FACE TO FACE AND ONLINE SOCIAL CAPITAL:
THE WICHITA TWITTER COMMUNITY

A Thesis by

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The following faculty members have examined the final copy of this thesis for form and content,
and recommend that it be accepted in partial fulfillment of the requirement for the degree of
Master of Arts with a major in Communication.

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Deborah Ballard-Reisch, Committee Chair

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David Kamerer, Committee Member

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Gregory Meissen, Committee Member

DEDICATION

To the Wichita area Twitter community
It's amazing how much heart, thought and humor you people pack into 140 characters

ACKNOWLEDGMENTS

ABSTRACT

This study looked at the exchange of online and offline social capital among a group of people who share both an online network (Twitter users) and live in the same offline community (Wichita, Kansas). The study, recognizing that communities are social networks, utilized a triangulated methodology including a survey, focus groups and a case study to analyze social capital in online and offline networks, similarities and differences in the experience of social capital online and offline, and the transference of social capital between online and offline networks. Results indicate the presence of both online and offline bridging and bonding relationships and the transference of social capital between them. Implications of these findings for the enhancement of offline communities are discussed.

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CHAPTER 1

INTRODUCTION

In 1997 the first online social network site, Sixdegrees.com, was launched (boyd & Ellison, 2007). The designers intentionally used a unique approach, for the time, for the site's structure in an attempt to replicate something that they believed already worked in the offline world, social networks (Bedell, 1998). The site started with 140 members and within a year had over a million members. Although this venture was no longer in existence by 2001 the social network approach to online interaction has continued to grow.

As social networking grew on the internet, some perceived a loss of social connection within face-to-face communities. Robert Putnam (2000) voiced concern that American communities were eroding because of the disintegration of personal connections among community members. While Putnam blamed much of modern technology for the problem, he was unsure of the effects of the internet or online social media. Others were sure that online social networking was at least partially to blame for the difficulties of modern community life and believed it would grow to be a bigger part of the problem (Stoll, 1995). Still others, such as Rheingold (1993) and Wellman (1999) were, and remain (Rheingold, 2010; Collins & Wellman, 2010), longtime advocates of online social networks and claim these communities can create and maintain relationships that are just as significant and healthy as face-to-face relationships.

The question that seems to get lost in the debate is, are there benefits that might be shared between online and offline networks? Might they enhance one another?

CHAPTER 2

LITERATURE REVIEW

Social Media's Ubiquity

Social media are "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content" (Kaplan & Haenlein, 2010, p. 61). In the past few years both access to and participation in social media have grown tremendously. In December of 2009, according to the Nielsen Group, there were 142 million social media users in the United States, or 47% of the country's population (blog.nielsen.com, 2010). Eighty percent of the adults online in the United States use social media monthly. Ninety percent of those under 35 years of age, who are online, use social media at least monthly as do two thirds of those over 55 years of age (blog.forrester.com, 2010). Of all adults, 18 and older, in the United States who were online, 80% used a social media site like Facebook, MySpace or LinkedIn (Comscore.com, 2010).

The social media site Facebook began with access restricted to college students and did not open its site to general access until September 11, 2006. The site now has over 400 million users worldwide with 120 million in the United States. The average Facebook user spends 55 minutes a day visiting the site (Facebook.com, 2010).

Social Networks and the Web

Social networks are the patterns that result from the interconnected relationships among individuals (Freeman, 2004). The framing of relationship patterns as networks is "grounded in the intuitive notion that the patterning of social ties in which actors are embedded has important consequences for these actors" (Freeman, 2004, p 2). Actors can be individuals or groups and relationships are the connections among them. Networks are dynamic and change continually as

a result of interactions among actors as well as the influence of outside forces. Networks and actors mutually influence one another (Knoke & Yang, 2008).

This approach to understanding human relationships has been the focus of research in the social sciences for several decades (Wasserman & Faust, 1994). The network construct has been applied to the study of all manner of human interaction patterns including political parties and voting patterns, economic behavior, organizational behavior, health communication and the behavior of markets (Freeman, 2000).

Computer networks are also social networks that connect people together (Garton, Haythornwaite & Wellman, 1997). The discreet nature of computer-mediated communication makes it accessible to all manner of network analysis (Schneider, & Foot, 2004).

Starting in 1997 programmers began to intentionally use social networking principles to create sites and applications that would seek to draw users. Boyd and Ellison (2007) define these online social networks as web based services that have four specific characteristics:

1. The service provides a space for individuals to construct an introductory presentation of themselves. This profile may include information about the individual such as age, location, personal interests and other unique facts the individual chooses to include. The visibility of these profiles varies according to the rules of the service and (often but not always) the choices of the individual.

2. A list of other participants in the service with whom the individual possesses a connection. How the connection is formalized differs from service to service. Some services, such as Facebook, require a mutual agreement, while others (such as Twitter) allow connections that do not require acceptance by both parties. The identification of these connections varies as well. Facebook.com and MySpace.com

call these connections "friends," Twitter.com designates them as "followers" and "following," while others use terms such as "contacts" (LinkedIn.com) and "fans" (Delicious.com and many others).

3. The list of connections of other participants is visible and can be perused by other participants.

4. Participants have the ability to communicate with each other through private personal messages or public postings of messages or a combination of the two. (p. 2)

These online social networks function under many of the same principles as offline networks including the existence of the network itself and the occurrence and importance of social capital among network members (Blanchard & Horan, 1998).

Social Capital

A phenomenon associated with social networks, whether online or offline, is the presence of social capital. Coleman (1986), although not the first to use the phrase "social capital" in a discussion of communities and networks, conceptualized the term to explain the fluid nature of expectations and trust among the members of a community. The more the members of a community trust one another; the more they can accomplish as a community. Some members of a community are more trusted than others. Some are able to build trust among community members more effectively than others. Coleman saw this trust gaining and building as social capital i.e. something that, like financial capital, could be earned, saved and traded.

The definition of social capital is a source of contention (Williams, 2006). Some have defined it as the groups or networks that facilitate positive outcomes (Bourdieu, 1986) while others have defined it as the actual positive outcomes of relationships (Foley & Edwards, 1997). Putnam defines social capital as both the network itself and the norms that, "facilitate

coordination and cooperation for mutual benefit" (2000, p.66). This study will utilize Putnam's definition of social capital.

Strength of Connections and their Influence on Social Capital

Granovetter (1973) suggested that the dyadic connections in social networks are not all the same. He proposed four variables that, in combination, determine the strength of connections within a network. The variables were the amount of time two actors spent relating to each other, the emotional intensity shared between the two actors, the mutual confiding or intimacy shared and reciprocal service between the two actors. The result of the study showed that the greater the intensity of these variables the stronger the tie between the two actors.

Strong ties indicate that the actors share many connections with each other and their social networks greatly overlap. These strong relationships tend to be supportive and deeply meaningful but also insular. Often they are shared by people who are similar and have great trust in one another. Because of this Granovetter suggests that strong ties breed cohesion locally but also bring about fragmentation overall. The more tightly knit a group is the less likely they are to interact with or trust outsiders.

Weak ties serve people, and their networks, in different ways. They allow for connections between actors who may have little in common. They do not demand the investment of time and self that a strong tie does. They can be formed quickly and in larger numbers. Information exchanges can reach a much larger number of people and travel greater social distances. Granovetter suggests that weak ties are, "indispensible to individuals' opportunities and to their integration into communities" (1973, p. 1378). Studies on the significance of weak and strong ties and the role they play in innovation diffusion (Rogers, 1979), the efficacy of job searches (Lin, Ensel & Vaughn 1981), the interaction of subgroups in larger social networks (Friedkin,

1980) and the relationships between the members of online forums (Petr´oczi, Nepusz & Basz´o, 2006) are a few of the numerous uses made of this theory in research (See Petr´oczi, Nepusz & Basz´o's (2006) section, "the notion of tie strength in social networks" for an extensive reference list of applications of weak ties/strong ties theory to research on topics from environmental protection to terrorism).

From the beginning Granovetter believed this approach was not only important for understanding the dynamics of large scale interpersonal networks but also that, "the personal experience of individuals is closely bound up with larger-scale aspects of social structure, well beyond the purview or control of particular individuals" (Granovetter, 1973, p. 1377). The success of communities, neighborhoods and other organizations is influenced not only by the quality of its members but also by the types of connections shared by its members. Weak ties tend to benefit the group as a whole due to their more inclusive nature while strong ties can promote unity. A healthy mix of the two ties can make for a healthy community and the overabundance of either type can be detrimental to a community. The structure of the community may not be obvious to its members but its influence will be felt by the individual members.

Putnam (2000) was concerned with the effects of these relational ties on a community and viewed both strong ties and weak ties as crucial to the healthy functioning of a democratic society. He coined the terms bridging and bonding, intended to parallel Granovetter's weak ties and strong ties, to describe two different types of social capital that result when different norms and networks are in place. Social networks are the patterns that result from the interconnected relationships among individuals' bridging relationships. Similar to weak ties, bridging relationships occur when individuals make broad connections across social networks. They are inclusive, often tentative and lack depth. They open up opportunities for the sharing of

information and/or new resources. The diversity and scale of bridging connections enable people to discover information, learn more about those outside their close group and enable a greater openness to outsiders.

Bonding relationships tend to be exclusive and reinforce group identity while maintaining membership boundaries. These relationships provide emotional and material support and are the foundation of fraternal and sororal organizations, sports teams, and ethnic enclaves. Putnam calls bonding relationships the "superglue" of social capital while bridging relationships alleviate the friction between groups and function as communal "WD-40" (2000, p. 23). A healthy network needs both the cohesion provided by bonding relationships and the dynamic energy supplied by bridging relationships.

Both bridging and bonding ties have the possibility to exist online (Williams, 2006) as well as offline (Kim, Subramanian & Kawachi, 2006). The question for this study is, do they transfer between online and offline life? Do these online connections have the ability to affect the creation and maintenance of social capital in the offline world and vice-versa?

Offline and Online Networks are Similar but Communication among Members is Different

The rich data context of face-to-face communication does not guarantee understanding (Goffman, 1967). All the visual and audio cues that are helpful in communication can also be misleading or used to mislead. Context can hide as well as reveal meaning. When one only has text one cannot rely on old assumptions based on all the rich cues of physical encounters (Miller, 1951). Two theories, outlined below, Lea and Spear's (1992) social identity model of deindividuation effects (SIDE) and Walther's (1996) hyperpersonal model, illustrate the unique contributions that computer mediated communication can make to interpersonal communication.

It has been assumed, and often still is, that the anonymity (either full anonymity or the partial anonymity offered by not being physically present even if easily identified) afforded CMC participants leads to uninhibited and aggressive behavior, especially flaming (internet slang for angry and / or demeaning messages) and trolling (internet slang for a poster's intentional behavior that disrupts online discussion groups) (Donath, 1999). Research of anonymous and mediated behavior in the CMC environment paints a much more complex, community-oriented, or at least influenced, picture (Postmes, Spears & Lea, 1998). The loss of individual identity in CMC does not always lead to uninhibited behavior. In fact, the situational norms of a group, along with the lack of contextual and nonverbal cues, can powerfully influence the behavior of online communicators. The social identity model of deindividuation effects (SIDE) posits that what is unique to the online experience can reinforce conformity to online group norms. Flaming often occurs in CMC situations because of cues that encourage the behavior either intentionally or unintentionally, as when participants give the flamer an inordinate amount of attention (Donath 1999). Because individuating cues, such as physical context and nonverbal communication, are absent in text-based CMC, the cues that do occur take on greater value and partners often over-attribute meaning to the cues they are given. Misspellings, bad grammar, and over use of exclamation points can lead to a strong negative judgment of the sender. Likewise kind, positive statements can lead to strong positive feelings towards the sender beyond what they would receive in a face-to-face setting (Walther, 1996). Due to this lessening of individuation the communication context changes from one of dealing with idiosyncratic individuals to a context of a shared social identity. This shift from a personal identity to a social identity, in certain CMC contexts, can be a powerful enforcer of the norms of a group that would hold no power at all in a face-to-face setting.

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Building upon the SIDE model's observations that CMC receivers often over attribute meaning to cues is another example of the strength of the online communication experience in the application of the hyperpersonal model of CMC (Walther, 1996). The theory is built upon three unique characteristics of online, especially text-oriented, relationships. First, because of the lack of cues in CMC, as predicted by the SIDE model, an idealized perception of partners is often the norm. The lack of cues enables a greater control over first impressions and the opportunity to avoid physical/social judgments. Participants are also able to devote more cognitive resources to the communication process at hand and have less concern about their physical self presentations.

Secondly, because of the asynchronous nature of CMC (meaning that one does not need to immediately respond to another's message and can delay response, the amount of delay depending on the type of CMC), participants have time, should they choose, to carefully plan their responses and construct their presentations. Asynchrony also allows communicators to overcome the temporal limits of conflicting or restrictive schedules.

Thirdly, CMC feedback loops, since they are also composed of restricted cues, can lead to stronger positive (or negative) feelings because they will include less information that disconfirms previous perceptions and will be reinforce by the above mentioned characteristics of asynchronous and limited cue CMC. One may wonder why so many people would have such a positive perception of hyperpersonal online relationships (Henderson & Gilding, 2004), if they are characterized by selective self-presentation, idealization, and a lack of information. Walther suggests that they can be "profoundly rewarding." and "more desirable than we can often manage FtF" (1996, p. 28).

Both the SIDE and the hyperpersonal models suggest that the dynamics of online communication are not simply a poor substitute for the offline life but have a unique set of strengths, to go along with their weaknesses, when compared to face-to-face communication (Walther, 2009).

Though online and offline communication are different, there is research that suggests that collocated groups, those working online but living in the same area, may positively affect online relationships. Walther (2002) suggests that since members of collocated online networks may meet each other in the offline world, whether they actually meet or not, the potential to do so would lead to a positive effect on the group's online relationships. Online work groups that are collocated were found to exhibit more attraction and cohesion than online work groups that were distributed (i.e. none of the members lived in the same area) (Pena, Walther & Hancock, 2007). In another study, distributed online work groups were much more likely to blame their partners for group problems and refuse to take personal responsibility (Walther & Bazarova, 2007). Walther and Bazarova suggest that, "when one's group partners are less unknown, simply by virtue of being from the same geographical location or institutional affiliation- even if they have not met FtF—individuals cannot readily scapegoat their own misbehavior on amorphous or assumedly different partners" (2007, p 17).

A qualitative study of 33 older Chinese adults who were part of an online community that also met with each other face-to-face, found that the online and offline worlds were mutually constructed and the multiple channels generated stronger relationships than either a single online or offline channel (Xie, 2008).

Research Questions

Any community, regardless of size, is also a network of relationships between individuals (Putnam, 2000) and can be studied as such. The questions that arise from this understanding of community, and the above discussion on social capital then are first, "is there evidence of social capital among online networks and how does it compare to a person's experience of face-to-face social capital in a physical community?" and second, "Is there a transference between the social capital of online networks and offline networks, particularly a physical community such as a town or city?"

Framing these as research questions:

Social capital, defined as bridging and bonding, exists in both the online world and the offline world. Though actors may be members of an online network and share membership in an offline network, the medium of communication in both worlds is different and both differ in their strengths and weaknesses. Could the sharing of both networks, even though they differ in medium, affect the existence of social capital in the offline or online context?

RQ1: Is there evidence of online and offline social capital among online members of a social network where the same members share membership in an offline community?

If there is evidence of social capital in online and offline social networks with members of a social network that exists within an offline community, the question arises,

RQ2: How does social capital online compare to offline social capital in the experience of people who share both membership in an online and an offline network?

If it is found that people who share membership in both an offline and online network are aware of their experiences of social capital in their online and offline worlds and can compare their experiences in both contexts then the question becomes,

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RQ3: Does the social capital of an online network transfer to the offline world and vice versa?

CHAPTER 3

METHODOLOGY

To answer these research questions this study used a three-tiered approach in its methodology. While each approach was designed primarily to address one of the three research questions, they were also developed in an iterative fashion so that each method built on the findings of the prior methods and offered insight into prior research questions as well:

1.   A survey to allow for the collection of general information about a particular group of members of an online network who also engage with one another in an offline network was conducted. Survey results were used, in particular, to address RQ1.

2.   Focus groups were used to create a richer, more detailed understanding of social capital and how it is experienced, both online and offline, among members of this group in order to address RQ2.

3.   A case study of a particular sub-group of group members explored RQ3.

Institutional review board (IRB) approval was sought and obtained for all facets of this research. For the purpose of this study the Wichita area is sometimes referred to as a community, especially in the survey. The Wichita area, or Wichita area community, refers to the people who share residence in an area bounded by an imaginary border that extends 25 miles out from the Wichita city limits.

The focus of these methods was Twitter users that live in the Wichita, Kansas area and interact, at least some of the time, with one another. The group meets the criteria of being a network that shares computer-mediated communication while also sharing the same offline network, i.e. being citizens of Wichita, Kansas (Putnam, 2000).

Description of Twitter

Twitter is an internet-based computer-mediated communication web site. The site is text-based, although users can include links in their messages. Messages are limited to 140 characters. Twitter is sometimes referred to as microblogging (Java, Song, Finin & Tseng, 2007) since it has some of the characteristics of blogging but is very limited in bandwidth. There is no charge to become a member and joining is a simple procedure. Messages are called Tweets and users are called Twitterers. Twitterers can see Tweets on their Twitter site from people they choose to follow. Following someone requires clicking the appropriate icon. If users lock their access, they must approve those who request to follow them. Users can block someone from following them at any time, and can choose to stop following someone, thus no longer receiving their messages, at any time. The number of people users can follow is limited to 2000 unless more than 2000 people follow them. Twitterers can also send private messages, called Direct Messages (DM), to anyone who is following them. These messages function like email, are only available to be read by the receiver and are not part of the public archive.

Twitter is both one-to-one and one-to-many communication (Miller, Cody, & McLaughlin, 1994); all Twitter communication, except for DMs and accounts with locked access, takes place in the open, and may be observed by followers of both Twitterers who converse with each other. Users can also view another person's Twitter feed (the posts they have sent and received) by going to that person's Twitter page, unless they have locked access to their page. Twitter messages also appear in Google searches and are searchable, for about two weeks after a message is posted, through Twitter's API (a software program that allows other software to interact with the Twitter feed). Recently it was announced that every public tweet since

Twitter began in 2006 will be digitally archived at the Library of Congress (Library of Congress blog, 2010).

Twitter updates may also be sent to or from handheld devices or cell phones via the short messaging service (SMS) that allows text messages to be sent between cell phones. The choice to use SMS for Twitter messages meant Tweets would be restricted to the SMS limit of 140 characters per message. There are also a number of web-based applications and smart phone based applications that allow a registered Twitter user to read their tweets and communicate with others without going directly to the Twitter web site. These applications, such as Tweetdeck, Seesmic and others, provide users unique ways to view messages and communicate with others (DeFebbo, Mihlrad & Strong, 2009).

The Survey

As stated in Wrench et. al. (2008), "a survey is a social scientific method for gathering quantifiable information about a specific group of people by asking the group members questions about their individual attitudes, values, beliefs, behaviors, knowledge and perceptions" (p. 213-214). The survey was used to address RQ1.

The survey was offered online through the web tool, Surveymonkey.com. A network sample of all Twitter users geographically located within the Wichita area was invited to participate. The study author publicly tweeted a brief message inviting all Wichita Twitterers to participate in the survey. The message was sent three times a day, at 8:00 am, 1:00 pm and 7:00 pm, to all those who follow him. A link to the online survey was included in each tweet as well as a request to "retweet" the message. Retweet is a convention of Twitter that means a message received by one Twitterer can be resent, with its original content, on to all the followers of

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another Twitterer. This allowed the coverage of the message to extend far beyond the number of followers of the original Tweet.

SurveyMonkey's paid option was used which provided a full array of design, tracking and analytic tools. The data was downloaded and analyzed with SPSS software. Only people who identified themselves as Twitter users in Wichita were able to complete the survey. Participants were also asked for their home Zip Code as a secondary way to assure the responder resided in the study area.

The survey consisted of two sections, a demographic section that asked questions which, while not identifying individual participants, enabled an analysis of the aggregate data gathered by traditional categories such as age, sex, marital status, general income and employment (the full online survey is in Appendix A).

The second section of the survey focused on RQ1 and used questions from the Internet Social Capital Scales (ISCS) developed by Williams (2006). The scale operationalized social capital as two outcomes in the responder's experiences with online and offline bonding and bridging relationships.

The scale has a series of 10 questions in the bridging sub-scale and 10 questions in the bonding sub-scale. The questions are asked twice, utilizing a 5 point Likert scale with response sets ranging from "strongly agree" to "strongly disagree." The questions are asked first in relation to online life (in this case, Twitter interactions) and then in relation to offline life. This makes for a total of 40 responses for each survey (see Appendix A). Although the scale is relatively new it has been used in other studies investigating college student relationships on and off Facebook (Ellison, Steinfield & Lampe, 2007), as well as a follow up study a year later to provide a longitudinal study of many of the same college students and the effects of Facebook on

their bridging and bonding social capital (Steinfield, Ellison & Lampe, 2008). In this study intensity of Facebook use in the first year strongly predicted the presence of bridging social capital in the second year, even after controlling for self-esteem and satisfaction in life as contributing factors. Those with lower self-esteem gained more bridging capital from their Facebook use than high self-esteem participants. A study on the use of online communities to promote social capital among high school students (Tomai, et. al., 2010) also made use of the scale as did a study of bridging and bonding behavior in relation to IBM's SNS Beehive which found, among other things, that the more a person used the site the more likely bonding and bridging social capital were present (Steinfield, et. al., 2009). Some of these studies modified the scale with questions of their own design but the original concept and framework seemed to stand up well in these studies. Alpha reliabilities of both the 10-item bonding and bridging subscales have been strong for both online and offline comparisons (Williams, 2006). Scores are (a=.896) for the bonding scale online, (a=.859) for the bonding scale offline, (a=.841) for the bridging factor online and (a=.848) for the bridging scale offline. The wording in the survey that was used for this study was modified to maintain the responders focus on Wichita area Twitterers and the Wichita area community.

Focus Groups

Focus groups are a method of gathering qualitative data that can lead to a richer understanding of the thoughts and practices of participants. A moderator guides a discussion among a small group (usually 6-8) who come from similar backgrounds regarding an issue of interest to the researcher (Morgan, 1998). There are at least three strengths of focus group data: exploration and discovery of information about and attitudes of the group being interviewed, information about the context, experiences, and history of the group, and understanding of

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current group conditions and characteristics and how they got that way (Morgan, 1998).

This study used two focus groups. The first was an online focus group of three local Twitter users; the second was a face-to-face group of six people.

The participants were selected from a list of Twitter users who identified themselves on their Twitter profile as living in Wichita, KS or ICT, KS (ICT is a common nickname for Wichita that comes from the federal designation of the airport in Wichita). The site Twitterholic.com (which recently changed its name to Twitaholic.com) gathers information from Twitter profiles and can aggregate the data according to the location reported by an individual's profile information. Using this aggregation feature, a ranking of the top 100 Wichita, KS Twitter participants, according to the number of tweets posted, was compiled. All business accounts were then removed from the list. The list was further reduced by removing all those who did not have both >100 followers and >100 friends, i.e. accounts the Twitterer follows. Each of the resulting names was copied to the site Random.org which produced a random listing of the names. Each name was contacted, beginning with the first name listed until eight names had agreed to be a part of a group. Due to last-minute cancellations only three people were available for the online focus group while six participated in the face-to-face group.

The online focus group was convened on the website Coveritlive.com. This site facilitates online discussions between an unlimited number of participants. Although it is intended to provide an internet accessible discussion available to the public, the privacy of the focus group participants was guarded at all times. The site was not posted on a website and the name of the "event" was a nondescript series of numbers. The participants were given the status of panelists which allowed their comments to come through unfiltered and they used pseudonyms on the screen. The participants were aware of the real names of other participants and the focus group

leaders. Three other people, the author, a professor and a graduate student helped monitor the discussion. The author asked questions which had been provided to the participants in advance (see Appendix B) and both the author and the professor asked follow-up questions. The complete transcript of the discussion was copied from the site for analysis.

The face-to-face group met in a room together and was asked the same set of questions the online group was asked. The author, the professor and a different graduate student monitored the discussion. The author asked questions and probed for responses, the professor recorded major points from the discussion by question on the white boards surrounding the room, and the graduate student recorded the discussion digitally while also taking notes on her computer. The recording and the notes were preserved for analysis.

Questions for both groups sought to probe deeper into any experiences participants had with, or opinions about, social capital, comparisons of their experiences with social capital online and offline and their perceptions of transference of social capital between their online and offline networks.

Case Study

The third component of this study was an exploratory case study. Case studies gather and analyze qualitative data to examine a contemporary event when the relevant behaviors cannot be manipulated (Yin, 2009). This case study focused on a group of Wichita area residents that first met each other on Twitter during the U.S. presidential election campaign of 2008. Through interaction on Twitter, this group decided to go to the inauguration together and organized their trip and all the other events surrounding it using Twitter as well as other social media. This group became known as ICT2DC and consisted of three men, three women and a group of supporters and backers.

The case study utilized individual interviews with the ICT2DC members that focused on the time periods before, during, and after the event. A group meeting and a panel discussion were held with the members previously. The questions used in the interviews and the panel discussion can be found in Appendix C.

Triangulation

Triangulation, or the use of multiple methods and sources of data, is an important strategy in research (Mathison, 1988). The choices of methodology and data sources in this study were made with triangulation in mind. The intent was not to cause a convergence of data upon a single theory or hypothesis. The purpose behind using these three methods, and the various data sources they demanded, was a richer, fuller understanding of the dynamics of social capitol in online networks and offline communities, particularly between the Wichita area Twitter network and the Wichita area community. Each methodology was primarily designed to address one of the three research questions. The survey was primarily designed to answer RQ1, the focus groups were intended to answer RQ2 and the case study was conducted to address RQ3. However, as the three research questions build upon each other and the methodologies also build upon each other, data from all three sources were examined for contributions toward understanding the three research questions. This triangulated and iterative approach provided a fuller, richer understanding of the nature and dynamics of online and offline social capital among Twitter users who live in the Wichita area.

CHAPTER 4

RESULTS

Survey

The online survey of Wichita area Twitter participants was opened to respondents on April 10, 2010 and was closed on April 19, 2010. 191 people answered, "I agree" to the first question, "I have read and understood all information regarding this survey and agree to participate." Of those 191, 155 completed the whole survey including all four of the bridging and bonding scales. All of the following information is confined to the information supplied by these 155 participants.

The respondent's demographics. Among survey respondents there were more females, 55% (N = 84), than males, 45% (N = 69). The average age of survey participants was 35.78 (SD 10.44) while the range was 51 years from a minimum of 18 years old to a maximum of 69 years old. 53% (N = 81) of the respondents were 26 to 40 years old, while 29% (N = 47) were 41 years old or older. 18% (N = 27) were younger than 26 years old.

Two-thirds (67%, N = 104) of the participants had earned at least a bachelors degree and one fifth (20%, N = 31) had earned a post graduate degree. A third of the respondents (34%, N = 52) were single while a little more than one half (56%, N = 86) were married. Another 10% (N = 16) described their relationship status as, "living together." The overwhelming majority of respondents (95%, N = 147) most closely identified their racial ethnic group with the description, "white or European." The yearly household income for most (58%, N = 87) was $50,000 while more with a third (33%, N = 49) made $75,000 or more.

The average person filling out this survey would be a white, 36-year-old, married, female college graduate with a yearly household income of $50,000 or more.

The survey respondents also supplied information on their Twitter use. The average number of months a respondent had used Twitter was 20.45 months (*SD* = 11.94). 28% (N = 44) of respondents had been on for a year or less and 25% (N = 38), for two years or more. The majority (47%, N = 73) had been on for more than a year but less than two years. The majority (60%, N = 83) spend seven hours or less on Twitter each week while 21% (N = 32) spend 15 hours or more per week on Twitter.

During their time on Twitter the respondents have posted an average of 3,251.98 tweets (*SD* = 3,896.99). This high standard deviation is the result of a dramatic negative skew and a very high range of posts from a maximum of 23,000 posts to a minimum of 10 posts. Approximately one third (35%, N = 54) of the group had posted 1,000 tweets or fewer, 30% (N = 46) had posted between 1,001 and 3,000 tweets, and35% (N = 53) had posted more than 3,000 tweets. Eight percent (N = 11) had tweeted more than 10,000 times.

The respondents' Twitter accounts ranged from a minimum of five followers to a maximum of 7,500. The average number of followers for a respondent was 451.05 (*SD* = 745.52). Again the high standard deviation number is caused by a negative skew and large dispersion of scores. Almost a third (30%, N = 46) had 150 followers or less, 25% (N = 38) had between 151 and 300 followers, 19% (N = 29) had between 301 and 450 and 27% (N = 42) had 451 or more followers. The 22 respondents with the largest number of followers had 50% of the total number of followers of all respondents.

The numbers are not quite as skewed, but still negatively skewed, when looking at how many people the respondents follow. The least number of Twitter accounts followed was five while the greatest number of accounts followed by a respondent was 2,300. The average number of Twitter accounts a respondent followed was 308.30 (*SD* = 319.41). 36, or 23%, followed 100

or less, 27% (N = 41) followed between 101 and 200, 29% (N = 45) followed between 201 and 400 and 33% followed 401 or more Twitter accounts.

Thirty nine percent (N = 60) of the respondents had never been to a Tweetup and another 37% (N = 57) had been to between 1 and 5. 97% (N = 150) of the respondents are on Facebook; 64% (N = 99) of them blog and 52% (N = 81) are registered with LinkedIn.

Using the median numbers for the Twitter account categories, along with the information mentioned above, a profile of the typical respondent would be as follows: At the time of this study, she had been on Twitter for about 18 months and spent a little less than 7 hours (6.5), or about an hour a day, on her Twitter account. She had around 280 (284) followers and followed around 200 (205) accounts; she had posted about 2,000 tweets and had been to at least one Tweetup. She was on Facebook and also had her own blog.

The respondent's Twitter experience. The topics respondents report that they twitter about, while not necessarily related to social capital, reveal something about the focus of Twitter posts and, perhaps, some of the topics avoided by many of these respondents. The topics that respondents reported that are most likely to be tweeted about occasionally were entertainment (64%, N = 98), education/academics (56%, N = 84) and sports (47%, N = 72). The topics they reported they were most likely to tweet about several times a day were personal experience (23%, N = 35) and family/friends (9%, N = 14). In fact the topics that were most likely to be tweeted more than occasionally (adding together the daily, weekly and several times a day categories) were personal experience (84%, N = 129), interest/hobbies (72%, N = 114) and family/friends (61%, N = 94).

The topics which were most likely to never be tweeted about were politics/politicians; 42% (N = 65) reported they would never tweet about politics or politicians and only 21% (N =

31) reported they were likely to tweet about politics/politicians more than occasionally. Sports was the next least likely to be tweeted about with 37% (N = 57) reporting they would never tweet about sports. (Topics and survey responses can be found in Appendix D).

The first research question in this study asked if there was evidence of social capital, both online and offline, among members of the Wichita Twitter community. Before the four bridging and bonding scales are discussed there was a great deal of evidence that social capital activity could be found among the survey respondents. In the series of questions, "Why do you tweet?" (see Appendix D for the complete list of questions and the percentage of responses), there are eight questions in which 66% either agree or strongly agree with a statement. Of those eight questions, four of them affirmed activities that play a direct role in the process of social capital. Eighty five percent of the respondents agreed, or strongly agree, that they tweeted in order to, "meet new people" and to "feel they are part of a community". The respondents also strongly agree, or agree, that they tweet to, "keep in touch with family and friends" (74%, N = 112) and "to present information on my interests" (84%, N = 129). These responses show that the actions and attitudes that enable and encourage social capital are a large part of the actions and attitudes of the Wichita area Twitter users and lay the foundation for discussion of the results for the bridging and bonding scales.

Bonding and bridging, both online and offline. As mentioned in the methodology chapter, there were four different social capital scales used in this study. Each scale has ten questions and uses Likert scales that include the responses: strongly agree, agree, don't know/not sure, disagree, and strongly disagree. Since a score of 1 was assigned to each strongly agree response, a 2 to an agree response, a 3 to a don't know/not sure response, a 4 to a disagree and a 5 to a strongly disagree the highest score in each scale (5x10=50) would signify no experience of

the bridging or bonding that it was intended to measure. The lower the score, the greater the experience the respondent had with bridging or bonding, offline or through Twitter, depending on the scale being analyzed.

All four of the scales were submitted to factor analysis and no subscales were detected within the four scales. All four of the scales were found to be highly reliable. The Wichita Bonding scale (10 items, α = .88) and the Wichita Bridging scale (10 items, α = .91) both measured the presence of the experience of network ties in the responder's offline relationships with people in the Wichita area. The Twitter Bonding scale (10 items, α = .88) and the Twitter Bridging scale (10 items, α = .90) measured the experience of network ties in the responders' online relationships, through Twitter, with people in the Wichita area. Each of the scales showed strong evidence that both bridging and bonding ties were experienced by the responders both in their offline relationships, as expected, and in their Twitter relationships.

A score of 24 or less was designated the positive range for each scale. A score of 20 would indicate the person was averaging a score of 2 on all ten questions for that scale. A 2 on the scales is the numerical level for the agree answer and would signify the responder had, on average, positively experienced the effect across the board. A score of 25 would mean an average of 2.5 for each response which is still on the side of a positive experience (a 3 on the scale means the responder was not sure they had experienced the effect).

The mean score of the Wichita Bonding scale (N=155) was a 19.62 (*SD* = 6.88) and the median was 20. Fully 77% (N = 119) of the responders scored in the positive range. The mean score for the Wichita Bridging scale (N = 155) was 21.77 (*SD* = 6.61) and the median was 21. The number of responders that fell in the positive range was 119, or 77%.

The Twitter Bonding scale scores (N = 154) were the highest, and therefore the least

positive, of all the four scales. The mean for the Twitter Bonding scale was 25.01 (SD = 7.73)

and the mode was 24. The percentage of respondents that scored in the positive range was only

52% (N = 81). The last of the scales, Twitter Bridging (N=152), had a lower mean score, 20.33

(SD = 6.39), and a higher percentage of positive responses, 81% (N = 125), than the offline

Bridging scale.

There was a significant matrix of positive correlations found among the four scales (see

Appendix D). There was a significant strong positive correlation between the Wichita Bridging

scale and the Twitter Bridging scale (r = .63, p = .00) with a percentage of common variance of

40% (r^2 = .40). There were three significant moderate positive correlations between: the Wichita

Bridging scale and the Twitter Bonding scale (r = .48, p = .00) with a percentage of common

variance of 23% (r^2 = .23), the Wichita Bonding scale and the Twitter Bonding scale (r = .46,

p = .00) with a percentage of common variance of 22% (r^2 = .22), and the Twitter Bonding scale

and the Twitter Bridging scale (r = .41, p = .00) with a percentage of common variance of 17%

(r^2 = .17). There was a significant weak positive correlation between the Wichita Bonding scale

and the Wichita Bridging scale (r = .295, p = .00) with a percentage of common variance of 9%

(r^2 = .09). There was no significant correlation found between the Wichita Bonding scale and the

Twitter Bridging scale (p > .05). Analysis of the four scales supports an affirmative response to

RQ 1. There was evidence of offline social capital, both bridging and bonding connections,

among these Twitter users who share a membership in an offline community, in this case the

Wichita, Kansas area. Three-fourths of them experienced positive bonding relationships in their

offline life. In this same group three-fourths reported positive bridging relationships in their

offline lives as well.

This group, Twitter users who live in the Wichita area, also shared social capital online in their relationships on Twitter. Positive bonding relationships in their online, or Twitter relationships, were identified by more than half of participants, the smallest number of participants to report any of the four types of relationships measured. Participants also experienced bridging relationships on Twitter (81%, N = 125), a larger percentage than the number who reported a positive bridging experience in their face-to-face relationships.

Focus groups

In seeking to answer RQ2, "How does social capital online compare to offline social capital in the experience of people who share both membership in an online and an offline network?" this study analyzed data acquired from two focus groups: an online focus group conducted May 6, 2010 that lasted 1 hour and 5 minutes between 7:00pm central and 8:05 pm central and a focus group that met on May 12, 2010 at Elliott Hall on the Wichita State University campus for 1 hour from 7:00pm to 8:00pm central time. A total of nine people participated in the two groups, five females and four males. Four of the group listed their age in the 26 to 35 year old category; three reported being in the 36 to 45 year old category, one in the 46 to 55 year old category and one in the 56 to 65 year old category.

Data was compiled from the notes taken during the face-to-face focus groups and the transcript from the online focus group using a constant comparative method of analysis (Glaser & Strauss, 1967) in both a deductive analysis and inductive analysis in a reiterative process in order to determine the predominant themes from the discussions across groups.

Two main categories of themes became evident in the analysis. Under each of these categories were identified major themes, those that the two groups devoted a lot of attention and thought to, and minor themes, those themes that seemed important to one or both of the groups

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but attracted less focus. The two main categories were Relationship-Related themes and Personal Focus themes. The minor themes under Relationship Related were: Twitter and families, Facebook and Twitter, and Twitter and live events. The major themes that were Relationship Related are: Relationship maintenance and Twitter and the local community.

The minor themes that fall under the Personal Focus category include: The importance of Twitter, Customizing Twitter, the benefits of Twitter, the negatives of Twitter and Twitter as an outlet. The one major theme in this category was Twitter and information.

Personal focus themes

Minor themes

The importance of Twitter. Some felt that if not for Twitter they would have missed out on meeting people that they now value knowing. One felt like Twitter had saved his job. Others felt like Twitter provided them with entertainment and information they would not have found otherwise. "I joined it on a lark, for fun. It became much more a part of my life than I expected."

Customizing Twitter. One idea that popped up a few times in the course of the discussions was how different people would use Twitter in different ways. One person said they mostly used Twitter for weather updates and to follow another person's blog updates. A couple pointed out how they both used Twitter differently in how they communicated with family and friends. One used Twitter to stay in daily contact with parents while the other used Twitter to keep tabs on family members but only directly contacted them during long trips. Many comments were made that began with a variation of, "I don't use Twitter the way other people do."

The benefits of Twitter. Almost every member of the two groups chose to mention something they found uniquely beneficial about Twitter. They thought it had improved their writing by forcing them to be concise. One person said, "It's like magic for journalists, forcing

you to take that long lead and make it smaller." Others thought it had helped them become better communicators because it forced them to be concise. Others liked that it allowed them to stay in contact from anywhere (via mobile phone). Many liked what Twitter brought them; information, entertainment, news, or friends. This minor theme encapsulated a sense that Twitter brought something positive into users' lives or, as person described being on Twitter as, "It's like being at a party."

The negatives of Twitter. The participants were not naïve in their evaluation of Twitter and also recognized there were drawbacks to using the service. Some felt that being on Twitter had decreased their attention span or caused them to be less patient when dealing with others. They felt that Twitter was having a bad influence on others writing skills because of the penchant of some to use phonetic spelling and abbreviations. One observed that, "Everyone is starting to write like Prince" referring to the musician known for his fondness for replacing words with a single letter or number like U for "you" or 2 for "to." Some worried about the dangers of sharing too much personal information. A couple had negative encounters with others on Twitter; one when a politician responded to some negative comments the person had made and the journalist had a couple of death threats sent to him via Twitter.

Twitter as an outlet. A few saw Twitter as a safe place where they could vent their frustration, "If I am frustrated I like to throw something out there. Then I feel better," or anger, "There are times when you are crunched for deadline, or someone screwed you over. I just want that to be there on Twitter." Others like the opportunity to not take things so seriously and, "be funny or stupid" without trying to impress anyone..

Major theme: Twitter and information. This was an important theme in both discussions. One person stated the expectation that the rest of the two groups, in one way or

another, voiced, "The thing I expect from Twitter is information." Participants relied on Twitter for weather and news ("It's my main source for news") both locally and nationally.

They also viewed it as a venue to help them with problems. They post a difficulty they are experiencing, or a question they have, and they expect, because of experience, that someone will provide them with an answer to solve their problem. One said, "It's a great place to ask questions."

They shared stories of companies responding to their complaints about a product even though they had not contacted the company, only complained about the product on Twitter. One had received a book from a publisher after the person mentioned on Twitter that their dog ate their copy of the book. One was surprised to receive a recipe from a celebrity chef on Twitter. This person also had a t-shirt sent to her by an anonymous benefactor after she had mentioned on Twitter that she liked the shirt.

A quote from another participant sums up this theme, "I now expect Twitter to have answers for me. When I have a problem with a product, I am disappointed if I post and don't get help within 24 hours."

Relationship-related themes

Minor themes

Twitter and families. Along with the over arching discussions about relationships on Twitter there was some specific discussion about interacting with family members on Twitter. A husband and wife thought that Twitter aided their communication with each other, "With Twitter we have a venue to communicate when we are struggling with face-to-face communication." One person said she used Twitter to keep in touch with her mother and father; another indicated his father never went on Twitter except when his son took overseas business trips so he could

stay in touch with his son. Another felt closer to her siblings since they had started staying in contact on Twitter.

Facebook and Twitter. The topic usually came up in discussions about extending relationships beyond Twitter or curating relationships online. Facebook was viewed as a place for relationships with family or friends one already knew, "The family and friends, the people I haven't heard from for years until now, those are on Facebook."

Twitter and live events. One participant mentioned the "water cooler" aspect of Twitter around events. He felt that it was hard to talk about a TV show at work because so many people time-shift by recording shows or watching them online it and he didn't want anyone to spoil the show before they saw it. This observation lead to a discussion about the fun of watching live events while reading and posting tweets. The Academy Awards Show was mentioned as one such event. "If it's a major event you get that water cooler experience on Twitter."

Major themes

Relationship maintenance. This theme has four subthemes within it. All of them center around Twitter friendships: ease of connection, avoids interrupting daily life, the unique properties of CMC, and the process of creating and maintaining relationships.

Ease of keeping in touch -- The group members felt that Twitter allowed the participants to easily keep in touch with people, "it's just a sense of keeping up with the smaller details in life." They are able to stay in touch with a number of people, "I've met people from all over the world on Twitter," and have a sense of closeness with them because they are informed about the details of their friends' lives.

Avoids interruptions-- Along with this sense of connection there is the sense that they can stay connected to people without interrupting their friends, and their own, busy lives. "Twitter

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takes away that pressure of making a phone call and having something to say right then and not interrupting someone else's day."

The unique properties of CMC-- They are aware that there is information that is shared between friends that might not be shared in a face-to-face setting and that even links posted and retweets communicate something about the people they are following. "You get to hear people differently."

The process of creating and maintaining relationships-- There was discussion of the kinds of tweets that users would respond to, especially messages of humor and warmth, ("A few good Twitter friends have come about by someone sending me a snarky DM.") and how respondents would try to build relationships by responding to peoples' messages ("I think it starts with just replying to someone's post). They also spoke about how some relationships developed into closer relationships ("Twitter is sort of the gateway to where the closer relationships can be cultivated"). Some spoke of close friends they had first met on Twitter, "I have met lots of people through Twitter, many have become personal friends."

 Although they were cautious of meeting someone face-to-face they only knew from online ("I still don't trust Twitter completely for really reading people") they felt that it had been worth the risk to make these friends, "I've met so many people on Twitter that I end up being friends with in real life; it's limitless really."

Twitter and the local community. The intertwining of face-to-face relationships and Twitter relationships was evident throughout both groups discussion, but it was particularly evident in the conversations that supply the data for this theme. The conversations fell into five subthemes:

Connecting with the local community is an intentional strategy-- Most talked of choosing to follow local people and wanting to know local people. "95% of the people I follow are local."

A sense of discovering the local community through Twitter-- One said Twitter had allowed her to, "Get to know a city that she had lived in for 12 years." Others spoke of the new perspective they had on Wichita and its citizens. One reveled in the fact that when her dad needed a local mechanic she knew of one from Twitter.

Delight that Twitter aided them in being known by others in the community-- They were making acquaintances with people they had never thought they would meet and a few close friends. One male participant remarked that people he didn't recognize would speak to him because they recognized him from his Twitter avatar. Another sent out a general invitation to his birthday party through Twitter and Facebook. He felt the diverse group of people that showed up made him part of something he would never have been part of before.

The recognition that the connection between Twitter users and the local community is a special situation-- One of the members travels and works with other Twitter users in other areas. He says his colleagues in other cities are surprised by the diversity and connections among Wichita Twitter users. He says no one from other locations claims anything similar. Others spoke of the cross section of people they encounter on Twitter and have met offline. The reason for this seemingly unique dynamic is not clear. Some thought it might be because "the Midwest is a friendly place" in comparison to other locations. Others thought the size of the town made it less likely to form cliques on Twitter.

The local nature of Twitter-- This theme was driven home by the number of tangible events that illustrated the cross over between Twitter relationships and face-to-face relationships; Participation in a book club that was created by Twitter friends, one participant had his knee

replaced and needed rides to physical therapy. A number of people who knew him from Twitter volunteered to provide transportation. Often the first time he met them face-to-face was when they came to give him a ride to his physical therapist. Another person told of his car breaking down but having a ride to work five minutes after he tweeted his problem while another told of needing a ride in a snowstorm and someone from Twitter providing the ride.

An analysis of the two focus groups reinforces the conclusions offered by the survey concerning RQ 1. Social capital, in both bridging and bonding, is something that is experienced among Twitter users in the Wichita area. There are strong friendships formed and maintained by some Twitter users and they are glad to tell of them. There are many acquaintances initiated and maintained on Twitter as well and they have positive effects on both the Twitter community and the Wichita community.

RQ 2 is concerned with a comparison of these experiences of online and offline social capital. There does not seem to be any disappointment with the quality of participants' Twitter relationships nor does there seem to be criticism of the quality of those relationships that are formed on Twitter but grow to encompass their offline time as well. There does not seem to be a conscious awareness of a difference in the origins, maintenance or utility of online and offline social capital. Perhaps the best answer to RQ 2 is that offline and online social capital compare favorably only in that they do not seem to draw comparisons to each other as dissimilar experiences. Even with the recognition that their online relationships are different, there does not seem to be a conscious comparison of the two. This could be because it has not occurred to the participants. Or it could be that the two seem interchangeable rather than competitive, that the division of online and offline social capital is an artificial one when a local community is

involved in both kinds of relationships. These issues lead to an analysis of the case study in an attempt to address RQ3.

Case Study

On November 4th, 2010 the Democratic Party of Wichita, Kansas held a watch party at the Murdock Theater. As the evening's events unfolded and the election of Barack Obama to the office of President of the United States of America seemed certain, some who were at the party shared their excitement through their Twitter accounts. At some point in the evening one person proposed, over Twitter, that those who wanted to go to the Inauguration should try to go together. Ultimately the person who first proposed the trip was unable to go because of job constraints. But six people formed the group ICT2DC and made the trip. Only two of the group knew each other well, a married couple, and two knew each other vaguely from an online gaming group. The rest had never met face-to-face before the election. Their only connection was through Twitter. All six credit Twitter with being a major influence in the organization and execution of the event and for each person's participation in the trip. One member suggested, "the trip couldn't have happened without Twitter." Another member explained, "Twitter formed a basis of trust that allowed us to take the risk."

Two of the group had bachelor's degrees and three others had some college experience. The oldest was in his early thirties and the youngest was 20. The rest were in their mid to late 20s. Three of the travelers were males and three females. Another person gave extensive technical assistance in preparation for the trip and during the trip. All six considered him a member of the ICT2DC team.

Social media was at the center of the ICT2DC experience. The group constructed a website, ict2dc.com (which is no longer active), to document the trip. On the web site readers

could access blog postings from the group and follow their progress on a map. They also had a Flickr.com account where they posted all the photos they took during the trip and had a Twitter account for the group @ICT2DC that they posted on along with their personal Twitter accounts before, during and after the trip. On the day of the Inauguration the @ICT2DC account had 440 followers and the blog had over 550 page views.

Local news outlets interviewed the members before the trip and offered links on their web pages to the group's web page. During the trip the group was also interviewed by several radio stations that found their blog and by Kansas City and Wichita television stations at various times during the Inauguration events.

The group did not receive any financial sponsorship except for the loan of a van by a local business. The group left on Friday, January 16th in the late afternoon after all members of the group were finished with their day jobs. They took turns driving the 1,300 miles straight through and arrived in Washington DC the afternoon of the 17th. They stayed with a friend of one of the group members and had procured tickets to inauguration events from one of Kansas' senators. After enjoying some of the events and attending the Inauguration on the afternoon of January 20th, they piled back in the van and drove straight back to Wichita, returning the evening of the 21st.

Group members joke about spending so much time together, over forty hours of it in the confined space of the van, and not only not hating each other but remaining friends. In transferring their relationships from strictly online to the realities of the trip, there were adjustments that had to be made. As one group member stated, "Traveling with people can be difficult, and there were some tense moments both on the trip and in the meetings leading up to it," but, as another group member noted, Twitter afforded them "a certain quality of

relationship." By the time they began the trip they shared inside jokes and common understandings from their interaction on Twitter and email. One referred to it as trust built, "through sharing the little snippets of each other's lives." Another believed that something as simple as the sharing of their daily routines had led to a level of trust that was built "both in the knowing, and in the sharing" of this mundane information.

Taking part in the trip continues to have influence on their lives. All of them gained new followers on Twitter which led to more acquaintances and friendships. They gained a little bit of notoriety in the Twitter community, as well as the local community. They have found projects and job offers through connections made in relationship to the trip.

In interviews with five of the six ICT2DC members one over arching theme emerged; the positive influence of Twitter. This positive influence was acknowledged not only in the creation and execution of the Inauguration trip but in the everyday lives of each of the members. In analyzing the interviews four subthemes emerged that were particularly influenced by the group's participation on Twitter: Their view of the local community, activity, opportunities and relationships.

Their view of the local community. As one member stated, "Twitter changed completely my view of Wichita and its social life." Because they were exposed to a number of views and events that they would not have normally been exposed to in face-to-face relationships, they perceived Wichita as a much more active community than they had perceived before Twitter. Every one of the group spoke of activities, big and small, that they would not have known about if not for reading about it on Twitter. Two of the members spoke of the delight in finding people of like political views and one said, "Until Twitter I thought I was the only Democrat in Wichita." All these discoveries made the Wichita area become something, in

their eyes, that it had not appeared to be before. Twitter helped the area seem to be a more vibrant, welcoming place and provided, "a sense of community" that was not strictly online but had not been found without the online interaction through Twitter.

Activity. With all of the discussion of online communication as basically a sedentary pursuit, it is informative to hear all the discussion of the activity it leads to. The adventure of the trip to Washington DC was not the only activity at which Twitter was at the center. Float trips, political rallies, and art viewings were just a few of the activities that were tied to Twitter's influence. One said that without Twitter she would've missed out on, "Being informed of and a part of various protests and marches for civil rights." One of the members of the group used Twitter to help organize an impromptu memorial service for a doctor who was murdered in Wichita. The service was held the same day as the murder and drew hundreds.

Along with the political activities were discussions of local activities, restaurants and other businesses to support. The sense was that without Twitter ICT2DC group members would have missed out on a lot of things to do.

Opportunities. More than one person in the group reported finding a job through Twitter. "I've gotten offers to recommend me for a job, etc. from people on Twitter who didn't necessarily know me in real life." Another member credits Twitter, at least to some extent, with helping him find the job he now has. Twitter has been part of, "a lot of opportunities for my family," said another member. Along with the job opportunities, one felt Twitter had also been a venue to bring him "creative opportunities" that he would not have had otherwise. Twitter seemed to open the door not only to a new sense of the community but also to new information, jobs and programs in which to participate.

Relationships. They all spoke in terms of increased numbers of friends and acquaintances, "I have a lot more friends," because of Twitter. I've met "lots of cool people in Wichita and all over the world." They recount stories of close friends they first met through Twitter, of finding a roommate on Twitter, and another credits Twitter with helping him meet and develop his relationship with his current girlfriend.

The expansion of acquaintances far beyond what would be possible in face-to-face relationships is attributed to Twitter because it, "massively extends your ability to create and build weak ties." Twitter provides, "an ease in organizing meet-ups with friends that allows it to be a casual process that can include close friends and new acquaintances easily." Most members say their social life would be much poorer if Twitter did not exist. A couple told of how when they moved back to Wichita they did not know anyone. Twitter had been a means for them to connect with a number of people they had never met before. Many of those people, including the ones they went to DC with were now good friends.

RQ3 asks, "Does the social capital of an online network transfer to the offline world and vice versa?" The story of ICT2DC answers yes to that question. The stories of each of the members of the ICT2DC group make the yes even more emphatic. A quotation from one of the members concludes this section as it affirms the yes to RQ1 and RQ3 and, in answer to RQ2, gives an idea of the permeability of the online and offline communication in the experience of social capital:

> When I first moved to Wichita in 2008, I didn't know where to start in terms of making friends. I wasn't connecting with my co-workers, and groups like YPW (Young Professionals of Wichita) didn't seem right for me. When I signed up for Twitter, I wasn't expecting to tap into any kind of local community online, but that's exactly what

happened. The majority of the friends I've made in Wichita were through Twitter or events/programs/jobs I heard about on Twitter. If I had grown up or went to school here, that would probably be different; I think I was just in the right place at the right time as far as the Wichita social media scene goes. And I never would have gone to the inauguration otherwise.

CHAPTER 5

DISCUSSION

The Presence of Online and Offline Social Capital

RQ1 asks if there is the presence of online and offline social capital in the relationships of the Wichita area Twitter group. As Twitter users in the Wichita area experienced bridging and bonding social capital, both online and offline. To assess the presence of any of the four bridging or bonding constructs, a threshold score for all scales was set at 24 on a scale range of 10-50, lower scores indicated more agreement on the presence of a construct. Of the 155 people who took the survey a little more than three fourths scored in the positive range on the Offline Bonding scale. A little more than one half of the respondents also experienced bonding in their online relationships. In the Offline Bridging scale three quarters of the 155 respondents had a positive score. In the online/Twitter bridging scale eight out of ten respondents had a positive score.

The mean scores for each scale, except for Twitter Bonding, were also above the 24 point threshold and also emphasized the presence of these relationships. The mean of the Wichita Bonding scale was just below 20, the mean of the Twitter Bridging scale was slightly above 20 and the Wichita Bridging scale was about 22. The Twitter Bonding scale was just outside the positive range at just over 25.

The presence of offline bonding was consistent with Granovetter (1973) and Putnam (2000), as was the presence of bridging among offline members. It was also consistent with Granovetter and Putnam that bonding was reported more frequently and more strongly offline than online. Bonding relationships demand more investment on the part of relationship partners in each other and this can often be achieved more easily in relationships that have a face-to-face

component (Putnam, 2000). In both focus groups, face-to-face meetings were seen as a necessary step in a progression to closer relationships.

Online bridging was somewhat stronger than offline bridging, consistent with Walther's hyperpersonal model (1996) and not inconsistent with Granovetter. Granovetter's weak ties model was first hypothesized before the advent of social media sites but online interactions have been shown to provide the necessary foundation for the construction and maintenance of weak tie relationships (Ellison, Steinfeld & Lampey, 2007).

It is inconsistent with the literature that there were no correlations between any of the online bridging or bonding scales and any of the time measurements (i.e. length of time on Twitter, amount of hours on the site each week) or the number of times a respondent posted. The hyperpersonal model (Walther, 1996) and the SIDE model (Lea & Spears, 1992) both suggested that the more messages exchanged, both sent and read, the more likely a relationship would be created and/or maintained. The data from the four scales indicated there were relationships being formed online. The time and posting statistics indicated a larger number of messages were being exchanged. It would seem that there would be some degree of correlation between the two but there was not.

The Comparison of Online and Offline Social Capital

RQ2 involved the comparison of social capital online and offline. A comparison of scores from the four social capital scales showed that offline bonding was much more likely to be experienced by users than online bonding and that online bridging was much more likely to happen than either online bonding or offline bridging.

Much of the discussion in the focus groups that clustered under the theme "Relational maintenance" dealt with the difference between the online experience and the offline experience.

Focus group members felt that they met more people online and that there were more opportunities to meet people from diverse backgrounds. They also noted that it was easier to keep in touch with a large number of people online and that it was easier to maintain a sense of closeness with a large number of people through the shared details of each other's lives. They felt that the asynchronous aspect of Twitter allowed them to maintain a relationship while avoiding interruptions in their daily life and the daily lives of their partners. They could send and read messages as their schedules allowed and so could their relationship partners.

They also recognized that the kind of information that was exchanged online was of a different character than the information shared in their offline relationships. People online would often more readily share the details of their daily lives, as well as their personal thoughts and feelings. This information allowed those who followed them to have a sense of closeness to online communicators. As one member of the online focus groups said, "I've gotten to know some professional colleagues even better through Twitter because they share details of their personal lives/thoughts on here." They also felt that there was an opportunity for a larger number of relationships because these messages could be shared with a number of people simultaneously.

Online communication also differed from offline in the sharing of links and retweets. This behavior not only was a means of sharing information but also a means for the sender of communicating through choices made. One of the online participants said, "Even just a link that someone posts can be a little insight into their personality, their beliefs, what they find interesting." This message content is another online experience that differs from offline message content not only in its form but also in its ubiquity and ease of use.

Online behavior, in the form of helpful responses to questions along with exchanges of information and entertainment, was also more prevalent than the experience of similar behavior offline. The reasons for the difference again had to do with the ability online communication gave a sender to reach more people with a message, a question, or a request for information. The use of DMs (direct messages that are privately exchanged between two individuals) was also a unique aspect of the online experience. People reported carrying on public conversations while simultaneously holding private ones, sometimes with the same person.

Online relationships were viewed as more limited in certain other respects. Focus group members felt that for relationships to progress to a certain level of closeness the participants would need to meet face-to-face. The general feeling was that it was not wise to trust the information shared online, since it could be manipulated. This expectation of meeting someone before the relationship could be considered close pointed to a difference between online and offline relationships and fit with Putnam's (2000) description of the requirements for more time in a bonding relationship, more sharing of intimacies and more shared experiences, although these requirements seemed to contrast with the tenets of the hyperpersonal model. No matter how many messages someone had shared, or the quality of the messages, participants did not feel they could trust the online experience fully; they still needed the offline experience to confirm the trustworthiness of their partner.

Inherent in the themes of the benefits of Twitter and the negatives of Twitter was the belief that online and offline experiences were different and that some things that happened online were better than offline (for example forcing participants to be concise) and sometimes the offline experience was better (i. e. their confidence that face-to-face meetings were ky to developing close relationships). Nowhere in the focus group discussions, or the interviews with

the ICT2DC members, was there a declaration that online experiences were superior to off line experiences. Nor were there any declarations that offline experiences were superior to online experiences. There was no differentiation between online and offline friends in terms of quality of relationship for any focus group or ICT2DC participants. The online experience was valued but it was never proclaimed to be better, or worse, than offline experiences. Respondents recognized the differences between the two experiences and spoke of the negatives and positives of both but this lack of privileging between the two seemed to suggest that either the differences were not viewed as significantly important or that online and offline experience, which included both the communication dynamic and the relationships, complimented each other in a way that neither experience threatened the other experience. The above affirms RQ2 and delineates the differences between the experience of online and offline social capital and leads to a consideration of RQ3.

The Transference of Online and Offline Social Capital

Research question #3 addressed the possible transfer of social capital between online and offline contexts. The correlation between the four scales was significant in every comparison except one (see Appendix D). As mentioned in the results section, the percentage of scores that were less than 25 for each scale provided an indication of the presence, and strength, of each kind of relationship in the Wichita area Twitter community. The Twitter Bonding scale had a medium positive correlation with all three of the other scales: the Wichita Bonding, the Wichita Bridging scale, and the Twitter Bridging scale. An online bonding relationship was the least likely of the four kinds of relationships, 52 % of participants scored in the <25 range, yet these types of relationships had a connection to all the other of relationship types.

The Wichita Bridging scale and the Wichita Bonding scale tied for the second least likely relationship type (77%). The Wichita Bridging scale had the second best correlation with the three other scales. It had a strong positive correlation with the Twitter Bridging scale, a moderate positive correlation to the Twitter Bonding scale and a weak correlation with the Wichita Bonding scale. The Wichita Bonding scale had a medium positive relationship with Twitter Bonding, a weak positive relationship to the Wichita Bridging scale and no significant relationship with the Twitter Bridging scale. The Twitter Bridging scale was the most likely relationship and had a correlative connection with two of the other three scales including a strong positive correlation with the Wichita Bridging scale, a medium positive correlation with the Wichita Bonding scale and no relationship at all with the Wichita Bonding scale.

 The correlations among the scales indicated a relationship between offline social capital and online social capital that suggested a dynamic between them. The percentage of common variance the three scales share reinforces the conclusion that there is a dynamic relationship between online and offline social capital. The percentage of variance shared by the Wichita Bridging scale and the Twitter Bridging scale was 40%. The percentage of variance shared between the Wichita Bridging scale and the Twitter Bonding scale was 23% and between the Wichita Bonding scale and the Twitter Bonding scale was 22%. The only comparison that didn't show a significant relationship was the Wichita Bonding scale and the Twitter Bridging scale.

The strong correlation between the online and offline bridging scales and the large levels of common variance pointed toward the transference of social capital. The existence of this dynamic was affirmed in the focus group data and the experience of those in the case study. The social capital of a bridging relationship (for example in the form of information exchanged and available jobs discovered) was also transferable between offline and online contexts.

The major focus group theme of Twitter and information was about the kind of information exchanges, finding help with problems and getting answers to questions that supported the creation and maintenance of bridging relationships. Often these exchanges transferred directly. Someone asked for a ride to work on Twitter and help came offline in the form of someone providing that ride. A group of people exchanged messages online about something they were watching offline; for example the academy awards, a sporting event or a live news event. The group while typically physically separated shared their observations online in a way that built and maintained a bridging relationship with both online and offline components.

Participants perceived a permeability between online and offline worlds in terms of social capital. Bonding relationships that were started online included offline face-to-face meetings if the relationship was to grow closer. It would then, most commonly continue in some combination of offline and online interaction. The results, and the dynamic, of the relationship cannot be framed in simple offline and online categories.

The minor theme of Twitter and families dealt with the same dynamic. A father and son's online relationship was neither created nor dependent on their offline experience. But when the son went on a business trip the relationship was maintained through their offline interactions. It would be simple to assign a percentage of time, or information exchanged, to their online and offline experiences but it would be incorrect to say that the online exchanges carried no social capital into their offline life just as it would be incorrect to say their offline life carried no social capital into their online life.

All of the discussions under the theme Twitter and the local community indicated the permeability of online and offline social capital. Members shared their knowledge of the area

with each other online but the benefits (other than the acquisition of the knowledge) were enjoyed offline. When someone shared their offline experiences in the area and their perceptions of the experience, say of a restaurant in town, the online and offline social capital again intertwined. When someone read of this person's experience online and ate at the restaurant and had a similar experience, trust was created and facilitated by online interactions centered on shared offline experiences. Book clubs that met face-to-face but were created by people who met on Twitter and then invited others who were not online cannot be categorized exclusively in either the offline or online social capital context. When a man was given rides to his physical therapy sessions by people he had met on Twitter, the social capital that was shared passed easily between the online and offline worlds of both the man and his helpers.

The experiences of the ICT2DC group also confirmed this dynamic. Relationships that started online led to offline experiences. The first suggestion for the trip was made online by a person who did not go on the trip. The offline experience was informed, enhanced and driven by the online relationships the group members formed with each other and with others. This led to offline friendships, experiences and, in at least one case, employment. The ultimate positive experience of this collocated online group also illustrated some of the conclusions of previous studies dealing with collocated and distributed online work groups. As difficult as the trip was, ICT2DC participants maintained a cohesiveness that was in line with the findings of Pena, Walther, and Hancock (2007); their lack of negative comments towards each other (even when they obliquely mentioned difficulties) was in line with a previous study on the blaming behaviors of online groups (Walther & Bazarova, 2007).

The more ICT2DC participants told their stories the harder it was to tease out what interaction, discovery or benefit they attributed to offline relationships and what they attributed

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to online relationships. Many of their relationships evolved to be both online and offline and were not exclusively one or the other. The exchanges of social capital and the kinds of relationships they shared were also hard to assign to an online or offline category. Their experiences affirmed RQ3. Their experiences also suggested an alternative paradigm of online and offline social capital. Rather than a binary paradigm of either/or this study suggested that a permeability paradigm of online and offline social capital fit through the experiences of the Wichita Twitter community.

Limitations

This study is subject to several methodological limitations unique to each data collection methodology:

Survey limitations. Along with the usual difficulties of implementing a survey that provides generalizable results, such as the difficulties of recruiting a probability sample, identifying the true population being studied, and a the risk of participants who are misleading or inconsistent in their replies (Wrench, et. al., 2008), an online survey presents additional difficulties (Wright, 2005). The responses are anonymous so there is no way to prove that the respondents actually live in the Wichita area, use Twitter, or have answered questions truthfully. Some people online may be more disposed than others to take online surveys and this may lead to a systematic bias, and answers may have been influenced by the responder's computer experience or their knowledge of the internet (Wright,2005).

Wright (2005) also points out that there are unique difficulties in establishing the sampling frame of an online population. With Twitter it is very difficult to know exactly where people live or how many from a particular geographic area are using Twitter. Because of this it is impossible to know the size and characteristics of the population of interest. The methods used to

gather a sample for the survey, a combination of convenience and snowball, werer non-probability samplings, meaning they were not randomly selected and therefore subject to bias. The number of participants who had access to the Tweets and Retweets recruiting participants may not have been large enough or diverse enough, or reached all segments of the Wichita Twitter population, thus hindering the researcher's ability to study a representative sample of the Wichita area Twitter community.

Additionally, an individual's responses to the questions may vary over time or may be affected by experience or context. The results of this survey are not generalizable.

Focus group limitations. This study is subject to the inherent limitations of any focus group including having less control over the direction of the discussion than a one-on-one interview, the small sample size prohibits any generalizations from the results, and the quality of the data is dependent on the ability of the discussion leader (Bender,& Ewbank, 1994). The participants in the focus groups were skewed towards heavy Twitter users. This skewing was intentional but it also means the data from the groups was not drawn from light or moderate users of Twitter and whatever unique perspectives they might have contributed was not represented.

The online focus group only had three participants rather than the preferred six to eight participants (Morgan, 1998). The smaller number of participants led to fewer perspectives to discuss and build upon. The online focus group also provided less data due to the constraints of online communication including: lack of visual cues, lack of auditory cues, and lack of a shared physical environment. This also contributed to less content originating from the online focus group than from the face-to-face group. Online focus groups, often referred to in the literature as OFGs (Tates, et. al., 2009) are a relatively new methodology that have received the attention of

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researchers in the social sciences in the last decade. The research so far has shown that OFGs

produce the same quality and quantity of data as that from face-to-face focus groups (Underhill,

& Olmsted, 2003). Their use in research of online populations offer many positives including an

ability to synchronize with the particular synchronous or asynchronous hapits of a populations,

the ability to deal with physically disperse groups and heightened sense of anonymity when

needed through the use of pseudonyms (Stewart, & Williams, 2005).

      Case study limitations. The case study of the ICT2DC group is subject to all of the

limitations of a case study methodology including: the ambiguity of studies that makes room for

more than one plausible hypothesis that can be inferred from a given theory, and the selective

bias that is introduced by a researcher's awareness of the outcomes of the case before a

hypothesis is formed (Bitektine, 2008) plus the limitations of using a single case study (Kaarbo,

& Beasley, 1999). A single case study does not allow for a comparison with other cases and so

does not take into account between-case variations. In a single case study it is also difficult to

determine if the themes and observations are unique to that case or are representative of a larger

pattern. It is also difficult to know how outside factors, both unique to the situation and routine

impacted the situation.

      Finally, this is a retrospective study conducted almost two and a half years after the

events of interest, the trip to the 2009 presidential inauguration took place, rather than a

contemporary gathering of data. Thus information gathered in these interviews is subject to the

memories of the participants. The subsequent passage of time may also have had an effect on the

perceptions and attitudes of the members.

      Additionally, not all members of the ICT2DC group were able or willing to take part in

the interviews. Two key participants in the group did not contribute to this study. Two other

participants preferred to respond to the interview questions via email, one due to time constraints and the other due to a preference for writing their thoughts. This limited both the amount of interaction between the subject and the research, and the available data since there were no auditory or visual cues for the interviewer to observe. The other three ICT2DC members who agreed to interviews preferred to be interviewed over the phone, again for convenience. This also meant observable data was limited.

Future Research

From within the parameters of computer-mediated communication, the dynamics of offline and online communication between members of the same offline community, and the use of Twitter among collocated users, three areas of further research emerge:

Questions about the Use of the Twitter Platform. Twitter's design makes it an inviting venue for communication research. Twitter's messages are limited to 140 characters, it functions both as an asynchronous and synchronous vehicle, it allows observation of a high volume messages, these messages can be recorded for detailed analysis and it affords direct access to the message's communicators. In the course of this study of Twitter users in the Wichita area three opportunities for further research present themselves:

First, what, if any, is the correlation between online bridging and online bonding and the amount of time someone has participated on Twitter and/or the amount of messages someone has posted? As was mentioned in the results section there was no correlation, in the sample studied, between the amount of time someone had been a participant of Twitter or the number of messages a participant had posted, and their experience of online bridging or online bonding. These results seem at odds with the hyperpersonal model that suggests the more messages exchanged among online communicators, the more likely a relationship is to be created and

strengthened. It maybe that there is a saturation point where the total number of messages, and or the total length of time participating on Twitter, reaches a point where they no longer have a measurable effect on relationships. It may be the more significant number has to do with the amount of messages passing between any two individuals or it may have to do with the type of messages, i.e. those that intend interaction versus those that are not conducive to interaction.

A second research question deals with those that very active on Twitter. Why do some choose to focus on interacting with collocated Twitter users while others tend to ignore local users and interact with people outside their area?

A third research question ask how Twitter compares with other online social networking sites, Facebook for example, in the creation and maintaining of online and offline social capital? Is there more or less permeability between online and offline social capital with other online social networking sites?

Questions About the Dynamic Between Offline and Online Relationships

This study establishes that there is a dynamic between online and offline relationships in a specific collocated area-wide group. Three opportunities for further study include:

First, in a relationship that shares both an online and offline component, what role does each play in that relationship? Do they strengthen each other or compete with each other? Do their roles differ depending on the kind of relationship, i.e. bridging or bonding?

Secondly, how do specific relationship behaviors, such as relationship maintenance behaviors, compare in strength of effect, when presented online with those same behaviors presented offline?

Thirdly, is this dynamic between online and offline relationships present in other communities? How does the experience of the Wichita area Twitter community compare to other

communities? And if there are differences in the experiences of other communities what is the reason for those differences? Does the size of a community have an effect on the presence and dynamic of online and offline relationships?

The Effect of CMC on Offline Communities

This study focused on individual relationships in the context of a shared local community and a shared online presence. While it sought to answer questions about the individual's experience it was outside the study to answer questions about the effect of these relationships on the community as a whole. These final research questions focus on the wider community aspects of online and offline relationships.

First how does Twitter use, or any other online social media networks, affect an offline community? Does the social capital that is present in individual relationships also have an effect on the communities shared by these individuals?

Secondly, there is a great deal of research that has centered on work groups and the effects online and offline relationship have on the group's relationships and productivity. Does that research, and its conclusions, apply to the larger context of whole communities. Does the dynamics of online/offline relationships scale in size from small group to large or does the size of the group or community have an effect on these relationships?

Finally, are there communities where the intentional incorporation of offline and online relationships has been attempted as a part of a strategic plan to enhance the community? If so what are the strategies involved in implementing it and what are the results? How would such a community, if it exists, compare with the Wichita area Twitter community?

Conclusion

  As computer-mediated communication has become widespread in all areas of American culture, curiosity, and sometimes fear, have grown about its effects on personal relationships and the fabric of society. This study provided a snapshot of the Wichita area Twitter community, a group of people who shared a physical community and an online community, and examined their online and offline bridging and bonding relationships. At least half the people who participated in the survey experienced all four types of relationships. The participants in the focus groups and members of the ICT2DC group recognized the differences in their online and offline experiences and also experienced the transference of social capital between their offline and online relationships.

  Results of this study indicate that online and offline relationships are not a zero-sum game. They are not mutually exclusive and do not necessarily compete with one another; rather online and offline relationships complement each other. Online and offline worlds are not exclusive, but rather permeable and social capital can pass back and forth between them. These relationships can be created and maintained through computer-mediated communication without threatening the creation or maintenance of these relationships offline.

  The implications of this study extend beyond individual relationships to the communities that are composed of these individuals. Bridging and bonding relationships, and the social capital they encourage, are key components in the composition of a healthy community. Being an active part of an online community can generate and develop the types of relationships that are important for the health of a neighborhood, or town or a city. The time and energy spent communicating through online social networks need not be a threat to the fabric of the community but rather a benefit.

By examining a community and listening to the experiences of its members, this study has found not only the presence of bridging and bonding relationships in the members online and offline worlds, it has also found these relationships to be permeable. That is, the relationships and their effects on participants' lives pass between their offline and online worlds. The Wichita area Twitter community is an example of the synergy that can be tapped into when online social networks are used to complement and enhance offline communities.

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APPENDICES

Wichita Twitter Users

1. Thank you for agreeing to take this survey

Title of Project: Face to face and online social capital: The Wichita Twitter community

You are being asked to participate in a project conducted through Wichita State University as part of Bobby Rozzell's Master's Thesis. Wichita State University's IRB requires investigators to provide informed consent to participate in this project.

This project is limited to people who use Twitter and who live in Wichita or within 25 miles of the city limits.

Your Participation is completely voluntary and all answers will be kept anonymous, but in order to participate you must meet the following 3 requirements:
-You must be at least 18 years of age or older
-A registered Twitter user
-Reside in Wichita or within 25 miles of the Wichita city limits.

EXPLANATION OF PROCEDURES: If you choose to participate in this study, you are asked to fill out a survey, which will take approximately 15 minutes. The survey will ask your opinions, feelings, and attitudes toward your relationships with people on Twitter and in Wichita.

DISCOMFORT/RISKS: There are no expected risks associated with participating in this study. Participation is completely voluntary. If any question causes you discomfort, feel free not to answer it. You may stop at any time.

BENEFITS: There are no direct benefits of the research to you. While you may not receive any personal benefit, it is hoped that with the information gathered through this survey we will have a better understanding of this particular form of microblogging, and of how its use influences both online and offline communities.

CONFIDENTIALITY: This is a totally anonymous survey. The survey does not ask for any identification. The aggregated data from the survey will be submitted to the researchers without any personal identification. Only the investigators and the Institutional Review Board at Wichita State University will have access to the data.

COSTS/COMPENSATION: There will be no cost to you nor will you be compensated for your participation in this study.

REFUSAL/WITHDRAWAL: Participation in this study is completely voluntary. You may refuse to participate or withdraw from the study at anytime. Doing so will not affect your relationship with Wichita State University. You are under no obligation to participate in this study.

CONTACT: If you have questions about this research you can contact me at:

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Elliott School of Communication
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Wichita, KS 67260-0031

Wichita Twitter Users

Phone: (316) 978-6066
Email: deborah.ballard-reisch@wichita.edu

If you have questions about your rights as a research subject or about research related injury, you can contact the Office of Research Administration at Wichita State University, Wichita, KS 67260-0007. Telephone: (316) 978-3285

* 1. I HAVE READ AND UNDERSTOOD ALL INFORMATION REGARDING THE SURVEY AND AGREE TO PARTICIPATE.

◯ I agree

◯ I disagree and wish to exit the survey

Wichita Twitter Users

2. Demographic questions

1. What gender are you?

◯ Female

◯ Male

◯ Transgender

2. What is your age?

Age [   ]

3. What racial/ethnic group do you most closely identify with?

◯ African American

◯ Asian

◯ Pacific Islander

◯ Latino

◯ Hispanic

◯ Native American

◯ White or European

Other (please specify)

[   ]

4. What is the highest level of education you have attained?

◯ Not a High School Graduate

◯ High School or GED

◯ Some College, no degree

◯ Associate's Degree

◯ Bachelor's Degree

◯ Advanced Degree

5. What is your zip code and the town you reside in?

City/Town: [   ]

ZIP: [   ]

Wichita Twitter Users

6. What is your relationship status?

○ Married

○ Single

○ Living with a partner

○ Other (please specify)

[   ]

7. What is your yearly household income

○ Less than $15,000

○ $15,000 to $34,999

○ $35,000 to $49,999

○ $50,000 to $74,999

○ $75,000 or more

Wichita Twitter Users

3. Twitter participation questions

1. How long have you been using Twitter?

Number of months [   ]

2. How many hours do you spend on Twitter in a typical week?

Number of hours [   ]

3. How many followers do you have on Twitter?

Approximate number of followers [   ]

4. How many people do you follow on Twitter?

Approximate number of people you follow [   ]

5. How many tweets have you posted since you started?

Total number of tweets [   ]

6. A few questions on your Twitter experience

	Never	Seldom	Don't know/not sure	Usually	Always
When you tweet, is it related to work?	◯	◯	◯	◯	◯
When you tweet, is it for personal enjoyment?	◯	◯	◯	◯	◯
Do you proofread or edit tweets before posting?	◯	◯	◯	◯	◯
Do you access Twitter from a desktop computer?	◯	◯	◯	◯	◯
Do you access Twitter from a laptop/netbook computer?	◯	◯	◯	◯	◯
Do you access Twitter from a mobile device (cell/PDA)?	◯	◯	◯	◯	◯

7. How many Tweetups have you attended?

◯ Zero

◯ 1-5

◯ 5-10

◯ More than 10

Wichita Twitter Users

8. Please list other ways you participate online:

- ☐ Blog
- ☐ Facebook
- ☐ MySpace
- ☐ LinkedIn
- ☐ Others (please specify)

Wichita Twitter Users

4. Your Twitter use

1. Why do you tweet?

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I tweet to share information useful to other people	○	○	○	○	○
I tweet because I can access twitter wherever I am	○	○	○	○	○
I tweet to feel like I am part of a community	○	○	○	○	○
I tweet to present information on my interests	○	○	○	○	○
I tweet to tell others about myself	○	○	○	○	○
I tweet when I have nothing better to do	○	○	○	○	○
I tweet to practice my writing	○	○	○	○	○
I tweet because I like writing	○	○	○	○	○
I tweet to provide information	○	○	○	○	○
I tweet to meet new people	○	○	○	○	○
I tweet because it helps pass the time	○	○	○	○	○
I tweet because it is easy to update	○	○	○	○	○
I tweet because I can publish at any time	○	○	○	○	○
I tweet to document my life	○	○	○	○	○
I tweet to keep a record of what I learn	○	○	○	○	○
I tweet to show my personality	○	○	○	○	○
I tweet to refine my thinking	○	○	○	○	○
I tweet to keep in touch with my family and friends	○	○	○	○	○
I tweet to keep track of what I am doing	○	○	○	○	○

2. What do you tweet about?

	Never	Occasionally	Weekly	Daily	Several times a day
Entertainment	○	○	○	○	○
Sports	○	○	○	○	○
Education/academics	○	○	○	○	○
Business	○	○	○	○	○
Politics/politicians	○	○	○	○	○
Technology/science	○	○	○	○	○
Arts/culture	○	○	○	○	○
Interests/hobbies	○	○	○	○	○
Family/friends	○	○	○	○	○
Creative work	○	○	○	○	○
Personal experience	○	○	○	○	○

Wichita Twitter Users

5. Looking at your relationships with people in the Wichita area

1. For this group of choices think about people in the Wichita area with whom you come in contact regularly.

	Strongly agree	Agree	Don't know/not sure	Disagree	Strongly disagree
There is someone in the Wichita area I trust to help solve my problems.	◯	◯	◯	◯	◯
There is someone in the Wichita area I can turn to for advice about making very important decisions.	◯	◯	◯	◯	◯
There is no one in the Wichita area that I feel comfortable talking to about intimate personal problems.	◯	◯	◯	◯	◯
When I feel lonely, there is someone I can talk to in the Wichita area.	◯	◯	◯	◯	◯
If I need an emergency loan of $500 I know someone I can turn to in the Wichita area.	◯	◯	◯	◯	◯
There is someone in the Wichita area who would put her/his reputation on the line for me.	◯	◯	◯	◯	◯
There is someone in the Wichita area who would be a good job reference for me.	◯	◯	◯	◯	◯
There is someone in the Wichita area who would share their last dollar with me.	◯	◯	◯	◯	◯
I do not know people in the Wichita area well enough to get them to do anything important.	◯	◯	◯	◯	◯
The people I interact with in the Wichita area would help me fight an injustice.	◯	◯	◯	◯	◯

2. For this group of questions think generally about people in the Wichita area with whom you come in contact.

	Strongly agree	Agree	Don't know/not sure	Disagree	Strongly disagree
Interacting with people in the Wichita area makes me interested in things that happen outside of my town.	◯	◯	◯	◯	◯
Interacting with people in the Wichita area makes me want to try new things.	◯	◯	◯	◯	◯
Interacting with people in the Wichita area makes me interested in what people unlike me are thinking.	◯	◯	◯	◯	◯
Talking with people in the Wichita area makes me curious about other places in the world.	◯	◯	◯	◯	◯
Interacting with people in the Wichita area makes me feel like part of a larger community.	◯	◯	◯	◯	◯
Interacting with people in the Wichita area makes me feel connected to the bigger picture.	◯	◯	◯	◯	◯
Interacting with people in the Wichita area reminds me that everyone in the world is connected.	◯	◯	◯	◯	◯
I am willing to spend time to support general Wichita area activities.	◯	◯	◯	◯	◯
Interacting with people in the Wichita area gives me new people to talk to.	◯	◯	◯	◯	◯
In the Wichita area I come in contact with new people all the time.	◯	◯	◯	◯	◯

Wichita Twitter Users

6. Looking at your relationships with people on Twitter who live in the Wichit...

1. For this group of choices think of people who you regularly interact with on Twitter who live in the Wichita area.

	Strongly agree	Agree	Don't know/not sure	Disagree	Strongly disagree
There is someone on Twitter, who lives in the Wichita area, I trust to help solve my problems.	○	○	○	○	○
There is someone on Twitter, who lives in the Wichita area, I can turn to for advice about making very important decisions.	○	○	○	○	○
There is no one on Twitter, who lives in the Wichita area, that I feel comfortable talking to about intimate personal problems.	○	○	○	○	○
When I feel lonely, there is someone I can talk to on Twitter, who lives in the Wichita area.	○	○	○	○	○
If I need an emergency loan of $500 I know someone I can turn to on Twitter who lives in the Wichita area.	○	○	○	○	○
There is someone on Twitter, who lives in the Wichita area, who would put her/his reputation on the line for me.	○	○	○	○	○
There is someone on Twitter, who lives in the Wichita area, who would be a good job reference for me.	○	○	○	○	○
There is someone on Twitter, who lives in the Wichita area, who would share their last dollar with me.	○	○	○	○	○
There is no one on Twitter, who lives in the Wichita area, I know well enough to get them to do anything important.	○	○	○	○	○
There is someone on Twitter, who lives in the Wichita area, who would help me fight an injustice.	○	○	○	○	○

2. For this group of questions think generally about people you interact with on Twitter, who live in the Wichita area.

	Strongly agree	Agree	Don't know/not sure	Disagree	Strongly disagree
Interacting with people on Twitter, who live in the Wichita area, makes me interested in things that happen outside of my town.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, makes me want to try new things.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, makes me interested in what people unlike me are thinking.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, makes me curious about other places in the world.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, makes me feel like part of a larger community.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, makes me feel connected to the bigger picture.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, reminds me that everyone in the world is connected.	○	○	○	○	○
I am willing to spend time to support general Wichita area Twitter activities.	○	○	○	○	○
Interacting with people on Twitter, who live in the Wichita area, gives me new people to talk to.	○	○	○	○	○
On Twitter I come in contact with new people all the time.	○	○	○	○	○

Wichita Twitter Users

7. Thank you!

I appreciate your participation. If you have any questions or would like a report on the information gathered in this survey send me an email at blrozzell@wichita.edu

APPENDIX B

TWITTER SOCIAL CAPITAL FOCUS GROUP QUESTIONS

1.   If Twitter didn't exist, what would be absent from your life?

2.   Think of these three kinds of relationships on Twitter

    a. People you talk to on Twitter that you knew before Twitter.

    Thinking of people you talk to on Twitter that you knew before Twitter:

If you have this kind of relationship, what role does Twitter play in these relationships?

    b. People you have met through Twitter that you now have an acquaintance relationship

        with.

    Thinking of people you have met through Twitter that you now have an acquaintance

    relationship with:

If you have this kind of relationship, what role does Twitter play in these relationships?

    c. People you have met through Twitter that you now have a close relationship with.

        Thinking of people you have met through Twitter that you now have a close relationship

        with:

        If you have this kind of relationship, what role does Twitter play in these relationships?

3.   What do you expect to get from your participation on Twitter?

4.   What is your strategy for your participation on Twitter?

Two examples: Some teens use Twitter as an alternative to Facebook. If you refuse a Friend request on

Facebook it means you're stuck up. It also makes IT hard to talk privately with a group of close friends.

These teens open Twitter accounts that are blocked and only allow their close friends access, in effect

creating a private chat room.

Second example: Some use Twitter for friend building and discovery of new people but if they grow

closer to someone they stay in touch in other ways and move their relationship off Twitter.

What is your strategy for your participation on Twitter?

5.   How do you cultivate acquaintance relationships on Twitter?

6.   How do you cultivate close relationships on Twitter?

APPENDIX C

QUESTIONS FOR EACH OF THE ICT2DC MEMBERS

1. What would be absent from your life if Twitter had not existed. I would like examples of events or relationships (or other things) that you think Twitter played a unique role in their existence in your life.

2. Did the trust (if any) that was built in Twitter relationships transfer to face-to-face relationships in your ICT2DC experience? Again any specific examples you could give me would be helpful.

3. As a result of your participation in ICT2DC, and after the event, have you experienced a transfer of positive Twitter relationships to face-to-face relationships, either in close relationships or acquaintances. Again I would appreciate examples if you can think of any.

4. From your experiences, in your opinion, do you think there is any transfer between social capital developed on Twitter and face-to-face relationships and the offline world? If you think there is a transfer please include examples you have experienced or observed.

Table 1: Survey responses to Questions about Twitter Experience

A few questions about your Twitter experience	Never	Seldom	Don't know/ not sure	Usually	Always
When you tweet, is it related to work? (N=153)	13% (9)	**58% (88)**	9% (13)	26% (40)	2% (3)
When you tweet, is it for personal enjoyment? (N=155)	1% (1)	7% (11)	3% (5)	**74% (114)**	15% (24)
Do you proofread or edit your tweets before tweeting? (N=155)	2% (3)	10% (16)	1% (2)	**52% (80)**	35% (54)
Do you access Twitter from a desktop computer? (N=154)	12% (18)	**43% (66)**	3% (5)	36% (55)	6% (10)
Do you access Twitter from a laptop/netbook computer? (N=152)	8% (12)	33% (50)	4% (6)	**53% (80)**	3% (4)
Do you access Twitter from a mobile device (cell/PDA)? (N=154)	11% (17)	18% (28)	1% (2)	**56% (86)**	13% (20)

Table 2: Survey Responses to Question, "Why Do YouTweet?"

Why do you tweet?	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Because it helps me pass the time (N=151)	3% (5)	16% (24)	18%(28)	**48% (72)**	15% (22)
To share information useful to other people (N=151)	3% (5)	25% (37)	11% (17)	**46% (69)**	15% (23)
Because I like to write (N=154)	6% (10)	**39% (60)**	16% (24)	25% (38)	14% (22)
To provide information (N=152)	16% (25)	**49% (74)**	13% (19)	19% (29)	3% (5)
To keep a record of what I learn (N=153)	6% (9)	16% (25)	12% (19)	**46% (71)**	19% (29)
Because I can access Twitter whenever I want (N=150)	3% (5)	28% (43)	25% (38)	**35% (52)**	8% (12)
To show my personality (N=153)	14% (22)	**42% (65)**	16% (25)	21% (32)	6% (9)
To practice my writing (N=154)	18% (29)	**60% (92)**	9% (14)	12% (18)	1% (1)
Keep in touch with my family and friends (N=153)	13% (20)	**61% (93)**	9% (14)	13% (20)	9% (6)
Keep track of what I am doing (N=151)	12% (18)	**48% (72)**	17% (26)	17% (25)	7% (10)
To feel like I am part of a community	19% (28)	**66% (99)**	9% (14)	5% (8)	1% (2)
To tell others about myself (N=153)	15% (23)	**47% (72)**	13% (20)	21% (32)	4% (6)
To refine my thinking (N=152)	19% (29)	**64% (98)**	7% (11)	9% (13)	1% (1)
To present information on my interests (N=154)	24% (38)	**60% (92)**	8% (13)	6% (10)	1% (1)
To meet new people (N=152)	19% (29)	**65% (98)**	5% (8)	11% (16)	1% (1)
To document my life (N=151)	9% (13)	**43% (65)**	16% (24)	26% (39)	7% (10)
Because I can publish at any time (N=152)	7% (11)	**41% (63)**	12% (18)	30% (46)	9% (14)
Because it's easy to update (N=153)	22% (34)	**48% (74)**	15% (23)	11% (17)	3% (5)
When I have nothing better to do (N=153)	16% (25)	**50% (76)**	13% (20)	17% (26)	4% (6)

Table 3: Survey Responses to Question, "What Do You Tweet About?"

What do you tweet about?	Never	Occasionally	Weekly	Daily	Several times a day
Entertainment (N=154)	6% (10)	**64% (98)**	23% (36)	5% (8)	1% (2)
Sports (N=154)	37% (57)	**47% (72)**	14% (22)	2% (3)	0
Education/academics (N=152)	25% (38)	**56% (85)**	14% (22)	4% (6)	1%(1)
Business (N=154)	18% (27)	**45% (69)**	25% (38)	10% (16)	3% (4)
Politics/politicians (N=154)	**42% (65)**	38% (58)	12% (18)	6% (9)	3% (4)
Technology/science (N=154)	16% (28)	**44% (67)**	29% (45)	8% (13)	1% (1)
Arts/culture (N=152)	9% (13)	**46% (70)**	34% (51)	9% (14)	3% (4)
Interests/hobbies (N=154)	3% (4)	23% (35)	**41% (63)**	24% (37)	7% (10)
Family/friends (N=154)	5% (7)	**34% (53)**	33% (51)	19% (29)	9% (14)
Creative work (N=153)	10% (16)	**38% (58)**	29% (44)	18% (27)	5% (8)
Personal experience (N=153)	1% (2)	14% (22)	27% (42)	**34% (52)**	23% (35)

Table 4 Correlation Table – Wichita and Twitter Bridging and Bonding

		Wichita Bonding	Wichita Bridging	Twitter Bonding	Twitter Bridging
Wichita Bonding	Pearson Correlation	1	*.295	*.464	.092
	Sig. (2-tailed)		.000	.000	.258
	N	155	155	154	152
Wichita Bridging	Pearson Correlation	.295	1	*.475	*.633
	Sig. (2-tailed)	.000		.000	.000
	N	155	155	154	152
Twitter Bonding	Pearson Correlation	.464	.475	1	*.411
	Sig. (2-tailed)	.000	.000		.000
	N	154	154	155	151
Twitter Bridging	Pearson Correlation	.092	.633	.411	1
	Sig. (2-tailed)	.258	.000	.000	
	N	152	152	151	152