy? The Role of Subjective Theories for Self-Disclosure in Online Communication. *Societies*, 4, 770–784.

[31]   Nie, N. H., & Erbring, L. (2002). Internet and society: A

preliminary report. *IT & Society*, 1(1), 275–283.

[32] Oswald, D. L., Clark, E. M., & Kelly, C. M. (2004). Friendship Maintenance: An Analysis of Individual and Dyad Behaviors. *J. Social and Clinical Psychology, 23*(3), 413-441.

[33] Pénard, T., & Poussing, N. (2010). Internet use and social capital: The strength of virtual ties. *Journal of Economic Issues,* 44, 3, 569-595.

[34] Portes, A. (1998). Social Capital: Its Origins and Applications in Modern Sociology. In *Annual Review of Sociology,* 24.

[35] Putnam, R. D. (2000). *Bowling Alone. The collapse and revival of American community.* New York, US: Simon &Schuster Paperbacks.

[36] Quan-Haase, A., & Wellman, B. (2004). How does the internet affect social capital? In M. Huysman & V. Wulf (Eds.), *Social capital and information technology* (pp. 113-135). Cambridge, MA: MIT Press.

[37] Resnick, P. (2001). Beyond bowling together: Socio-technical capital. In J. Carroll (Ed.), *HCI in the new millennium* (pp. 647– 672). New York: Addison-Wesley.

[38] Sherif, M. (1988). *The robbers cave experiment: Intergroup conflict and cooperation.* Scranton, PA: Wesleyan University Press.

[39] Shklovski, I., Kiesler, S., & Kraut, R. E. (2006). The Internet and Social Interaction: A Meta-analysis and Critique of Studies, 1995-2003", in: Kraut, Robert, Brynin, M., and Sara Kiesler (eds), Computers, Phones, and the Internet: The

Social Impact of Information Technology. Oxford University Press.

[40] Sunde´n, J. (2003). Material Virtualities. New York: Peter Lang.

[41] Torres, A., Silva, F. V., Monteiro, T. L., & Cabrita, M. (2005). *Homens e Mulheres Entre Família e Trabalho.* Lisbon: Comissão para a Igualdade no Trabalho e no Emprego.

[42] Valenzuela, Sebastian, Namsu Pak & Kerk F. Kee (2009). Is There Social Capital in Social Network Site? Facebook Use and College Students' Life Satisfaction, Trust, and Participation, *Journal of Computer- Mediated Communication*, 14, 875-901.

[43] Van Alstyne, M., & Brynjolfsson, E. (1996). Could the Internet balkanize science?, *Science* 274, 5292, 1479-1480.

[44] Vitak, J. (2014). Unpacking Social Media's Role in Resource Provision: Variations across Relational and Communicative Properties. *Societies*, *4*, 561–586.

[45] Wellman, B., Anabel Q., H., Witte, J., & Hampton, K. (2001). Does the Internet Increase, Decrease or Supplement Social Capital? Social Networks, Participation, and Community Commitment, *American Behavioral Scientist* 45, 437-456.

[46] Williams, D. (2006). On and off the Net: Scales for Social Capital in an Online Era. *Journal of Computer- Mediated Communication,* (11), 593-628.

[47] Woolcock, M. (2001). The Place of Social Capital in Understanding Social and Economic Outcomes. *Canadian Journal of Policy Research,* 2 (1), 1-17.