Impact of Internet Use on Social Capital: Testing Putnam's Theory of Time Displacement in Urban Pakistan

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There is a rapid growth of information technology in Pakistan and the use of social media in urban Pakistan. This study analyzes the impact of Internet use by the young individuals and its relationship with the social capital and interpersonal behavior. The study reveals that Internet uses affect the youth and displaces them physically from the social capital but on the other hand the users are socially getting closer virtually with the society. Other impacts of the use of Internet are withdrawal of interest in the national development, family affairs and community matters. The study confirms the Putnam theory of time displacement and its effects social capital.

Keywords: Internet usage, time displacement, social capital, virtual communication, Putnam, Pakistan

The advent of information technologies has brought faster and major changes in societies influencing people's patterns of communication and changing lifestyles. People are relying on digital media to gratify their social and psychological needs. Social media use facilitates the raise of individual's virtual ties but disturbs the social capital. Heavy social media users are more vulnerable to separate from physical social ties. Social media can isolate people and reduce social/family and outdoor activities (Attewell, Suazo-Garcia, & Battle, 2003).

Sociability is important for establishing and maintaining social capital. Use of digital media might change the nature and kind of the individual's social behavior and facilitate individual's virtual ties and disturb social capital. Computer-dependent communication might be used to reinforce virtual relations, but it also develops weak interpersonal and face-to-face communication (Granovetter, 1973; Resnick, 2001, Riphagen & Kanfer, 1997).

Many investigations have checked the impact of new media consumption on social capital, finding heavy new media users are more susceptible to be separated from usual social ties (Agarwal, Animesh, & Prasad, 2005; Beard, 2002; DiMaggio et al., 2004; Goldfarb, 2006; Weiser, 2001; Widyanto & McMurran, 2004; Young, 2009). Moody (2001) argues that excessive use of new media diminishes and displaces social activities since the user spends much time online and therefore, he/she in not able to take part in social activities. When people are busy and indulged in a large number of virtual contacts, these may reduce the stronger face-to-face communication (Kraut et al., 1998). Other studies report that excessive new media usage not only diminishes and reduces social circles but also raises melancholy and loneliness (Kraut et al., 1998; Lavin, Marvin, McLarney, Nola, & Scott, 1999; Nie & Erbring, 2000; Stoll, 1995; Turkle, 1996). The present study is based on Putnam's Theory of Time Displacement, which describes says the more time someone spends with new technology/social media, the less time that is given to family members, friends and other social activities.

This investigation analyzed the use of Internet and its impact on interpersonal communication network and social capital in urban Pakistan. Specifically, the study investigated impact of digital media on the young residing in Lahore.

LITERATURE REVIEW
Internet Use Trends in Pakistan

Use of digital media has rapidly spread in Pakistan especially in urban areas, and in all social classes. The use of new media in 2013-14 reached about 60 percent in Pakistan. However, Internet users are still only about 13-18% of the total population in Pakistan (Sajid, 2013). In Pakistan, social networking sites (SNSs) have become an essential ingredient for fun, excitement, and adventure for many, more than 8 million (see Table 1). People who can't catch up with their family members and friends in a face-to-face setting can greet them online. Sajid (2013) highlights that the 120 million mobile phone subscribers have significantly changed the media landscape in Pakistan. Kemp (2013) reveals that Pakistan stands at no. 5 among the largest mobile phone users in the Asian market.

Table 1
Pakistan Social Media Facts and Figures

Total Population	190,291,000
Population under age 30	67%
Population in Rural Area	64%
Social Network Users	8,007,460
Mobile Subscribers	120,962,829
One New Mobile subscription	Every 2 Seconds
3G Mobile subscription	500,000
Average cost of Mobile	Less than $100
Total Internet Users	29,128,970
Internet penetration in Pakistan	15%
Mobile Internet Users	15,000,000
Facebook use by Gender	Male 69%; Female 31%
Usage of Facebook	40 Minutes average per day
Time of Facebook usage	Between 6 p.m. and midnight
Average No. of Friends on Facebook	135
Using Facebook via Smartphone	30%
No. of Twitter users	1,900,000
No. of LinkedIn Users	1,200,000
Visits to YouTube	1,400,000

Sources: Kemp (2013) and Sajid (2013)

Interaction via social networking sites particularly, Facebook is gradually considered more comfortable and intimate. In Pakistan's urban setup, SNSs have become an indispensable tool of communication. All walks of people now are actively joining these networks for a variety of reasons: socializing, marketing, business, staying in touch with friends and family and so forth.

However, where social networking sites have benefits, there are crucial harms and risks attached to their usage (Shahid, 2015). These sites have somewhat cast a spell on the youth who cannot escape from the charisma and attraction of these attractive social interaction tools. SNSs have a strong influence on the youth and with more and more users joining it every day. Because of their charismatic appeal, it is necessary to study the reasons behind the observed behavior and attitude of users/consumers of these sites. The parents, educators, and technologists should know the potential risks and rewards of this phenomenon.

Putnam's Theory of Time Displacement

Putnam (2000), on the basis of his studies of television viewing, concluded that television is playing a role in declining social capital and constructed a theory of Time Displacement. The theory holds that new communication replaces old communication. Time spent with new media affects social capital at the expense of other daily activities and it reduces the time for face-to-face interactions. The researcher therefore, wanted to test the theory in the Pakistani urban society, which is a mixed in nature—traditional and liberal—to see that to what extent the theory is replicated. There is a common assumption that the Internet is affecting interpersonal communication and real-life relations of individuals in urban life. The term social capital spins around the social institutions, family affairs, society and customs that help in shaping the quality and quantity of a society's social interactions. Social capital is the glue that holds all these institutions as one (Bourdieu, 1980; Burt, 1992; Coleman, 1988). Every community or group is distinguished by a stratum of social capital that appears to be linked with the level of belief among groups of people (Bowles & Gintis, 2002). New media usage will be helping if used for normal routines; however excessive use can be harmful particularly for the daily life and family affairs. Studies indicated that excessive use of new media diminishes psychosocial comfort and resulted in the breakdown of family relationship (Whitty & McLaughlin, 2007; Widyanto & McMurran 2004; Yao-Guo, Lin-Yan, & Feng-Lin 2006).

Putnam's (2000) time displacement hypothesis states that heavy television viewers and Internet users have lesser face-to-face interactions. Different researchers established that online communication positively helps individuals in building social trust and motivating them to take part in social development (Best & Dautrich, 2003; Kobayashi, Ikeda, & Miyata, 2006). Kwak, Shah and Holbert (2004) argue that the scholarly clash between cyber cynic and optimists still continues, although it is obvious that the optimistic and pessimistic impacts of digital media on social capital are subjected to academic conceptualization of the medium (Williams, 2006). According to Williams (2006), the time displacement hypothesis has nothing to do with traditional and new media. While watching TV usually people do not talk with each other. Whereas, while sending or receiving e-mail, during chatting and using SNSs, people are engaged in interpersonal communication (Raacke & Bonds-Raacke, 2008; Shah, Kwak, & Holbert, 2001).

Contentment is judged in some way by societal affairs. In the case of digital media, it is assumed that those vigorously using social media are more likely to feel happier and experience connectedness (Diener, Emmons, Larsen, & Griffin, 1985; Kahneman & Krueger, 2006; Valkenburg, Peter, & Schouten, 2006). Ellison, Steinfield, & Lampe (2007) argue that college students with less pleasure use new media to increase their personal happiness/comfort. People get more emotional support at the time of personal crisis by using their trusted network of members (Uslaner, 2002). Social media networks allow consumers to acquire detailed information about their associations that includes individual surroundings, music flavor, wellbeing, and location. Such information can lessen hesitation concerning other users' behaviors and intent (Berger & Calabrese, 1975).

Generally, it is assumed that new media usage patterns related to community building and information acquisition play a positive role at the individual level. Whereas new media usage patterns in case of entertainment affect the production of social capital in a negative manner (Norris & Jones, 1998; Shah, Schmierbach, Hawkins, Espino, & Donavan, 2002; Wellman, Haase, Witte, & Hampton, 2001). Actually, use of new media itself does not shape one's social capital— rather the different ways of using the technology affect one's social capital. Williams (2006) argues that the kind of associations shaped by social media can build varied categories of social capital. According to the data collected on the quantity of email exchanged and the extent of those exchanges, they concluded that web phones, like other mobile phones, are particularly significant for upholding sturdy binds. According to McQuail (2005) the most apparent reason for new media users is the need for integration and social relations. Ahsan (2009) discusses that people like to move toward online social life more than trying to exercise socializing skills in the real world. According to the report of Daily Dawn (2015), the increased usage of Internet is reducing the time spent for other activities. People like to create new online contacts rather than making new contacts in the real world. Chen, Boase, and Wellman (2002) discuss how new media have influenced different aspects of communication and society. They conclude that due to the impact of new media, society is shifting from groups toward individualized networking. The heat of the impact has not only reached to the interpersonal level but also at the governmental, inter-organizational and even at the global levels.

The above-mentioned studies and reports conclude that the Internet impacts the social capital of people. It helps in producing strong or weak social ties. These studies enable the researcher to draw the following research question and hypotheses.

RQ1: What is the impact of Internet use on social capital (family and friend relationships) in urban Pakistan?

H1: The higher the use of Internet, the fewer real-time interactions with family and friends (social capital).

H2: The higher the use of Internet, the greater the use of social media will be, with more virtual interactions and fewer physical or face-to-face interactions.

METHODOLOGY

A survey method was applied to collect quantitative data from a large representative but mixed population of various universities students between September 2012 to July 2013. Due to time and budget constraints, three universities in Punjab were selected. For collecting information on the attitude and behavior about the phenomena from the public, the researcher selected Lahore city. The total population was 400 respondents, with 200 male and 200 female. The total population of this research study comprises all the youth with 20-25 years of age at Punjab universities and middle aged of 30 to 40 years, who have access to Internet and reside in Lahore. Due to the vast, mixed and scattered nature of the population, the researcher applied purposive and convenient sampling for data collection.

The questionnaire was pre-tested from five respondents in every group, which identified some deficiency in the questionnaire. The researcher amended the instrument before embarking on a full-scale survey. The reliability of the tool was confirmed through Cronbach's alpha, which was an average of 82% on the concept-based items in the questionnaire. Data on the questionnaire items were mostly obtained through the Likert scale.

The Key Concepts

Impact: Impact means all those changes that occur in the behavior and routine of people due to Internet usage.

Social Capital: Social capital means the family system, family relations and daily interactions, real-world relations with friends and face-to-face communication with family and friends.

Connection with family: To keep in touch with family members through social networking sites and the Internet.

To keep in touch with friends: To keep in touch with friends through social networking sites and the Internet.

Virtual ties: Online interaction and connection with family and friends.

Face-to-face communication with family and friends: Discussions, meetings with real-world relations, to spend quality time with real-world relations. Face-to-face communication with family and friends.

RESULTS

Data of the study were analyzed using descriptive and inferential statistic in order to answer to the research questions and test the hypotheses. Univariate analysis was used to explain the phenomena while multiple regression was applied to investigate relationship between usage of the Interest and social capital and how Putnam's theory of time displacement is workable in the Pakistani society. Statistical Package for the Social Sciences (SPSS Version 13.0) was used for the analysis.

The use of Internet and its impact of the social capital were analyzed through the multiple regressions and to check the applicability of Putnam's theory of time displacement in Pakistani society.

Table 2
Multiple Regression of Internet Use and Virtual Relationship

	Sum of Squares	df	Mean square		
Regression	646.80	4	161.701		
Residual	31.55	395	.080		
Variables	B	Std. Error	Beta	T	Sig.
Internet use keeps closer with friends and family virtually	.734	.033	.679	21.979	.000
Internet use makes new friends virtually	1.217	.033	.1.060	36.513	.000
Internet use decreases community involvement	-.980	.028	-.769	-4.500	.000

Multiple R: .976; R Square: .953; Standard Error: .283, F Value: 2.024; p: .000

The value of multiple R is .976 (Table 2), which indicates a positive significant and very strong relation between criterion variable (Exposure to Internet) and all the

independent variables. The value of R square is .953; we can infer that the model is explaining 95% of the variance in the criterion variable. The computed value of F (2.0243) and Sig. (.000) of the ANOVA suggest that the regression model is fit and overall statistically significant.

There was a significant relationship between the criterion variable "usage of Internet" and the predictors i.e. Internet use keeps closer with friends and family virtually (b=.679 and p=.000) and Internet use makes new friends virtually (b=1.2170 and p= .000). Thus H1 (Exposure to the Internet leads to virtual connectivity with society) was supported. However, the relationship between usage of Internet and community involvement was negatively found as per the hypothesized direction (i.e., 'Higher the exposure to social media, the less involvement in communal activities physically'). This confirms Putnam theory of Time Displacement due to excessive use of social media and its effects on social capital (family and friends).

Table 3 presents results of multiple regression, where the presumed predictors namely, Socializing with new people, Easier to communicate people, Keep in touch with family, Keep in touch with friends, and Content sharing were regressed against the criterion variable, Daily use of the Internet.

Table 3
Multiple Regression of New Media Use and Virtual Socialization

	Sum of Squares	df	Mean Square		
Regression	676.707	6	112.785		
Residual	1.653	393	.004		
Variables	B	Std. Error	Beta	T	Sig.
Socializing with new people	1.169	.006	.851	190.332	.000
Easier to communicate with people	1.770	.025	.202	70.642	.000
Staying connected with family	1.652	.011	.883	145.542	.000
Keep in touch with friends	.915	.013	.300	69.882	.000
Content sharing	.417	.010	.230	43.352	.000

Multiple R : .999; **R Square**: .998; **Standard Error**: .065; **F Value**: 2.6824; **p**: .000

The value of Multiple R is .999, which is statistically significant in a positive direction. The value of R square is .998; the model is explaining 99% of the variance in the criterion variable. The computed value of F (2.6824) and Sig. (.000) of the ANOVA suggest that the regression model is fit and overall statistically significant.

There was a significant relationship between the criterion variable "Use Internet" and the predictors i.e. Socializing with new people (b=.851 and p= .000); Easy way to communicate with people (b=.202 and p= .000); Keep in touch with friends (b=.300 and p= .000); Staying connected with family (b=.230 and p= .000); and Content sharing (b=.883 and p= .000). Thus H2 (Use of Internet leads to virtual socialization) was supported. It also indicates that Pakistani society is no more different than other societies of the world.

DISCUSSION AND CONCLUSION

This study explored impact of Internet use on social capital. Specifically, the study brought to light that Internet use affects the youth and displaces them from the social capital. The study indicates that there is a rapid growth of information technology in Pakistan and the use of social media in urban Pakistan. The Internet is most frequently used for e-mails, Facebook chatting for communication with their family, friends, colleagues, and unknown people, via e-mail, instant messaging or social network platforms. The study revealed that there is a significant reduction of landline telephone and face-to-face communication. On the other hand, the Internet is widening the gap among individuals by isolating them and reducing the time spent participating in social activities. These finding are in line with the results of previous studies.

Limitations of the study include focusing the study in one city, Lahore, and the convenience sampling. Further study could expand to other urban centers and use other sampling techniques.

The study confirms Putnam's theory of time displacement as the use of the Internet affects interpersonal communication and participation of a person in family and social affairs physically. The use of Internet shows a variety of impacts on the social relationship, such as its effects on family affairs, reduction of physical contacts with friends, and disengagement of youth in community involvement. However, Internet use helps the users virtually socialize with new people, family and friends. These factors have

also been supported in the previous studies. It is concluded that the use of Internet has significantly affected family life in urban Pakistan. Due to the excessive use of the Internet, the youth of urban Pakistan are not taking part much in the community activities, and lack interest in the national development. The other impacts of the use of Internet use are withdrawal of Internet user from taking interest in the national development, family affairs and community matters.

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