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Benefits of Internet Use in Supporting Rural Life: Managing Social Networks and Exchanging Social Support in a Rural Area

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Benefits of Internet Use in Supporting Rural Life: Managing Social Networks and Exchanging Social Support in a Rural Area

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Dedication

To my parents, who nurtured my dream and tirelessly guided my life.

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Benefits of Internet Use in Supporting Rural Life:
Managing Social Networks and Exchanging Social Support
in a Rural Area

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The purpose of this study was (1) to examine rural residents' perceived social support from Internet use for communication and (2) to understand the meanings associated with rural Internet users' social media use, particularly with respect to mediating diverse social ties and exchanging different types of social support. To assess how Internet use affects rural residents' sense of social support, this study investigated dynamic relationships between online communication and perceived social support by looking at interaction effects relative to extroversion, size of social networks, broadband use, and length of time using the Internet. To explore how social media are situated in a rural area, the present study investigated how rural residents use social network sites (SNSs) to maintain social contacts and exchange social support with members of their networks.

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Chapter 1: Introduction

1.1. STATEMENT OF THE PROBLEM

For the most part, people with higher levels of access to the Internet are residents of urban areas (Strover, 2001). Rural areas are often framed as "have-nots" in the digital age even as electronic networks are dramatically changing the mode of communication and information delivery. As of November 2009, 50 percent of rural Americans had high-speed Internet connections at home, while 68 percent of non-rural residents had high-speed Internet access (Horrigan, 2010). These recent statistics reflect a fast growing broadband penetration rate in rural communities since only nine percent of rural residents used broadband services in 2003 (Horrigan, 2006). However, the broadband penetration rate of rural communities still lags behind urban communities. A gap in the number of online activities also exists between rural and non-rural Internet users (Horrigan, 2006). Some of the differences may be accounted for by the fact that those living in rural areas tend to be older, less well-educated, and less wealthy than those in suburban and urban areas. Although users' demographic characteristics significantly influence the basic access divide, the non-availability of high-speed Internet connections is the most crucial reason for a persistent infrastructure and online activity divide in rural areas (Chadwick, 2006).

Many researchers have sought to document persistent differences in the rates of Internet adoption between rural and non-rural residents, for example, in the study *Falling through the Net* (1995), conducted by the National Telecommunications and Information Administration (NTIA). The NTIA reports focused attention on Internet access as a

continuum of existing U.S. telecommunication policy and raised concerns that "universal service," the idea that all Americans should have access to affordable telephone service, should be extended to Internet access. Consistent with this idea, the NTIA studies included data for rural, urban, and central-city residents and differentiated them into "haves" and "have-nots." This perspective of the digital divide seemed appropriate at the beginning of the diffusion process of new technology.

The next phase of digital divide research looked at existing digital divide issues focusing initially on the absence of simple access that considered "what people are doing online" and "what benefits are present when they are able to use high-speed Internet." For example, the study of *Home Broadband Adoption* (2006), conducted by the *Pew Internet and American Life Project*, compared the number of online activities across community types. The report showed differences in Internet activities among rural and non-rural users, and asserted that the activity gap among communities is not because of different tastes about the Internet but because of a lower penetration rate of broadband connection in rural areas. Broadband access is a significant condition when people engage actively in activities involving content creation which requires faster speeds. Broadband with fast, always-on connections facilitates more diverse activities to create web pages and blogs, contribute to discussion forums, share files, and manage the users' own news feeds, as opposed to a dial up connection (Chadwick, 2006).

Other critical studies about the digital divide suggest the possibility that the lack of the new technology might exacerbate inequality by preventing access to distance education and other resources that help people get ahead. Scholars believe generally that

the Internet is useful for enhancing the local pool of information and resources. Computer and Internet use could allow rural people to telecommute, create new service jobs, provide better access to market information promoting their existing business, and improve health care (Uncapher, 1999). By using the Internet, rural residents may be able to connect their businesses with long-distance markets in non-rural areas and to upgrade digital skills that they need in the new economic system. These pragmatic uses of the Internet can improve business conditions and sustain the economy in rural communities.

However, existing research is limited in terms of providing an understanding of specific usage of the Internet and illuminating multifaceted social outcomes associated with computer and Internet access for rural communities. First, most researchers have optimistic and deterministic views in examining the relationship between technology and society. Assuming that using technology can transform individuals and society, the researchers believe that Internet access can promote the social and economic conditions of rural communities. Typically, they have analyzed the rate of computer ownership and Internet access by comparing users' and non-users' demographic characteristics (by examining race, income, ethnicity, and education), and discussed the implicit advantages derived from Internet adoption (Bimber, 2000; Katz & Rice, 2002; Van Dijk & Hacker, 2003). However, such survey analyses have not elaborated different types and contexts of Internet use except for presenting "lags" across different ethnic and racial groups and household income categories (Strover, Chapman, & Walters, 2004, p. 467). In the area of rural digital divide research, there are broad assumptions that access is a simple solution for delivering advantages to local communities. Few scholars are interested in variations

of social outcomes that stem from Internet users' characteristics and their purposes for Internet use.

More psychologically oriented Internet related studies have attempted to identify variables that affect users' online activities and social outcomes of their activities, such as social interaction and social relationships (Kraut et al., 2002; Zhao, 2006; Lee, 2007). Some studies have distinguished various outcomes associated with specific usage of the Internet, assuming that the Internet has a transformative impact, but that the impact can be preconditioned by Internet users' personal characteristics and types of online activities. For example, Zhao (2006) found that non-social uses of the Internet, such as web surfing, did not make any differences in users' social networks but that social uses, such as email and chatting, were related to more contact with friends. These findings imply that the simple acquisition and use of Internet access may differentially convey certain advantages to users, depending on individual characteristics and social contexts.

Prior studies have usually highlighted advantages of Internet access in relation to economic development in rural communities. When discussing specific outcomes of computer and Internet access, economic development is usually cited as the desired outcome to improve financial circumstances in rural communities (Strover et al., 2004). The Internet allows geographically disadvantaged rural residents to take online classes for credit, learn new skills to utilize information and communication technology, and reach distant markets to expand their business. Because of these potential advantages, it is believed that Internet access is an effective vehicle to increase job opportunities and, subsequently, provide "urban" amenities to rural communities. In a report to the U.S.

Economic Development Administration, Gillett, Lehr, and Sirbu (2006) pointed out the positive impact of broadband adoption on augmenting rural economic benefits, such as increasing transactions in local businesses, decreasing communication costs, telecommuting, and providing online access to customers and potential employees. Such amenities are reported to make rural people feel they have no better choice in a changing economy than to adapt to and adopt the Internet (Uncapher, 1999).

However, this line of literature has not investigated the consequences of diverse aspects of Internet connection in rural areas. While attention directed toward economic outcomes of Internet use in rural communities is growing, little research has investigated the social outcomes that result from rural Internet connectivity. Social and geographical isolation are key challenges of life in rural and remote regions. Residents of such localities rarely see friends and family who live at great distances and they have limited local and non-local connections with others. The Internet, therefore, has the potential to help to mitigate social and physical distances of rural populations from other people and foster inclusion in a broader society (Collins & Wellman, 2009).

Although little scholarly attention has been focused on understanding the social outcomes from rural residents' Internet use, need for this academic work is reinforced by narratives of the literature addressing social impacts of other technologies on rural areas. For example, the previous studies have attempted to understand social and cultural patterns that the telephone or television reinforced or changed in rural settings (e.g., Fischer, 1992; Johnson, 2001). They heralded the role of those technologies in transcending time and space and transforming social relationships or social hierarchies.

As usage of those technologies was discussed in the specific social context, a number of studies have established assumptions around the idea that computer networks enhance social relationships and improve community integration in urban and suburban communities (Wellman & Gulia, 1999; Hampton & Wellman, 2003; Baym, Zhang, & Lin, 2004). However, no one has specifically examined the rural environments. Although the migration of populations to and physical isolation from large cities are serious social issues in rural communities, little research has discussed social outcomes of rural Internet access relative to producing social support and social integrity within communities.

1.2. PURPOSE OF THE STUDY

Inequality in Internet access limits rural populations' opportunities to build and maintain networks of social support (Anderson, Bikson, Law, & Mitchell, 1995). One of the consequences of rural to urban migration is a reduction in the number of friends and family one has as part of a local social support network. Distance and inconvenient transportation of rural communities from urban areas creates a challenging situation for rural residents in terms of maintaining contact with friends and family who live in other regions (Larson, 2007). The Internet can provide opportunities to communicate easily and cheaply with any who live in urban areas and anywhere in the world. The capacity of technology renders physical location less meaningful and makes rural life more desirable (Bell & Reddy, 2004). Despite the value and significance of the Internet for creating social resources and contacts that are more robust for rural communities, few studies have examined how residents of rural areas are able to maintain strong relationships with family and friends and meet new people over the Internet.

As the rate of home broadband penetration increases in rural areas, the Internet has become integrated into the lives of rural residents as tools for entertainment, communication, and business. For rural residents, in particular, the benefit of the Internet as a *communication* medium may be more prominent than other online activities for the reason that online communication maintains their social contacts and bridges their rural community life with other segments of society. According to the report *Broadband Adoption and Use in America*, conducted by the Federal Communications Commission (FCC) (Horrigan, 2010), 60 percent of rural broadband users responded that communicating with family and friends is the most important among online activities. The Internet provides convenient channels to increase social connectedness with family, friends, and acquaintances living within and outside their local communities. Computer-mediated communication allows users in rural places to maintain long distance relationships with close family and friends who have emigrated to large cities for study or jobs. It also provides virtual spaces in which people can easily create and develop new social contacts by crossing diverse communities. As a result, computer-mediated communication may enhance, expand, and diversify rural residents' social networks.

Indeed, increased social interaction and the formation of dynamic social relationships can be crucial for sustaining rural communities because close but small clusters of relationships in rural regions oftentimes provide the few kinds of support available (Wellman & Gulia, 1999). The physical distance of rural regions from urban centers is a major contributor to the marginalization of remote areas (Robertson, 1995), and computer-mediated networks make it possible to overcome the problem of distance.

For example, community service centers connected through computer networks in rural places have played an important role in facilitating communication within the region's business, political, education, and cultural sectors as well as in linking rural communities with central urban cities (Robertson, 1995).

Besides economic and educational outcomes, vigorous communication with diverse groups of people may reduce social isolation that rural residents frequently feel. People of rural areas gain social support and feel a sense of belonging to their communities by helping each other (Robertson, 1995; Borgida, Sullivan, Oxendine, Jackson, & Riedel, 2002). Strong community ties with close friends and relatives provide social support including emotional aid, advice about family problems, and giving and lending household items (Wellman & Wortley, 1990). Although such strong ties provide social support, weak ties such as those facilitated through the Internet provide informational resources or advice (Granovetter, 1982). A broad range of social support, the consequence of social interaction, has an important role in linking remote and isolated communities into the broader society (Larson, 2007). The current study may help improve our understanding of Internet users' social ties and the actual relationship between online communication and social support in a rural community context.

The goals of this dissertation are 1) to explore how rural Internet users build diverse social relations through social networking online and 2) to examine social outcomes of rural residents' Internet use for purposes of communication. Specifically, the study first investigates the relationship between rural residents' online communication and perceived social support. Then it examines how rural Internet users traverse

cyberspace and their real life community, and how their online and/or offline social ties help support their rural lives and integrate them into local communities.

This study combines quantitative and qualitative research methods to explore a relatively disadvantaged Texas rural area, Zapata County. For the quantitative analysis, the present study uses a subset of a dataset that was collected under the project entitled *Community Life in the Information Age*, sponsored by United States Department of Agriculture (USDA). The data provide information about rural residents' Internet usage and activities along with perceptions about community satisfaction, community attachment, and social support. That data is analyzed to evaluate whether Internet use for a communication purpose is a significant predictor for the extent to which rural respondents perceive they have social support. In order to avoid an exaggeration of the role of the Internet in explaining social support as it varied among respondents, the participants' sociability and initial social relationships (aggregate measures), which are the status of their "pre-Internet," are included in the analysis. Detailed operationalizations of these concepts are presented in the methods chapter (see Appendix A for questionnaire items).

A qualitative study identifies and documents Zapata residents' social relationships that developed via online social networking. Social network sites (SNSs) offer a place in which users amass weak ties and derive emotional strength from strong ones (Ellison, Steinfield, & Lampe, 2007). Like previous social technologies, such as the telephone, SNSs may provide a useful research ground in investigating how rural populations keep social contacts and maintain supportive relationships. To support and supplement

quantitative research, in-depth interviews were conducted among Zapata residents who have profiles on an SNS. The aim of the qualitative interviews was to provide a useful case study based on empirical research. The interviews specifically sought to gauge rural users' activities on an SNS and their attitudes and perceptions about the role of social networking in augmenting personal support and community life. The interviews included questions to identify different types of social relations on an SNS and users' perceptions about the use of the SNS and social support.

1.3. SIGNIFICANCE OF THE STUDY

The present study advances prior research in several ways. First, this study identifies rural residents' specific Internet use and addresses social outcomes explicitly by analyzing data collected from participants living in a South Texas rural community. Prior studies generally regarded computer ownership and Internet access as a simple solution for overcoming disadvantages of living in a rural community because accessibility was perceived as a prerequisite for utilizing technology and producing developmental impacts (Ess & Sudweeks, 2001; Gurstein, 2002). Those earlier studies usually illustrated implied outcomes to be expected from Internet use in rural regions. Since it is difficult to explore the relationship between the growth of the rural communities achieved within a short period of time and Internet deployment, those studies were limited in terms of articulating how much the Internet was effective in improving life conditions in rural regions. The current study addresses this issue in part by examining consequences of Internet use in rural regions by investigating Internet use for communication purposes and its possible related social outcomes. By looking at the

relationship between the extent of Internet use for communication and the amount of perceived social support, it was possible to measure how large a role online communication had in producing social support. The results of this study helps to explain the explicit outcomes of Internet use and how rural residents might amend, deepen, and extend their social networks through online communication. In addition, it explores the social implications of the Internet as a communication channel to establish a vibrant and supportive rural community life in relation to other modes of communication, such as face-to-face meetings and telephone usage.

This study also refines existing rural digital divide research by considering Internet broadband connections as a factor to improve the condition of life in a rural community. In tracing the role of the Internet in promoting rural connectivity, this study identifies several variables that may interact with Internet use and social outcomes. Based on users' pre-Internet characteristics, such as personality (introvert/extrovert), and initial social relations (size of social networks) as they may affect a specific online activity, this study developed a conventional measure of the impact of Internet use on local communities. This research design will be helpful for investigation of the extent to which Internet use for communication can explain rural respondents' perceptions of social support and how successfully the Internet as a communication technology serves as a mediator between individuals and their communities.

Research investigating the role of information and communication technologies in improving local community life is not a new area. A number of studies have found that new communication technologies have played a significant role in enhancing community

attachment and involvement (e.g., Wellman et al., 1996; Wellman & Gulia, 1999; Haythornthwaite, 2005). Computer networks do not exist in a vacuum, but are interconnected with real life social structures and relations. For those rural communities that experience out-migration of the population, the Internet may serve as a useful channel to strengthen existing strong kinship and friendship ties and add new contacts. This study is thus worthwhile in that it investigates the role of online communication in a rural context and presents information about social implications of Internet use in relation to promoting supportive local communities.

The rationale for using multiple methods is that the weaknesses of one method often strengthen of another. The combination of quantitative and qualitative methods enriches data and, at the same time, provides a clearer picture of the phenomenon. In the current study, the quantitative data analysis explores whether Internet use is a statistically significant factor to predict perceptions of social support among participants, while qualitative interviews were used to develop knowledge about the role of online social networking and to address the social implications of rural respondents' social networking. This methodological approach will help to interpret and explain what Internet uses bring to rural life.

In sum, the current study is designed to provide a better understanding of the nature of rural populations' online social networking and the social implications of broadband Internet use by analyzing qualitative interviews and quantitative data. The next chapter reviews previous literature on the development of communication technologies in rural communities and illuminates the role of the Internet as a new

communication medium. It sketches different perspectives in identifying the potential consequences of communication and information technologies for forming social relationships and providing social support in rural communities. Based on the review, several research questions are posed. Chapter 3 presents the research design and describes the sample of the present study, the measurement of the variables, and the analysis plans for each research question. As for the qualitative method, the chapter addresses the sampling process of potential respondents and the procedure for the interviews. Chapter 4 presents a descriptive analysis of variables and summarizes the findings from analyses of research questions. Chapter 5 provides results of the in-depth interview analysis of Zapata residents' SNS use. The final chapter discusses the implications of the findings, addresses limitations, and provides suggestions for future research.

Chapter 2: Review of the Literature

This chapter describes disadvantages of rural communities that the previous studies have identified and summarizes the role of Internet connections to create and maintain social relationships and provide social support in rural communities. Specifically, the first section of this chapter addresses the "distance penalty" that rural regions have experienced and the second part reviews transformational roles of communication technologies that have been discussed in the rural contexts. Elaborating this discussion, the next section examines social implications of Internet connection for alleviating rural disadvantages, focusing particularly on the facilitation of social relationships and exchange of social support. Based on the review, the end of the present chapter poses research questions that are significant for understanding the consequences of rural Internet connection.

2.1. WHY RURAL COMMUNITIES MATTER: "RURAL PENALTY"

Rural communities of the 1800's were small, isolated, and relatively self-sufficient societies. Geographic boundaries were clearly drawn and the formal (i.e., school) and non-formal institutions (i.e., home, church, etc) served to bind the community together (Robertson, 1995). As technologies of mass production and accompanying complex social changes have emerged, the traditional collective models of rural communities have been challenged. The transformed industrial structure of the 20th century broke down the independence of rural communities and increasingly shifted power and control of the rural community to the larger, urban community (Dillman, 1985). Throughout the 20th century, the main economic domain of society was moved to

and become concentrated in urban areas so that people left rural areas in order to obtain new economic opportunities. As a result, rural areas have become disadvantaged and marginalized because of poor infrastructure as compared to more densely populated areas.

In general, rural areas are defined by population density and territory. The United States Census Bureau classifies rural areas as open country with fewer than 2,500 residents (http://www.census.gov/geo/www/ua/ua_2k.html). Similarly, the United States Department of Agriculture (USDA) defines rural areas by various population thresholds. According to the criteria used in the USDA's rural definition, rural areas belong to any area other than 1) a city or town that has a population of greater than 50,000 residents, and 2) the urbanized areas contiguous and adjacent to such a city or town (http://www.ers.usda.gov/briefing/rurality/RuralUrbCon/).

Research conducted in a rural setting tends to understand characteristics of rural areas based on the basic definitions. Rusten and Skerratt (2007) defined key characteristics of rural areas in order to explain why rural communities lag behind urban communities. They focused mainly on rural characteristics due to weaker infrastructure, public services, and social support, particularly compared with urban areas. The deficiency in infrastructure and public services is a special problem of small rural communities that are geographically isolated from and peripheral to urban centers. Rural infrastructure, such as highways, railroads, air travel, and telecommunications, is increasingly limited. A decline in public transportation has made physical access to public services (including health, job centers, public libraries, post offices, banks, and

local government offices), which are increasingly centered on urban areas, problematic (Rusten & Skerratt, 2007). In turn, weak infrastructure has brought about disadvantages for the rural poor or those without ready access to private transportation. Limited telecommunications infrastructure limits social interactions with others outside the town.

Additionally, inconvenient access to public services, such as higher education, makes it difficult for rural populations to acquire new skills and find supportive learning opportunities. Some rural regions face major problems, such as an aging and declining population, unemployment, or lack of qualified labor to fill vacant jobs. In this case, unless the quality of life and business conditions of rural places are integrated with urban areas, life in rural communities will be even more challenged by the lack of support in social and economic services (Skerratt & Warren, 2003).

Such economic and social disparities between rural and non-rural areas are actually aggravated by the Internet which causes rural businesses to continually diminish (Townsend, 2000). The economics of American rural areas are defined mostly by manufacturing or farming, the two areas of production having the most difficulty transitioning to the digital economy (Zook, 2002; Townsend, 2000). Castells (2000) argues that in order to be competitive in the current digital economy, it is essential to be plugged into the network of information flow. However, rural regions are disadvantaged in different social and economic contexts because their pace in gaining Internet access is too slow (Castells, 2000; Chen & Wellman, 2003). Economic disparity between urban and rural communities existed before the advent of the Internet. The dense resources that metropolitan areas had established prior to that time, including financial capital,

technological knowledge, higher education, and networks of diverse businesses, enabled these areas to become vital hubs of information and production in a network society (Larson, 2007). In contrast, rural areas have not had similar infrastructure necessary to produce knowledge and financial resources. Castells (2000) notes that the lack of resources and infrastructure makes rural regions increasingly isolated and, in some cases, completely left out of the digital age.

Disadvantages due to the lack of Internet connections in rural areas compound issues of "rural penalty." Parker, Hudson, Dillman, and Roscoe (1989) named three factors that negatively impact rural areas in terms of lower population densities, distance of rural communities from urban centers, and economic specialization in sectors other than information- or knowledge-intensive areas (p. 24-27). Because of these characteristics, rural communities have difficulty in accessing social resources available in urban areas and in connecting to the larger network society. As a result, rural communities struggle to keep local economies afloat under increasing competition in flows of information and a global deregulated market economy (Glasmeier & Howland, 1995).

Another challenge that rural communities experience is distance from "human networks" (Rusten & Skerratt, 2007). Most studies on issues of social services in rural areas have looked at problems in accessing public services (e.g., health, higher education, public transportation, etc) and economic resources. Few scholars have questioned the extent to which the "rural penalty" may diminish community interaction, a sense of community, and community connectedness although there are numerous urban- and

suburban-based commentaries on the significance of networking for strengthening interaction among community residents (e.g., Wellman & Wortley, 1990; Wellman & Gulia, 1999; Wellman et al., 1996). Wilkinson (1991) argued that deficiencies in resources for meeting needs and inadequate social infrastructure are serious problems for rural communities because they become the principal barriers to local community interaction. He further predicted that quality of life would likely be threatened if community interaction is disrupted in rural communities.

The issue of distance from human networks is especially important for rural areas in which out-migration to urban areas is prevalent. The out-migration of people from rural areas represents a potential loss of human capital (Lichter, McLaughlin, & Cornwell, 1995). According to Lichter et al. (1995), migration is a selective process and out-migration may result in a lower stock of human capital in rural areas. They argue that this loss of human resources may affect economic development. Their study illustrate that during the late 1980s, rural areas had high-migration rates of the highly educated, while urban to rural migrants were the least educated in urban areas and disproportionately jobless, poor and near poor. Meyer (2008) also raised concerns about increased rates of out-migration that rural communities have experienced, focusing on young people (Meyer, 2008). In particular, highly educated youth living in non-metropolitan areas are leading contemporary non-metropolitan out-migration (Domina, 2006). The migration of youth tends to be more sensitive to economic pressures than older people's migration decisions (Borjas, Bronars, & Trejo, 1990). According to Domina (2006), higher levels of education attainment are associated with higher levels of migration from non-

metropolitan areas to metropolitan areas. This means that the "exodus of educated and ambitious rural youth" has driven non-metropolitan migration downturn (Domina, 2006).

Besides the consequences of rural youth out-migration in rural economic development, reduction in the sheer number of people available to make friends with or to have as part of a local social support network creates a uniquely challenging situation for rural residents (Larson, 2007). One of the consequences of the rural to urban migration is a reduction in the number of potential friends and romantic partners in rural areas. Substantially more urban residents (58%) than rural residents (36%) responded that it is easy to meet people in the places where they live (Rainie & Madden, 2005).

Disruptions in social interaction with family and friends contribute to isolation and thus threaten the well-being of predominantly rural communities (Wilkinson, 1991). Face-to-face interaction with family and friends are considered to be integral to maintaining strong ties. In addition, rural residents are likely to feel a sense of emotional isolation or loneliness when they lose supportive relations to talk with about experiences or problems (Larson, 2007). Millward (1995) argued that rural communities have stronger family ties and more interpersonal social relations with family or the extended family. In comparison with urban communities, she noted that rural communities gain more support from family members. In addition, family and the extended family play a crucial role in promoting health care and educational achievement in rural communities (e.g., Seeley et al., 1993; Israel, Beaulieu, & Hartless, 2001). Although these studies do not directly address problems of rural communities stemming from the geographical distance and the deficiency in public resources, they have implications for the

significance of family ties to compensate for the "rural penalty" and promotion of the well-being of rural communities.

2.2. TRANSFORMATIVE TECHNOLOGIES IN RURAL COMMUNITIES

The notion of community interaction influencing the well-being of rural communities raises discussion about the need for communication technologies in rural areas. Although the concept of community has been continually redefined and remains ambiguous, most sociologists tend to accept a traditional definition that includes elements, such as a specific place, common ties, and social interaction (Driskell & Lyon, 2002). Images of communities as idyllic neighborhoods where neighbors visit each other's private homes, chat on street corners, and get together in local cafés and bars are described (Oldenburg, 1999). These images demonstrate the emphasis placed on social aspects of community, even though the concept of community is often defined as spatial. The social definition of community emphasizes supportive, sociable relations that provide a sense of belonging rather than a group of people living near to each other (Hampton & Wellman, 2001).

Seen this way, the concept of community can be defined as a network having many ties that extend well beyond a local group. Simmel (1908) observed that "society" exists where a number of individuals interact and communicate in a complex network of relations. Social interaction facilitated by communication is closely related to the idea of community because mutual understanding through conversation is significant in uniting people. Scholars have perceived communication as an essential element in organizing, structuring, and connecting a community and a group of people starting in ancient time.

Nowadays, people maintain social ties through multiple communication media, such as in-person contact, telephone calls, postal mail, and more recently email, instant messengers, and SNSs.

In particular, telecommunications technologies have introduced remarkable changes at a time when regular interaction between rural and urban communities has become essential. Because those who live in rural communities suffer from the higher travel and transportation costs associated with the locality, the use of telecommunications technologies have become essential to minimize the rural "distance penalty" (Parker et al., 1992). Remote locations provided advantages to rural areas in the past by protecting local services from the urban competition. However, as transportation and communication technologies have improved, rural communities have become more closely connected with the rest of the world. The economic "protection" of rural distance has disappeared in well-connected national or global marketplaces so that the rural communities nowadays need to incorporate their businesses or public services with urban centers. Parker et al. (1992) argued that telecommunications, such as telephones and cables, are innovative technologies that help to overcome rural physical distance and improve quality of life and economic well-being by making education, health care and social services available.

Progress in those technologies has also been integral to bonding migrants or new arrivals into their home communities and connecting them to others from whom they could gain emotional support. Communication technologies have been particularly useful channels for people to keep in touch with others in their hometowns without being able to

visit them in person. Previous studies have examined how communication technologies play an important role in bridging rural and isolated communities and bringing them into the wider, mainstream social system (Wilkinson, 1991; Robertson, 1995; Uncapher, 1999; Larson, 2007). Those studies focus on the capacity of communication technologies to overcome problems of time and distance that most rural communities suffer. Effective communication systems can extend external resources, such as government, health, education, and entertainment services, to dispersed rural populations to promote rural development by reducing the costs of communication (Robertson, 1995). The capacity of communication technologies also empowers rural communities to enhance their internal resources. The technology can help organize groups and create local content and channels to promote community development and autonomy (Uncapher, 1999).

Discussing the role of communication technologies in community development is not a new phenomenon in social sciences. Research relative to the development communication stresses that increasing amounts of communication enhanced by media technologies will help enable the development of sustainable and balanced rural communities by compensating for the sense of isolation felt by rural people (Wilkinson, 1991). By strengthening local community networks, communication technologies can act as resources to minimize disintegration and fragmentation that rural communities oftentimes experience. Therefore, it is important to examine the role of Internet connections for improving the quality of rural life. A parallel task is to understand the meaning of the Internet access in modern American rural society and then examine implications of the technology for community interaction and well-being.

Marvin (1988) pointed out that communication technologies provide new platforms that reduce social distances between different groups of people (i.e., female-male, rural-urban, white-non-white) and transform social practices and patterns. Instead of emphasizing only technical efficiencies, Carolyn Marvin's approach is to understand the evolution and role of new technologies within cultural, social, and geographic perimeters. In other words, social meanings of communication technologies can be elaborated based on social patterns anchored in older technologies. Applying Marvin's theory, the present study presumes that the Internet, a relatively new form of communication, exists along a continuum of older technologies such as the telegraph, the telephone, wireless, television, and so on. In order to argue the transformational role of the Internet in rural communities, the following sections outline how the introduction of the telephone and television has improved interaction in rural communities.

2.2.1. Telephone

The telephone is one of the major infrastructures in rural America. When the telephone was introduced at the end of the nineteenth century, it was heralded for its role in transcending time and space and equalizing social hierarchies (Rakow, 1991). Marvin (1988) noted the possibility that the telephone might lead to a mixing of heterogeneous social groups. Accomplishing the multiplication and extension of interpersonal contacts was crucial to the development of modern society (Durkheim, 1964). With the advent of the telephone, "well-insulated communities" of pre-telephone days are permitted to cross social boundaries based on class, locality, gender, and ethnicity (Marvin, 1988, p. 107). Since the telephone captures most clearly the magnification of social contact and personal

relations in communities, it offers a useful means to understand the social role of the communication technology in an evolving community landscape (Fischer, 1992).

The telephone spread and was utilized differently across different types of local communities, according to Fischer (1992). The social role of the telephone was more significant for rural farms than for urban areas in the early 1900s, although the rural telephone industry declined because of problems related to setting appropriate rates and seeking potential customers (Fischer, 1992). Fischer's study about regions of isolated farm houses suggests that the telephone could compensate for the sense of loneliness and insecurity felt by farmers' wives and help with the solidarity of a small country town. In addition, the study shows the telephone played a necessary role in neighborhood affairs, such as exchanging information and local news, arranging social and church gatherings, planning trips and reunions, and promoting community meetings in farm towns. Those examples presented in Fischer's study demonstrate that the telephone has played a role as a communication technology to make farm life enjoyable, cooperative, and modern by facilitating community interaction and increasing community attachment among people.

This speculation was also evident in Pool's earlier discussion (1983) about the social consequences of the telephone in local communities. According to Pool (1983), telephones are the most frequently used mode of communication to maintain most intimate social networks within the community. Telephones are particularly useful media when community residents are living more than two blocks away (Pool, 1983; Fischer,

1992). In other words, the telephone offered many opportunities for social contacts among rural populations.

In rural areas, deficiencies in channels for collective action are the principal barriers to community harmony and cooperation (Wilkinson, 1991). For this reason, service availability of telephones in rural areas has been an important rural development goal in telecommunications regulatory decisions (Parker et al., 1992). Parker et al. (1992) noted that telecommunications services contribute to building new bonds of regional community as well as constructing a new economic and community vision by enhancing inadequate social infrastructure of services in rural communities.

2.2.2. Television

Television is another means of communication that was discussed within rural community settings. Earlier scholars found that television has had an unprecedented influence in improving the quality of rural community life (Agrawal, 1980; Hartman, Patil, & Dighe, 1989; Johnson, 2001). The broad scope of television programming allows rural people to become familiar with international affairs and programs as well as domestic government and local community affairs. In Johnson's rural television case study in India (2001), the multiplication of television channels transformed communication patterns, which had been limited to one channel controlled by government, into more democratized and diversified ways of communication that enabled audiences to intersect with the wider world. Specifically, as broadcasting coverage was expanded beyond the local community and government control, television provided

diverse information and entertainment channels to Indian rural community populations who were previously excluded from external media sources.

Johnson's observation of the role of television in rural India supports a point of view that a communication technology has the ability to restructure rural traditions and change rural life. In India, local television channels are strategically used for training the rural poor and farmers to achieve goals of rural development (Agrawal, 1980). Agrawal (1980) assessed television advertising as a successful means to educate the rural poor and farmers. In addition, the consequence of television has been frequently associated with changing patterns of communication, interaction, and involvement of local communities. In the 1980s, cable television was adapted to enhance community communication and local participation (Strover et al., 2004). Limited infrastructure, isolation, and the challenges of a harsh physical environment of rural areas tend to make rural populations long for higher levels of belonging and socializing in their local community (Putnam, 2000; Hogg & Carrington, 2006). By utilizing cable technology, rural communities have been able to create local content and local channels and form a better climate for vibrant local communication and participation.

On the other hand, some scholars have suggested that the influence of television in rural communities is not always desirable. While television becomes a gateway to diverse information about international affairs and diverse foreign cultural experience, the presence of television can weaken a structure of community relationships which monitor individual behavior and ensure traditional norms (Coleman, 1993). Johnson's television study (2001) showed that the older generation of rural villages had concerns

about the negative impact of television on the community because television conveyed a spirit of consumerism and created a "cash-based economy" that were disruptive of existing class divisions (p. 153). In other words, advertising and other programs on television have tended to replace family and community bonds with national and international corporate structures and values.

Time displacement theory, articulated in social capital research, has also presented concerns about television disrupting local community interaction (Putnam, 2000). The theory explains that the greater amounts of television viewing replaces time spent with friends and family. The reduced amount of interaction and communication among people in a community results in destroying community ties. In a similar context, television significantly influences communication patterns and social relationships within rural communities. Because television has ensured that information is no longer filtered through the traditional local elite and authority, rural communication patterns that opinion leaders previously dominated have been destroyed (Wongnom, 1980). All rural community members are able to have access to the same information so that the younger, less powerful villagers tend to threaten the legitimacy of the opinion leaders. In addition, community-centered structures and organizations tend to be weakened because television viewing transfers worldwide values and replaces face-to-face meetings which have been a significant channel for rural village interaction (Johnson, 2001). These previous studies of television present scholars' different perspectives for ways communication technologies affect social interaction and relationship structures in rural communities.

2.2.3. The Internet as a Communication Medium

Access to and use of the Internet is an issue frequently raised in discussions about the ways to reduce the "distance penalty" in rural communities. Adequate connections to advanced telecommunications infrastructure and services are viewed as necessary conditions to help rural communities fully participate in the emerging information society (Strover, 2001). Scholars have, therefore, conducted research to show the association between economic development and the presence of telecommunications infrastructure (e.g., Parker et al., 1992; Robertson, 1995; Uncapher, 1999; Rusten & Skerratt, 2007). Because the Internet enables users to expand spatial boundaries and make physical location relatively inconsequential (McKenna & Bargh, 2000), access is considered critical for rural residents to overcome limitations of their physical locations, equally important, to connect with global information systems in an information society (Robertson, 1995). Rural areas may become even more isolated and completely left off the network unless residents track changes driven by electronic and information systems and work to maintain their connections. For these reasons, rural development practitioners have advocated rural broadband connections to create an economic link between the local community and new systems of communication and information organization.

In line with research on other early communications technologies, there is a concern, however, that an over-emphasis on economic development might be a threat to the well-being of communities (Wilkinson, 1991; Robertson, 1995; Malecki, 2003). Studies that substantiate the existence of digital divides between rural and non-rural and

even within rural regions (Skerratt, 2003; Berkeley, Clark, & Ilbery, 1996; Clark, Ilbery, & Berkeley, 1995) argue that potential technological benefits have not been realized in rural settings. These findings are linked with analyses that suggest the role of information and communication technologies in economic development is not a magic solution for rural areas (e.g., Richardson & Gillespie, 2000; Malecki, 2003) because technology is "wrapped up" in human resources (Kitchin, 1998).

As Internet connection expands into rural places, residents may have new opportunities to obtain the external linkages that have the potential to serve also as "local bridges." In order to increase rural residents' ability for community building and development, external linkages are envisioned as tools for local people to access new information and ideas, and commerce and services. For that purpose, the process of diffusion by which global Internet networks are transformed into conduits of new ideas and relationships for local communities may be particularly important (Robertson, 1995). The promotion of Internet use in rural places for economic purposes may shift the focus and energies of rural development strategies outwardly, thus increasing dependence on and affiliation with outside organizations and economies. When the Internet transmits information successfully through online networks and bridges the local social system to outside organizations and economies based on the premise of local autonomy, social integration in rural communities may result. Therefore, an examination of links between Internet use and a "sense of community" and "civic connectedness" that characterize the well-being of rural areas may be useful (Rusten & Skerratt, 2007).

Research on the effects of Internet usage represents a continued trend that has sought to relate technology to community enhancement and/or destruction of community ties. A body of literature on the association between Internet usage and community integrity is growing because of evidence that the Internet offers the potential for new ways to communicate by increasing the overall volume of contacts and conversation (Hampton & Wellman, 1999, 2003; Bargh, 2002). Many scholars, following this line of research, focus on the possibility that the Internet may become a new basis for social inclusion, social capital, and community integrity (Wellman, 1997; Rheingold, 2000; Lin, 2001). Technology is viewed as capable of facilitating and helping to maintain strong, intimate, and supportive human relationships. It is also seen as increasing the number and diversity of weak or less consequential social ties (Wellman & Gulia, 1999). The capacity of the Internet to affect people's social relationships suggests that the Internet can be a useful medium for interpersonal communication.

Because the Internet is variously used in diverse domains for different purposes, a number of scholars have focused on Internet use for specific communication purposes that rely on useful channels among people (e.g., Baym, 2000; Rheingold, 1993; Rheingold, 2003). Rheingold (1993, 2003) examined the virtual community and claimed its key role in facilitating communication among Internet users and expanding computer-supported social networks. In his earlier study, he described the Usenet group, called the WELL, as an early type of virtual community where shared interests were discussed, thus establishing strong relationships among members. In later research about "smart mobs" (2003), he pointed out the social impact of virtual communities and computer networks.

His main argument was that online social networks, enhanced by mobile technologies, were transforming cultures, communities, and ways of communication.

Email, reported to be the most frequently used tool for those connected to the Internet, has been found to have positive effects on the development and maintenance of social networks (Kraut et al., 2002; Rainie, Fox, Horrigan, & Lenhart, 2000). According to Kraut et al. (2002), use of email leads people to spend more time online and discourages them from dropping Internet services. Other communication services such as instant messengers, chat rooms, multi-user games, and auctions, are increasingly popular on the Internet (Putnam, 2000). Kraut et al. (2002) argued that the Internet can have a positive social impact if communication, including contact with neighbors, friends, and family, and participation in social groups, dominates Internet use for a majority of its users. In their survey analysis to investigate the impact of Internet use for communication on social involvement and psychological well-being, they found that Internet use is positively associated with increases in the sizes of respondents' local and distant social circles and their face-to-face interaction with friends and family. Their study also observed that people who use the Internet are more likely to become involved in community activities and feel greater trust in other people.

Based on the ability of the Internet to affect different types of social connections, scholars remain interested in related social outcomes of Internet use for interpersonal communication. Lee (2007) distinguished different purposes of adolescents' Internet use in terms of study, game, communication and other recreations, and demonstrated that frequent Internet use for communication purposes created cohesive relationships among

users. Her results imply that the social effects of the Internet depend on the purposes for which people use the Internet. Her observations suggest further that binding all different kinds of Internet activities into one general notion has led to inconsistent findings about the social outcomes of Internet use.

Computer-mediated communication (CMC) has become pervasive not only because it is efficient but also because it can compensate for the discomfort some feel in face-to-face meetings. People sometimes prefer online conversations because they occur asynchronously and relatively anonymously so that users can easily control when they talk online and can control the sort of persona they present to the online correspondent. CMC also serves to reduce the level of stress and psychological tension associated with an obligation of immediate feedback inherent in face-to-face interactions (Cho, 2002), thus fostering more manageable communication among people. Through various modes of CMC including email, chat rooms, instant messaging, newsgroups, and other means, Internet users are able to engage in personal relationships with family and friends and others, keep in touch with family and friends, share aspects of their daily lives, and talk about their interests. Furthermore, they often show social commitment to virtual relationships formed through CMC that often endure over time and even expand through the use of additional channels of communication, such as the telephone and postal services (Parks, 1996). Sometimes CMC even lead to face-to-face encounters. Recent theories on intimate relationships formed online suggest they tend to become integrated into people's offline social lives, especially among young people (McKenna, Green, & Gleason, 2002).

In sum, the Internet as an interpersonal communication medium bears important positive social outcomes on individuals, groups and organizations, communities, and society at large. Because the Internet permits social contact across time, distance, and personal circumstances, it allows people to connect with distant as well as local family and friends, with coworkers, with business contacts, and with strangers who share similar interests (Kraut et al., 2002). Broad social access online may also increase people's social involvement, in ways similar to that of telephone use in the past. Previous empirical studies have found the potential for CMC to construct social ties and develop social intimacy, even though the process of online relationship development oftentimes takes longer and requires a high level of participant devotion.

Meanwhile, the emergence of CMC has raised concerns about the quality of online communication. Scholars have generally pointed out the inferiority of CMC in comparison with traditional modes of communication such as telephone and face-to-face conversations. They have argued that people perceive the Internet as a less useful tool for developing and maintaining close social relationships than face-to-face contact and telephone conversations. Users are found to have a tendency to be less emotionally satisfied and more isolated by new modes of communication, such as email and voice mail than had been the case with traditional forms of communication: namely, face-to-face, telephone, and physical participation in groups (Kiesler, 1997; Locke, 1998). Although the convenience of online communication may encourage people to spend more time in talking with others, it may also reduce deeper discussion and companionship with friends and family.

In explaining the relationship between Internet use and social relationships, time displacement theory articulates that a great amount of Internet use makes people spend more time alone, talking online with strangers and forming superficial relationships. This theoretical position that highlights the negative impact of Internet use suggests that online discussions displace higher quality face-to-face and telephone conversation, even if people spend more time on the Internet to talk with close friends and relatives. Komito (2001) studied the quality of relationships maintained via CMC in comparison with traditional communication tools such as letters and telephone, and found that letters and telephone conversation are likely to maintain more meaningful and deeply attached relations between people than computer interaction. Even though letters and telephone conversation are technologically mediated communication with less social presence than face-to-face interaction, the participants of the study perceived themselves to be more supportive for real commitment among individuals than CMC. Thus, comparisons with other conventional communication have suggested a possible deficiency of CMC in developing intimate and durable social relationships. Because social cues and physical proximity are not components in many contexts of computer interaction, people may not feel deeper companionship, and as a result, the relationships may be superficial.

Although the social impact of CMC on individual social relationships has been inconsistently addressed, previous studies indicate that the Internet has the potential to open up new ways for rural residents to build and develop social relationships via CMC. Earlier studies that have examined the value of CMC for online and offline social relationships have focused primarily on urban and suburban populations but little

research has considered how rural residents might integrate the Internet as a communication medium and how CMC could affect their interactions with others. Yet technical characteristics of the Internet, which reduce the limitation of physical location and allow vibrant interaction and connection, make the Internet especially useful for distant communication and long distance relationships (Baym et al., 2004; Larson, 2007).

Before the diffusion of Internet connectivity into rural regions became feasible, several telecommunications technologies had been suggested to compensate for the higher cost of long distance communication to rural areas. Building telephone networks and providing equitable costs for basic telephone services are typically higher in rural areas due to higher transportation costs (Strover, 2001). For that reason, telephone services in rural areas have traditionally been protected by federal and state policies, such as universal service to improve service availability. Wireless technologies based on satellites and mobile communication are other possible solutions to mitigate the high cost telecommunications service in sparsely populated areas. Flora, Flora and Fey (2003) argued that wireless technology can eradicate the "last mile problem" and eliminate the cost of laying cable to reach remote areas, even though the problem of weak wireless signals must be overcome. Mobile communication technology, such as cell phones, facilitates communication over long distances (Katz, 2007) but cell phone service in rural areas can be spotty. The social consequences of cell phone use provide insights for rural Internet communication. Physical proximity that cell phones create provides social support through social networking within communities (Rice & Katz, 2008), likely

affecting all segments of life (Katz, 2007). Cell phone text and video services may also connect close friends or family members who live far apart (Rice & Katz, 2008).

2.2.4. The Broadband Effect

The Internet supplements conventional communication channels, such as face-to-face conversation, telephones and cell phones and, at the same time, is particularly useful for maintaining long distance relationships (Baym et al., 2004). Specifically, Baym et al. (2004), who compared college students' social interactions online, face-to-face, and on the telephone in terms of purposes, contexts, and quality, found that long distance interactions were more likely to be maintained over the Internet than by telephone and face-to-face conversations and that Internet interactions were more likely to be long distance than local. In addition, Baym et al. (2004) found that diverse interactive applications of the Internet facilitated the multiplicity of Internet social relations and made long distance relationships easier to sustain.

The rapidly growing broadband[1] divide, however, also accentuates the disparities of online activities and access between rural and urban communities. In recent decades, the vision of the Internet has evolved from that of an expensive luxury technology to an essential infrastructure for business, health care, education, and government. At the same time, the notion of the digital divide has been remapped so that challenges faced by rural populations may relate to types of high speed telecommunications infrastructure,

[1] The term "broadband" refers to any technology that transmits data across the Internet at high speeds and is "always on." The Federal Communications Commission (FCC), which is the regulatory agency for telecommunications, defines broadband as the ability to carry data downstream at a minimum of 768 kilobytes per second (kbps) (see FCC webpage http://www.fcc.gov/cgb/broadband.html).

"broadband," as well as to basic access to the Internet, "dial-up" (Rusten & Skerratt, 2007).

Besides higher transmission speeds, another advantage of the broadband is being "always-on" (Horrigan & Rainie, 2002) so that significant delays that a dial-up modem requires to place a call, log in, and connect to the Internet are eliminated and Internet access instant and network communications can be initiated at any time (National Academy of Sciences, 2002). The significance of broadband lies in the kinds of activities that people typically engage when they are online (Chadwick, 2006), for example, content creation and social networking that require broadband speeds. The ability to send and receive data through the Internet, in turn, determines the amount and quality of data that can be transmitted, for example, complex and data-rich applications such as YouTube that require high speeds to upload and download streaming images.

Dial-up access has narrowed the rural/urban divide but the broadband divide is still problematic (Servon, 2002) because broadband is required to create web pages and blogs, contribute to discussion forums, share files with networked friends and others. To those who do not have fast and always-on connections ("broadband"), Internet activities are but a passive experience and even more common applications, such as email and general web browsing, are handicapped by a speed difference (Chadwick, 2006). Davison and Cotton (2003) found that broadband users engage to a greater degree than dial-up users with 11 out of 21 Internet activities, after controlling for education, gender, and Internet experience.

There is evidence that rural broadband connections could level the urban-rural differences in education, income, and health care (Mills & Whitacre, 2003; Jenkins, 2003). Atkinson (2007) pointed out that broadband availability is becoming an essential prerequisite for rural business development and growth and areas without broadband have more trouble in attracting new businesses. Reliable broadband connections, therefore, are likely to reduce out-migration by creating new economic opportunities. In that sense, broadband Internet availability may be compared with the construction of interstate highways forty years ago (Barnes, 2002). As the highways aided the economic development of many cities and rural regions and resulted in a shift from ships to trucks as a major form of transportation, broadband Internet may be indispensable to the development of telecommunications infrastructure by eliminating the issue of distance for rural communities.

Diverse applications facilitated by broadband may additionally improve rural social conditions as well as economic development (Servon, 2002) and rural broadband access may provide long distance education and health services. Broadband access is more crucial for taking online classes for credit in rural than in urban and suburban areas (Horrigan & Murray, 2006). Broadband technologies used for telemedicine networks are likely to reduce costs for rural patients and hospitals (Seto, 2008), for example, through the use of videoconferencing that depends on upstream, downstream, and fast browsing at high speeds to avoid serious errors.

The advancement to broadband connections means not only faster access but also distinctive patterns of outcome that are different from those that individuals who have

dial-up service typically use (Kwak, Skoric, Williams, & Poor, 2004). In a study of advances to different stages of Internet connection that involved a comparison between patterns of relationships and soft knowledge[2] between Internet users with broadband and dial-up connections, Kwak et al. (2004) found that Internet users with broadband connection were more likely to interact with others in various leisure and recreational settings than were dial-up users. The study also found that broadband Internet users demonstrated a higher level of soft knowledge than dial-up Internet users. Those findings, therefore, suggest that broadband technology makes it easier and more likely than the dial-up connection to socialize with others and acquire casual information.

2.3. SOCIAL IMPLICATIONS OF RURAL ONLINE COMMUNICATION

2.3.1. Amending, Deepening, and Extending Social Ties

Several studies have examined the value of broadband connection for online communication in rural communities with respect to social ties. The Internet affects users' social relationships usually in two primary areas, relationship maintenance and relationship formation (Baym, 2006). Online communication facilitates close emotional relationship between family members and close friends who have not seen each other for a long time. Stern (2008) observed that rural populations are more likely to use email to contact friends who live outside the local area but depend on telephone conversations with friends in the local area, thus suggesting that the Internet may allow for a greater

[2] In Kawk et al.'s study (2004), soft knowledge refers to "individuals' understanding about highly publicized, but politically non-substantive, events, such as the personal lives of famous individuals (p. 431).

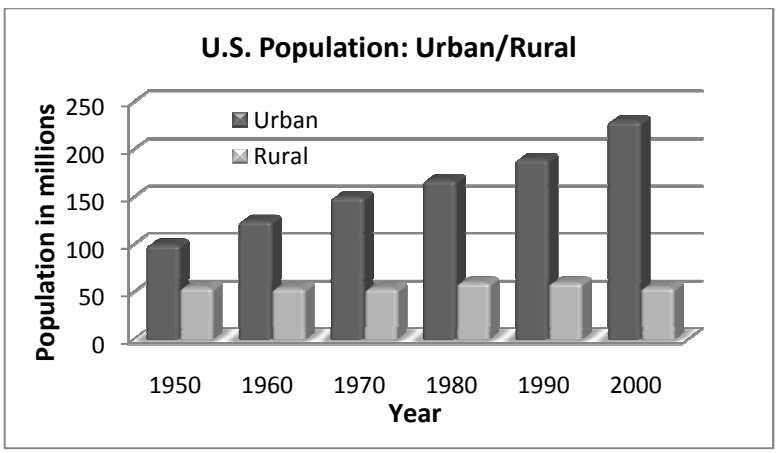
frequency of communication among people with strong social ties outside their local communities.

"Strong ties" is another way of expressing close relationships that according to Granovetter (1973), refer to intimate and continuing relations among family and friends. In the debate about whether online communication maintains strong ties over time, Walther (1995) raised concerns that limited social presence and asynchronicity of online communication slows the development of intimacy. On the other hand, Wellman et al. (1996) argued that the lower social presence of CMC may be sufficient to maintain strong ties between people who know each other well because they have already built intimate in-person relationships and with online interactions, they may eventually develop sociable and intimate in-person strong ties. The Netville study (Hampton & Wellman, 2003) provided strong evidence that the Internet may support meaningful in-person contacts with family, friends and neighbors and thus strengthen local community ties. Community members are more likely to interact in private spaces such as households or by phone lines, than in public spaces, such as street corners, parks, and cafés (Putnam, 2000). Computer networks tend to be intermingled with face-to-face conversation and telephone or cell phone calls and then bring people together within local neighborhoods by organizing groups in public spaces.

These findings that elaborate the way in which computer networks work in urban and suburban communities provide a window into the future in terms of how Internet use may affect community members' social interactions in rural neighborhoods. Rural areas are considered to have many strong ties in comparison with urban areas (Wilkinson,

1991), leading to assumptions that the effects of isolation and austerity in rural areas are counter-balanced by cohesion and mutual support in rural families and intimate friends (Flora et al., 2003). However, due to out-migration, rural residents' contacts with strong ties are likely to be outside their rural area. Much of rural America has experienced a steady population decline since the late nineteenth century. In the 50 years from 1870 to 1920, the number of Americans living in cities grew from 10 million to 54 million (The USAonline.com Web Page, 2008). Based on U.S. Census data, the report, conducted by *The University of Montana Rural Institute* (2005), shows that the proportion of Americans living in rural areas has declined, and the number of people living in urban areas has more than doubled (see Figure 2.1). When considering rural location and the potential of Internet use to facilitate long distance communication, it is reasonable to expect that contacts and interactions among people with strong ties occur.

Figure 2.1. Distribution of U.S. Population (1960-2000)



Source: The University of Montana Rural Institute Webpage: http://rtc.ruralinstitute.umt.edu/RuDis/RuDemography.htm

Despite its significance for rural life, Wilkinson (1991) argued that plenty of strong ties can actually disrupt the development of rural communities. Granovetter's idea (1973) of the "strength of weak ties" is applied to this critical perspective of rural strong ties. According to Granovetter (1973), the structural stability of social relationships depends on weak ties (i.e., formal and transitory contacts among relative strangers) to bind strong ties into larger structures. Therefore, the absence of weak ties in rural areas may serve as a barrier to community development and stability (Wilkinson, 1991). Rural areas are relatively homogenized communities composed of dense networks of individuals who have stayed in the same area over a long period of time. In small-scale rural groups, people have primary or exclusive roles and identities that conform to collective norms, so that, as a result, there is little dissent in social relations and activities (Larson, 2007). Weak ties are viewed as social circles that connect acquaintances, casual contacts, and others within different social boundaries, and people with weak ties tend to be unlike each other (Granovetter, 1973). The strength of weak ties means that the diversity of social circles connected with weak ties provides social support that is different from that characteristically found in strong ties.

Haythornthwaite (2005) observed that expanding online networks has the potential to create weak ties by initiating social contact among others not connected by kinship and friendship ties. This can be the case when an electronic discussion is established for giving help or an online group is created for interest-based discussion. Haythornthwaite (2005) suggested an example of weak ties among distance learners. Joining classes and chatting in a distance learning environment, students structure weak

ties with teachers and classmates who are taking online classes together, thus creating new connections that did not previously exist. Previte, Pini, and Hearn (2003) looked at the way women in rural areas engage in online communities and create weak ties by examining discussion lists of their online groups and analyzing how users of virtual communication constructed a sense of community. According to the findings, as rural women engage in social networking and link with members of existing offline rural organizations via the online group, they tend to expand their social circles to incorporate users other than family and close friends. The results indicate that rural women showed a great amount of personal investment, intimacy and commitment toward people with weak ties created through their online groups, thus supporting the idea that online relationships are woven into the fabric of rural people's offline lives in ways that sustain women in rural settings.

2.3.2. Exchanging Social Support

Active communication and interaction among people connected through strong and weak ties creates social support. Social support has been defined as a system of beliefs that lead people to feel valued and loved and that provide a sense of belonging to a network of communication that entails obligation or responsibility (Cobb, 1976). In other words, social support can occur when individuals feel empowered and encouraged. People are able to witness their own worth through esteem support, advice or guidance in coping with problems (Evans, 1993). There is an abundance of evidence that identify benefits of social support (Troits, 1995). For example, social support reduces negative effects of stress on psychological well-being, such as depression (Lin, 1997), while the

lack of social support generally increases psychological stress (Cohen, 1988). By sharing and helping with problems, people feel support and a sense of belonging through shared activities.

The concept of social support is closely related to the concept of social networks. When people communicate with each other, a certain form of social network is constructed within a group of people, an organization, or social entity where people are connected by social relationships. These relationships oftentimes lead to friendship, cooperative work, and information exchange (Garton, Haythornswaite, & Wellman, 1997). Social networks also serve as a resource for coping with negative feelings, such as stress or isolation (Cohen, 1988). Additionally, supportive social networks help foster communication and mutual obligations among individuals. In the absence of support from others, people tend to have fewer opportunities to mediate isolation and engage in activities that serve to form and maintain supportive interpersonal ties.

Online communication provides access to more people and new social circles and, as a result, increases the probability of finding those who can solve problems (Kraut & Attewell, 1996). In fact, previous studies have suggested that physical distance between people is an important factor to predict the degree of social support they provide and obtain. The greater the social and physical distance between the support seeker and provider, the less likely that reciprocity will take place (Wellman & Gulia, 1999). There is little motivation for individuals to provide assistance, information, and support to physically and socially distant others. People are also less likely to anticipate receiving help and support in return from others they hardly know in-person. However, even when

computer networks are used to facilitate relationships between people who never see each other, the networks allow users to find social support, companionship, and a sense of belonging (Haythornthwaite, 2005; Wellman & Gulia, 1999). Many online interactions take place between persons who have never met face-to-face and who are not bound into densely knit community structures. Despite the absence of physical and social proximity, the Internet provides a useful means of supportive communication and interaction.

Additionally, it has been found that social support exchanged with strong personal ties has been positively associated with individual well-being and happiness. Strong ties provide opportunities to become close to others and to access timely to information (Granovetter, 1973). Useful information is easily shared through strong ties due to bonds of friendship. According to Granovetter (1973), besides information, strong ties also convey trust and form the basis for the informal exchange of resources and favors. Social relationships in rural communities are typically constituted by physically proximity to friends and relatives. Therefore, close bonding between the relationships is the principal means by which people and households obtain supportive resources, although not all strong ties tend to produce social support (Wellman & Wortley, 1990).

Strong ties have limitations, however, in terms of restricting an individual's access to new information, as friends and family frequently hear redundant information. Residents of rural areas see "new" people less frequently and therefore have fewer opportunities to obtain new ideas and information. Prior studies have examined the value of weak ties strengthened by online interaction in urban and suburban areas (Wellman et al., 1996; Wellman & Gulia, 1999; Hythornthwaite, 2005). Although social relationships

among weak ties have lower quality than strong ties in terms of deep companionship or emotional attachment, weak ties offer the advantage of increasing opportunities for contact with various groups of people. The connectivity to others increases the number of others who may be able to provide support and help (Wellman & Gulia, 1999). In particular, online connectivity increases the likelihood that people will help others by re-routing information online in their real life communities as well. When community interaction becomes vigorous through computer networks of local communities, connections with acquaintances who do not regularly meet are enhanced (Kavanaugh, Reese, Carroll, & Rosson, 2005). In those ways, the Internet increases effectiveness for building weak ties in community contexts.

If this theory is correct and applied to rural settings, the Internet may allow individuals and households of rural regions to find others outside their neighborhoods and thus develop community based social relations into more complex webs of relations over a long period of time. People can acquire more contacts with different sets of people for gaining access to information different from their own. Acquaintances or weak ties can moreover act as resources to diffuse new ideas and information between the local community and the broader society, as well as among groups within the same community (Granovetter, 1982).

Because weak ties are not composed of family members, friends, and close neighbors, they are able to encourage diversity and constitute one strand in multiple webs of social ties and interactions (Komito, 2001). Activities among weak ties, such as exchanging of information and ideas, have the potential to initiate reciprocal social

relations and a higher quality of life in local communities (Kavanaugh et al., 2005). Kavanaugh et al.'s research of the Blacksburg community network demonstrated that people with weak ties across groups have higher levels of community involvement, civic interest, and collective efficacy than people without weak ties to groups. Those characteristics, encouraged by online interaction may facilitate integrating rural community life into broader society.

2.4. MAINTAINING SOCIAL TIES ON A SOCIAL NETWORK SITES (SNS) AND BENEFITS

Social network sites (SNSs) constitute a new mode of online communication for connecting members and sharing information about similar interests. Like blogs, SNSs allow individuals to join and create personal profiles and to present themselves to other users through a variety of formats. A typical user profile page shows the owner's picture and personal information. Additionally, other information may be present, such as personal pictures, videos, a blog and diverse groups that SNS users belong to. Like chat services, SNSs incorporate a list of other users with whom individuals share common interests.

This type of site makes communication between users easy and fast, normally in the form of email-like messages and posted comments on friends' profiles. But unlike other web services, such as email or instant messengers, SNSs allow individuals to make visible their list of connections to others and to traverse others' social networks (boyd & Ellison, 2007). This unique feature of SNSs allows users to see their friends' friend lists and expand their own social networks by adding acquaintances who may know each

other. Building a profile in this way enables users to efficiently develop a wide online social network by making the most of the communication opportunities that social networking sites offer. In addition, more than virtual communities are born online, because SNSs are usually virtual spaces that reflect offline relationships. As profile pages identify users' school information and hometowns, people can easily find those with whom they were associated through school or community networks. In that way, experience and activity on SNSs are inseparable from users' community life, even if they are totally absorbed into SNSs.

Those features have inspired research to understand the social implications of SNSs in maintaining different types of social ties and mobilizing participation in collective activities. The bulk of SNS research has focused on the potential of SNSs to bridge (or create a gap) between online and offline connections. Donath and boyd (2004) were among the first to hypothesize that online social networking may not increase the number of strong ties a person may have, but may increase the weak ties a person could form because the technology is suited to maintain these ties cheaply and easily. This proposition was empirically tested by Ellison et al. (2007) using survey data from a small sample of undergraduate students in the U.S. Applying Putnam's (2000) framework of social capital theory, Ellison and her colleagues found that use of Facebook was strongly associated with maintaining or solidifying existing offline relationships, as opposed to meeting new people. Interestingly, these authors found that Facebook usage had an effect on students' psychological well-being, suggesting users with low self-esteem and low life satisfaction might gain greater benefit.

On the other hand, some findings that SNSs foster users' well-being and social capital do not mean that they always do so. Survey research by Nyland, Marvez, and Beck (2007) found that heavy users of MySpace, in contrast to light users, felt less socially involved with the community around them. Furthermore, a substantial number of respondents used social networking for entertainment, as opposed to maintaining or strengthening offline relationships. This representative study echoes one of the most pervasive criticisms against SNSs: that they lead to the isolation of users (e.g., Hodgkinson, 2008).

More recent studies tend to emphasize the social outcomes of SNSs for creating new pathways to positive behavioral dimensions such as active participation in the civic/political arena, less depression and loneliness, and greater social trust and life satisfaction. For example, Sebastian, Park, and Kee (2009), who found that Facebook increases social capital, empirically examined relationships between intensity of Facebook use and college students' life satisfaction, social trust, civic engagement, and political participation. Other studies found that SNS users sought to maintain personal connections in ways that reinforced strong and weak ties and that engagement in personal relationships could lead to community interaction (Watkins, 2009). Although online social networks do not offer the most effective solution for people's disengagement from civic duty and democracy (Sebastian et al., 2009), findings of previous research suggest positive effects of Facebook on users.

2.4.1. Previous Research in Rural Communities

In examining the impact of new information and communication technologies on individuals and communities, CMC research has been criticized because of a perceived technological deterministic approach (Lea, 1991) in which scholars have emphasized the role of the technologies to drive individuals' behavioral and cultural changes. This line of research, following in the tradition of diffusion of innovation (Rogers, 1962), works well for studying the effects of the technology from a diffusion perspective. However, this approach is not sufficient for a comprehensive understanding of the relationship between use and impact of technologies. In order to avoid simply describing the rural-urban divide, it is worthwhile to examine how Internet use is integrated into rural people's existing social lives rather than how the effects of Internet use dramatically change community life. Information and communication technologies have the potential to connect "cyber-space" to "community-place" and to support a network of people (Fernback, 2005). One of the major social issues facing rural communities is the ultimate need to foster reciprocal exchange and community support, not a technological need (Komito, 2001). This implies that the Internet should establish more effective conduits to increase social connectedness in rural communities. While online interaction and relationships may be fragile and more versatile in some cases, new avenues for interacting with existing intimates as well as diverse interest groups and getting social support may occur.

When identifying social outcomes of online communication, users' characteristics should be considered. Some scholars suggest that research in this field needs to take into

account participants' characteristics to mediate Internet use and recommend looking at factors like the nature of users' initial social relationships and sociability as precedent variables. This perspective, illustrated by the "rich get richer" model, explains how the structure and quality of users' initial social relationships affect the ways that users construct online relationships (Wellman & Frank, 2001). People who already have strong social relationships may have more social motivation and skills to use the Internet for maintaining and enhancing their social ties compared to socially isolated people. Evaluating several hypotheses regarding relationships between adolescents' Internet use and social capital, Lee (2007) confirmed this model with findings that indicate those who have strong social ties will have an increased ability to enhance their social capital by using the Internet and the computer as tools for social interaction.

Individuals' network size is a critical way to understand the structure of social relations, because different network sizes generally represent different amounts of available human resources and, subsequently, access to human relationships (Burt & Minor, 1983; Wellman & Frank, 2001; Lin, 2001). The concept of network size refers to the number of individuals who are connected to each other, forming and maintaining relationships (Burt & Minor, 1983). It shows how intensively individuals regularly communicate and interact with other people or organizations in their local community.

In addition, the user's personality may significantly affect whether online communication has positive or negative social impact. For example, increases in Internet use are linked to a wide range of psychological and social benefits for all participants, but those benefits differ in terms of whether the individual is an introvert or extrovert (Kraut

et al., 2002). In other words, people who already possess relatively greater social skills (i.e., extroverts) are better able to use the Internet to meet new people and have profitable social interactions online than are those who are less socially skilled (i.e., introverts). That is, while online communication contributes to social capital by improving connections with others, people who already possess strong ties or levels of sociability are more likely to receive social benefits than those who have lower levels of sociability. These notions indicate that the Internet becomes a useful conduit to facilitate human relationships, and subsequently, increase the amount of social support from available human resources in rural communities.

In particular, features of SNSs make them appropriate to see how online communication facilitates rural residents' inclusion into social networks and the extent to which exchange of social support within their local community and outside community occurs. In the history of development of communication technologies, rural populations have adopted social technology enthusiastically (Fischer, 1992). In rural settings, the telephone was perceived as a device to reduce rural isolation and bridge social distance (Fischer, 1992). Scholars have noted that rural Americans use the telephone in ways unique to their settings (Fischer, 1992; Umble, 1991) and that the adoption of the Internet makes social interaction more robust in rural areas. Larson's (2007) research about rural users' conception of the Internet looks at rural social technology use and suggests different themes to describe how "ruralness" relates to Internet use in managing and maintaining social relationships.

Based on this theory, Gilbert, Karahalios, and Sandvig (2008) investigated differences of SNSs use between rural and urban users and concluded that, compared to urban people, rural people use SNSs to form friendships offline and then move them online rather than to create new relationships online and that rural users' friends on SNSs live significantly closer than urban users' friends. Gilbert et al. (2008) interpreted that those findings may result from "ruralness." Since the geographic isolation of rural communities affords much more privacy from outsiders than urban locations, rural users are more likely to secure themselves from strangers met online and to have friends with whom they already established offline connections. These findings allow us to understand how rural people use SNSs in unique ways but do not capture the social outcomes derived from SNS use that ensure the viability of rural communities. The limitation in this area of research needs to be addressed.

2.5. SUMMARY OF LITERATURE REVIEW

This chapter has reviewed how broadband Internet could open up new ways for residents of rural areas to make meaningful relationships via online communication and how their social ties serve as a resource to gain social support. Broadband supports a variety of online activities with fast and always on Internet connections (Chadwick, 2006). Because rural populations who move to larger cities tend to become dispersed in urban settings (Wilkinson, 1991), online interactions facilitated by broadband Internet may facilitate distant communication and thereby strengthen strong ties with family members and intimate friends.

In addition, online communication may build weak ties that connect users with new acquaintances or other organizations. Granovetter's (1973) idea of the "strength of weak ties" suggests that interpersonal relationships with strangers or acquaintances are helpful for establishing strong ties in the larger structure of the community. According to Granovetter, without weak ties, strong ties may restrict opportunities for upward mobility of individuals and contribute to disruption of the community as a whole. In rural communities, broadband connection may offer opportunities to supplement few weak ties.

Both strong and weak ties contribute to social stability and social well-being (Granovetter, 1973). While strong ties based on intimate and repeated contacts provide emotional support, interactions with weak ties facilitate exchanging diverse experience and information coming from different social spheres (Hythorthwaite, 2005). In particular, emotional attachment via strong relationships with neighbors, friends, and relatives is an indispensable feature to compensate for the shortage of urban amenities and the factor of. The strength of weak ties may also serve as a useful resource to complement the lack of resources in accessing diverse information and help that are not otherwise available in strong social circles. That is, the Internet may encourage repeated and intimate contacts among residents who already have strong ties and, at the same time, increase the probability of their forming other kinds of important relationships otherwise missing in their existing social circles.

Additionally, the social impact of the Internet may differ in terms of the individual user's initial social relationships (the size and nature of social networks) and

personality (extrovert vs. introvert). People who have already established strong relationships may have greater motivations to use the Internet to further develop their social ties those who are socially isolated. In a similar way, Internet users, who have a tendency to be outgoing and friendly, are more likely to interact online with others and gain more social benefits.

This research seeks to broaden our understanding of Internet use and social implications in rural communities. Although the impact of Internet use on social support and relationships is not a new topic, scant attention has been paid to users in rural environments. Previous studies have looked at Internet access in rural areas as useful for driving economic development and providing amenities. As the Internet penetrates rural areas, additional research will be needed to articulate the social implications, particularly in identifying links between rural Internet connectivity and community connectedness and social support.

2.6. RESEARCH QUESTIONS

While most research has regarded the importance of rural Internet connectivity in terms of economic outcomes, this study examines the potential of online communication in producing social support for users in rural areas, especially outcomes related to social networking. The geographic focus for this study is Zapata, a rural community that is remote from urban centers in Central Texas, a community where broadband services were made available only a few years ago. Specifically, this study investigates how online communication relates to participants' perceptions of social support in the County of Zapata.

2.6.1. How does broadband make a difference, compared to non-broadband Internet use?

Another interest of this study is to examine how the introduction of broadband makes a difference on the rural residents' perception of social support. Specifically, broadband users who are able to engage in more interactive activities (i.e., news, work, entertainment, social networking and group participation) are compared with those who use basic dial-up services for the purpose of determining the extent to which broadband access may improve social conditions previously established with basic Internet access. Kwak et al. (2004) concluded that the adoption of broadband Internet accelerates patterns of political and social consequences introduced previously with adoption of narrowband Internet. This study seeks to determine how online communication with friends and family is related to perceived social support and how the relationship between the two variables differs between broadband users and non-users.

RQ1a: How is the extent of online communication related to perceived social support?

RQ1b: How does the relationship between online communication and perceived social support differ between broadband users and non-broadband users?

2.6.2. How do the longevity of Internet use, extraversion personality, and the size of social networks make differences?

The extent of online communication with family and friends may be an important predictor of variation in perceived social support. In addition to the potential impact of online communication on exchange of social support, some research has shown that

experience with the Internet is meaningful for creating social capital (Gibson, Howard, & Ward, 2000). Initial use of the Internet involves experimentation with its diverse functions that over time lead to more meaningful uses of the medium. According to Gibson et al. (2000), experienced Internet users are likely to demand more information, more rapid personal responses, and more opportunities through Internet use than less experienced Internet users. Intentional Internet use by experienced users may breed higher levels of social outcomes such as forming and maintaining social relations, as well as greater political participation derived from social networks maintained and developed via the Internet. In a similar vein, Kavanaugh (2001) observed that early adopters tend to use the Internet more for civic engagement and community involvement than late adopters. The concept of social support can be understood as one kind of social benefit related to social capital and community involvement derived from computer networks. Therefore, this study explores how the relationship between Internet use for communication and social support differs in terms of how long individuals have used the Internet.

RQ2a: How does the relationship between online communication and perceived social support vary depending on the longevity of Internet use?

This study also considers preceding variables that may influence the impact of online communication on perceptions of social support. Based on the "rich get richer" model, people's sociability and the structure of initial social relationships are considered

to significantly influence the way in which they engage in online communication, and subsequently, affect the social benefits that they obtain. Demographic variables, such as age, ethnicity, gender, language use, or education are not taken into consideration because the population in the subject region is relatively homogeneous so that these variables do not seem significant factors for explaining variations in usage and outcomes. Instead, this study seeks to determine how the relationship between online communication and social support differs for individuals who exhibit varying degrees of extraversion and have created varying sizes of social networks.

RQ2b: How does the relationship between online communication and perceived social support vary depending on the degree of extraversion?

RQ2c: How does the relationship between online communication and perceived social support vary depending on the size of social networks?

2.6.3. How do rural people use a social network site to maintain supportive social networks within their local community and outside their community?

The second part of this study aims to gain a better understanding of rural residents' social relationship building and maintenance through the Internet and consequences on their community life. A case study approach is employed to look at rural residents' SNS use, social relationships, and perceptions of social support, in particular, how rural residents build and maintain social networks in ways that offer a sense of support through the Internet. Participating in online communication is assumed to offer rural residents more opportunities to consolidate their existing relationships and

to experience contexts of cyberspace that differs from real community life, thereby leading to a deeper sense of companionship and help from social ties that are created, developed, and maintained through online social networking.

In order to investigate how rural community residents integrate cyberspace into their real life contexts and vice versa, this study focuses on people who already use an SNS. While rural residents are a segment of Internet users now, little attention has been paid to those who are already online. Therefore, it will be valuable to observe the consequence of the more recent social technology use for increasing rural connectedness and support in community life.

The term social networking site includes different SNS platforms (e.g., MySpace, Facebook, Cyworld, or Friendster) that share similar technological features, for example, to post information about themselves, post pictures, leave messages for friends about upcoming events, and link (i.e., provide a hyperlink) their sites to friends' sites. Customization of site pages is easily achieved through use of profile management tools that do not require programming skills. Although most SNS users are young people, the number of older people visiting SNSs has grown rapidly (Clifford, 2009) thus the need has arisen to study whether SNS use offers benefits for older people to maintain and assemble social ties. Therefore, the following research questions are asked.

RQ3: What kinds of social ties do rural participants form on SNSs?

RQ4: To what extent and in what ways does rural participants' SNS use provide support their lives in rural communities?

RQ5: How can rural participants' SNS use supplement telephone or cell phone use for sustaining social ties?

This study employs both quantitative and qualitative research methods. The first sets of research questions, RQ1a, RQ1b, RQ2a, RQ2b, and RQ2c are investigated by analyzing the survey dataset collected from users in Zapata County, Texas. The three research questions from RQ3 to RQ5 are examined through qualitative interviews with the residents who have created personal profiles on SNSs.

Chapter 3: Method

3.1. RESEARCH SETTING

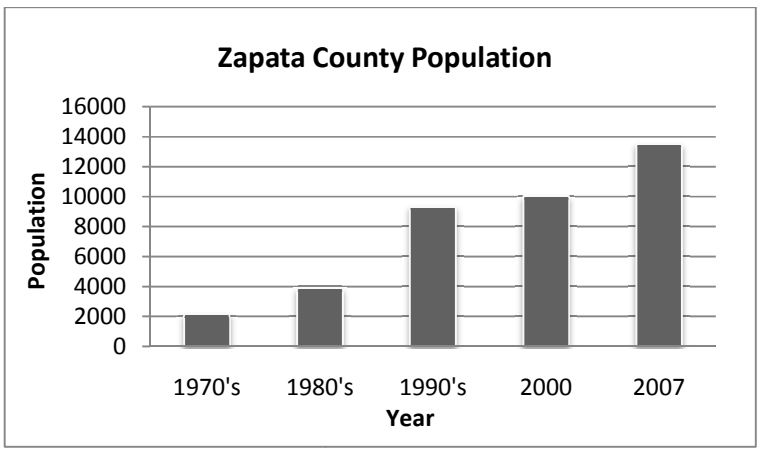
3.1.1. Overview of Zapata County, Texas

The current study investigates Zapata as a target community to examine the role of online communication in increasing social connectedness and support for rural communities. Zapata is a border area between Texas and Mexico in which the Spanish Mexican heritage dominates most aspects of daily life. A rancher from Coahuila, Mexico, founded the area near San Ygnacio in 1750, after which the area was controlled fist by the Spanish and then by the Mexicans and their descendants. The area was part of a Spanish province until 1821 and part of Mexico from 1821 to 1836. From 1836 to 1848, both Texas and Mexico claimed the area. Finally, in 1848, the boundary of Mexico and Texas was settled and in 1858, Zapata County was founded.

The local economy depends on ranching, gas/oil, and tourism. Zapata County was originally a Hispanic-dominated area with few white residents. After construction of a new highway in 1935, cattle, goat, and sheep ranches prospered and after the Falcon Dam was completed in 1954, the international Falcon reservoir started to bring in tourism. Petroleum was discovered in 1919, national gas and oil activities have boomed since the year 2000s, and ranching continues to be a major industry in the area. Zapata also attracts winter tourists and vacationers because of the mild climate and good fishing in the reservoir (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html).

Zapata was not affected by modern development before the 1930's (Gonzales, 2006). However, with two significant milestones of the 1930's, the establishment of a water system and construction of an international bridge across the Rio Grande connecting Old Guerrero, Mexico, with the town of Zapata, the economy began to grow. Between 1980 and 1990, the population grew rapidly as retirees and others, attracted by the reservoir, took advantage of the low cost of living (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html). In 1980, Zapata had an estimated population of 3,806 and in 1986, there were seventy businesses. In 1990, the population more than doubled to 9,279, and in 2007 it was elevated to 13,466 (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html, see Figure 3.1).

Figure 3.1. Zapata County Population from 1970's to 2007

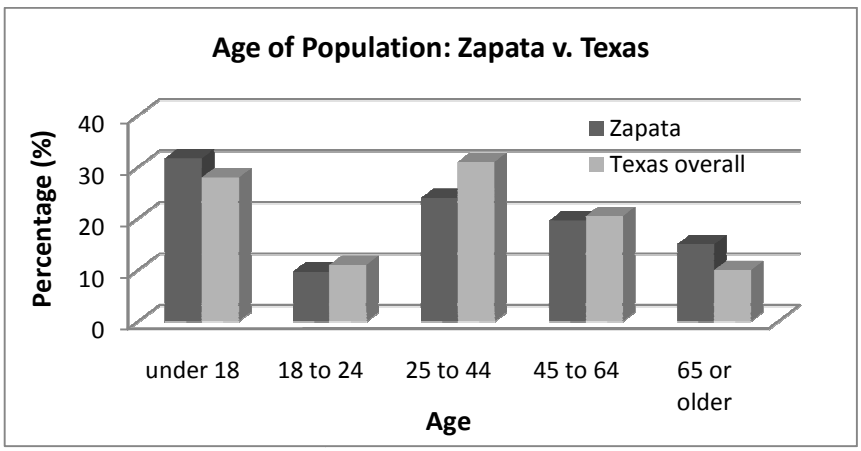


Source: Zapata County Chamber of Commerce Webpage: http://www.zapatausa.com/info.html

The 2000 census reported a population that was 31.7% under the age of 18, 9.7% from 18 to 24, 24% from 25 to 44, 19.6% from 45 to 64, and 15% who were 65 years of

age or older. Figure 3.2 shows the age of Zapata residents compared to the State of Texas, overall. The median age in Zapata is 32 years old and the majority of the population is Hispanic or Latino of any race (89.1%). About 15% of the total households have a female head of household with no husband present. The income level is relatively low compared to urban areas. In 2000, the median for a household in Zapata was 24,136 USD compared to 39,927 USD across the state. The census data from 2000 showed that about 29.1% of families and 33.5% of the population were below the poverty line, including 45.1% of those under the age of 18 and 27% of those ages 65 and older.

Figure 3.2. Comparison of Age of the Population: Zapata and Texas State

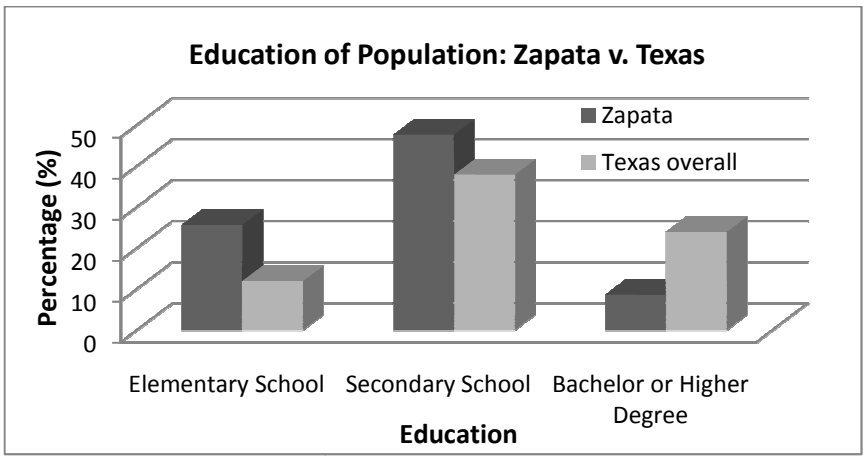


Source: 2000U.S. Census

Possibly as a result of the relatively high population of low income families and a local economy based on natural resources and tourism, the educational levels in Zapata are relatively low. As reported in the 2000 census, of those 25 years and over, 25.7% finished elementary school as their highest level, 47.7% finished secondary school, and

8.7% earned a bachelor's degree or higher (c.f., 24% of the residents 25 years or older in the whole of Texas state, see Figure 3.3).

Figure 3.3. Comparison of Education for Those 25 Years and Over: Zapata and Texas



Source: 2000 U.S. Census

3.1.2. Social Dynamics of Zapata

The county of Zapata was chosen because of its geographic location and the fact that residents make it a good example of a rural community. The town is located along the U.S.-Mexico border, fairly isolated and remote from urban cities of Texas, so that efficient media are needed to communicate border-to-border and across long distances. A 2008 survey found that 37 % of the residents were born outside the U.S (Straubhaar, Strover, Inagaki, Spence, & LaRose, 2008). With development of the Rio Grande Valley, hundreds of foreigners immigrated to Zapata County, with Mexicans constituting the predominant ethnic group (Gonzalez, 2006). The Texas-Mexicans, whose family members reside across the border, use the Internet for constant and convenient long

distance communication when travel to Mexico is not possible. In fact, repeated social interactions with family are significant factors that support the success of Latino immigrants (Woolley, Kol, & Bowen, 2009).

The Zapata residents' strong family networks call for the Internet to maintain strong ties with their family members. The majority of the Zapata population (89.1%) is Hispanic or Latino. Studies that have examined the role of Latino family values to illuminate how Latino immigrants gain emotional support and guidance (e.g., Hwang & Wood, 2009; Woolley et al., 2009; Azmitia, Cooper, & Brown, 2009) have found, for example, the belief that one can count on family assistance helps immigrants face challenges of living in the United States (Azmitia et al., 2009). In other words, family values of mutual support play a protective role in Latino immigrants' well-being. According to Halgunseth, Ispa, and Rudy (2006), in the Latino culture families are expected to serve as the primary source of instrumental and emotional support and the commitment to the family needs and desires is greater than that of the individual. Since strong attachment and cohesion to family ties provide an important source of social support, Hwang and Wood (2009) argued that frequent and repeated contacts and interactions with family are important to maintain strong family ties in the Latino culture.

In addition, the family is the main source for social identification among all classes of Mexican-American society (Madsen, 1964). Madsen's description of Mexican-American culture in south Texas (1964) emphasizes the role of the extended family to bond strong family ties. The nuclear Mexican-American family consists of parents and their offspring, but the bond between parents and children extends over three generations.

Each household in an extended family is located near the others. It is common to see two or more houses of related families crowded together on one plot. In addition, Mexican-Americans think it is wonderful to have many relatives and to keep in touch with them. For this reason, they tend to maintain contact with more remote relatives although they are never as close as grandparents, parents' brothers and sisters, uncles and aunts, and first cousins. In order to strengthen extended family bonds, it is common for families, who move to various locations to work, to plan visits to communities where relatives live. Strong family values are demonstrated in Straubhaar et al.'s finding (2008) that Zapata residents prefer live in a community with their family if possible. Against this background, it is important to understand how the Internet helps to maintain and strengthen social ties and various levels of perceived social support among residents of this region.

Infrastructure for broadband connection was built in 2005 that has made high-speed Internet services available to residents. As part of a rural development program implemented by United States Department of Agriculture (USDA), a vendor was granted funding in 2003 to offer broadband transmission (USDA, 2007) and residents began to subscribe in 2005. High-speed Internet providers include SBC Communications, Frontera Telecom, Blue Moon, and Border to Border Communications (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html).

Zapata recently won a 2007/2008 micro city award in which the town was favorably evaluated as a micro city with economic potential, human resources, quality of life, infrastructure, business friendliness, cost effectiveness, and an investment promotion

strategy (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html). According to the Zapata County Chamber of Commerce, Zapata has initiated many development projects including a new border crossing into Mexico, major highway improvements, and a strategy for growth and investment that includes logistics, air transport, alternative energy, eco-tourism, and security. Natural gas and infrastructure improvements have made significant contributions to the economic growth. With construction of the new highway, U.S. Highway 83, connecting from Brownsville to Laredo, agriculture along with the cattle, goat, and sheep industries has prospered. The new highway has been crucial for transporting the animals to San Antonio, an urban area three hours from Zapata.

The establishment of a water system and the construction of the international bridge across the Rio Grande River have further stimulated economic growth by facilitating shipment of the cattle and agricultural products (Byfield, 1966). In addition, the reservoir that resulted from the construction of Falcon Dam has attracted a new industry, tourism that has attracted retirees and other visitors (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html).

Additionally, the initiation of broadband Internet service has improved the quality of rural life by offering high-speed Internet availability, an important factor for economic development of rural areas (Barnes, 2002). Because of Zapata's location on the US-Mexico border and its oil/gas resources, the community has 1,000 businesses, including global oil companies such as ConocoPhillips and Shell (Zapata County Chamber of Commerce website: http://www.zapatausa.com/info.html). Peggy Umphres, former

president of the Zapata County Chamber of Commerce who now works at the Zapata County Economic Development Center, explained that the county recognizes the significance of broadband services for economic success and encourages local business owners and residents to use the broadband[3] for connecting to international centers as well as U.S. urban areas. Because of the economic benefits that rural areas derive from the broadband and the Internet in general, this study investigates the social implications of broadband infrastructure for a growing border area. Specifically, this study attempts to show how the broadband infrastructure will likely strengthen community networks and improve the quality of community life.

3.2. OVERVIEW OF RESEARCH DESIGN

The present study combines quantitative and qualitative analyses to examine the consequence of Internet use in rural residents' perceptions of social support and diversifying social networks in a south Texas rural community. For the quantitative analysis this study relied upon the Zapata county portion of the dataset, *Community Life in the Information Age*, sponsored by USDA, to examine how broadband Internet connection functions in rural communities. To explore Zapata residents' dynamic social ties and the consequence of online social networking on community life, qualitative research was conducted through face-to-face in-depth interviews.

The rationale for using multiple methods is that the weaknesses of one method may serve as the strengths of another. By combining methods, the researcher can utilize

[3] Personal interview with Peggy Umphrey, Zapata, TX, November 20, 2008

the best of each method and thus compensate for unique deficiencies. The employment of multiple methods allows for increased data richness and a clearer picture of the phenomenon under investigation. In this study, qualitative research is appropriate for some questions in certain conditions, while quantitative is appropriate for others. Combining different methods makes it possible to construct a more comprehensive research design, analysis, and interpretation. Because both approaches are relevant to understanding the significance of computer mediated communication in rural community life, findings and data produced by the two studies facilitate development of a robust evaluation of the phenomenon. Quantitative research provides an overview of the consequences of Internet use in producing social support in the county of Zapata. On the other hand, qualitative results assist in the grounding of quantitative results. Specifically, survey analysis presents the basic relationship between online communication and perceived social support. Qualitative interviews strengthen knowledge of the way in which rural Internet users form social relations via online social networking. The mixed method enhances our understanding of rural Internet use and develops theory with regard to the role of the Internet in improving dynamic social relationships and quality of community life in rural areas.

3.3. QUANTITATIVE METHOD: SURVEY ANALYSIS

3.3.1. Descriptions of Sample

Quantitative methods, used to gain a preliminary understanding of the impact of online communication in increasing or decreasing participants' perception of social support, rely on data from the survey research, *Community Life in the Information Age*,

sponsored by the USDA. The survey research, begun in 2005, is a longitudinal study of a sample of four rural counties in Kentucky, Michigan, and Texas, conducted by a research team of Dr. Sharon Strover, Dr. Joseph Straubhaar, Dr. Robert LaRose, and Dr. Jennifer L. Gregg. The survey focuses on Internet use and community life within four rural communities. In 2005, data collected about heads of households 18 years of age or older, focused on general information of Internet use and people's perception of satisfaction of community life, social support, and community trust, and their intention to stay in or leave the town. A mail survey was completed by 1592 heads of household locating in the four rural counties. The individual county response rates ranged between 20% and 47%. In 2008, the research team revisited the four rural counties and conducted the survey again and included additional interview questionnaires. These data provide an abundant overview of rural Internet use and community life.

The first wave of data, collected by a mail survey solicitation to heads of households, was based on a random sample of residential addresses in the four counties obtained from a commercial mailing list vendor. In the two counties of Texas, the survey was administrated in person to those who failed to respond to the mail surveys because of language and literacy issues, and the second wave in Texas was conducted entirely face-to-face. The data provide general information about Internet use and community life. The questionnaires inquire about attitudes toward and efficacy of Internet use and purposes of online activities. Another part of the survey asks rural residents about their perception of community satisfaction, social support, community attachment, and their intention to stay in or leave a local community. The survey provides information about

survey respondents' personal characteristics including age, gender, ethnicity or race, sociability, household income, highest level of education, and employment status.

The current study utilizes the second wave dataset of the county of Zapata, Texas, collected in 2008. The present sample consists of 412 heads of household (approximately 35% of total households) residing in that county. The data used in this study include information regarding the extent of online communication via email, messenger, and social network sites, sociability, size of social networks, and perceived social support. All questions in the dataset used for this study are reproduced in Appendix A. Missing values on other variables are handled by full information maximum likelihood estimation. Thus, the sample size for this study is 412 heads of households living in Zapata, Texas.

3.3.2. Measures of Variables

3.3.2.1. Online communication

Information about rural residents' online communication is drawn from questions regarding the extent to which respondents communicate online via social networking sites, email, and Internet messengers. In the survey, rural residents were asked if they had ever used the Internet. If they said yes, they were asked to what extent they communicate with family and friends from their local community and in other communities through social networking sites, email, and instant messengers. One item in the original survey questionnaire measures respondents' use of social networking sites, email, and Internet messengers in combination. Those three applications for online communication are combined under one question in the original survey questionnaires. The scale ranges from 1 to 5 (1 = not at all; 2 = a little; 3 = somewhat; 4 = quite a bit; 5 = a great deal) and 61.9

percent of the sample said they used the Internet, and 38.1 percent (n = 157) responded they had not. In order to include the rural residents who had never used the Internet, those who responded "no" were coded as 1 (not at all) for the question regarding what extent to which they communicate with friends and family from their local community/in other communities via email, instant messengers, or social networking sites.

3.3.2.2. The size of social networks

Participants' initial size of social networks was assessed by the size of overall social ties that people currently have in their local community and/or in other communities, as measured by two questions. First, respondents were asked to estimate the number of people, including relatives and friends, whom they interact with at least once a month. The second question estimated the number of voluntary associations, such as clubs, churches, youth programs, and any other community associations that they were members of. Respondents were asked to answer those two questions with no breaking out of local and non-local. Those items are constructed to measure how actively rural residents have relationships with people and involve in civic organizations.

3.3.2.3. Extraversion personality

In this study, rural residents' extrovert and introvert personality is considered to be their initial sociability. Respondents were asked their level of agreement with each of the following statements: "I like to have a lot of people around me," "I really enjoy talking to people," "I like to be where the action is," and "I am a cheerful, high-spirited person." The scale ranged from 1 (strongly disagree) to 7 (strongly agree). This scale is predicted on Kraut et al. (2002)'s study to examine extraversion of personality traits.

3.3.2.4. Perceived social support

This is measured by eight items assessing the amount of social support that rural residents perceive in their community life in general. The items comprise measures of two aspects of social support. One is support and reciprocal help from family and friends. The other is reciprocal relationships with their neighbors in local community at large. The first set of questions asked how large a role respondents' family and friends play in their lives. Respondents were asked to rate their agreement with the statements, such as "My friends really try to help me," "I can count on my friends when things go wrong," "I can talk about my problems with my family," and "I have friends with whom I can share my joys and sorrows." The items to measure the extent of social support that rural residents perceived from their neighbors and general community included questions, such as "I can count on my neighbors to watch my house when I am gone," "If I was in trouble, most people in this community would go out of their way to help me," "My neighbors would be helpful in the event of a personal emergency or crisis," and "There is a special person in my life who cares about my feelings." The scale ranged from 1 (strongly disagree) to 7 (strongly agree). This scale is based on Zimet, Dahlem, Zimet, and Farley's (1988) social support scales.

3.4. QUALITATIVE METHOD: IN-DEPTH INTERVIEW

The current study undertakes an open-ended interview for developing knowledge of the role and impact of online social networking on offline community life. The aim of the interviews is to document the role of rural residents' social networking in the construction of dynamic social relationships and to reveal how they perceive social

support and companionship from contacts they have developed on a SNS. In addition, the interviews explore how rural contexts affect (or do not affect) their use of SNSs and vice versa. Qualitative methods are well-suited to understanding the meanings, interpretations, and subjective experiences of people (Daly, 1992) and are especially useful for understanding individual and shared meanings constructed by people in specific group contexts without fragmenting or reducing that experience to attitudes or behavior.

Semi-structured and open-ended face-to-face interviews were conducted to provide an opportunity for in-depth inquiry of participant beliefs and attitudes in a way that is not possible with survey methodology (Rubin & Rubin, 2005). By allowing participants to help shape the direction of the interview (i.e., allowing for tangents), the possibility of discovering other areas of interest was opened up for placing emphasis on the interaction of the participant and the interviewer. This interaction allowed the interviewer to more readily work to create a relationship with the interviewee, thus working to create a rapport with participants (Rubin & Rubin, 2005).

3.4.1. Sampling

The present study combines random and snowball sampling methods. Respondents were recruited from different kinds of SNS users living in Zapata County. Personal profiles on SNSs, such as Facebook or MySpace, revealed users currently living in Zapata, so that it was possible for others to identify their regional networks. The current study sent courtesy messages to ask if they would participate in interviews and invited them to the interview. The interview invitation message was sent to total 30 Zapata residents who have personal profiles on MySpace or Facebook. Four out of 30

SNS users replied to the message and agreed to interviews. They were asked to recommend other interviewees in order to recruit more SNS users in Zapata. As a result, a total 15 Zapata residents participated in the interview representing a diversity of backgrounds in terms of age, sex, ethnicity, education, and occupation.

3.4.2. Procedure

The message requesting participation in interviews included an introduction containing a statement about the purpose of the study (see Appendix B) and the IRB consent form (see Appendix C). The initial four participants were informed that confidentiality of the interview would be protected and anonymity of participants would be guaranteed. When they agreed to participate in the interview, they were informed of the schedule for researcher's on-site visit and made an appointment for the interview.

The next step after setting the interview schedule was to conduct face-to-face interviews in Zapata. The interviewees were given an informed consent form that states the confidentiality of the interview record and their privacy right and then asked to provide their signature on the form. When the participants agreed with the consent form, each respondent was asked a series of closed and open-ended questions designed to gather their background information (i.e., age, gender, education, household income, and Internet use in general), their views about and experience with activities via social networking, and their perceptions of social support in community life. All interviews were conducted by the researcher and were recorded using a digital voice recorder. The length of the interviews varied from 40 to 60 minutes.

3.4.3. Interview Questionnaire

Some primary advantages of the interview method include flexibility and the ability to gather information about not-quantifiable complex relationships. In this study, an interview questionnaire was used primarily to help clarify why rural residents were using online social networking and how they were creating and developing social networks between cyberspace and their real life local community in relation to issues of social support making community life enjoyable. In keeping with the exploratory purpose of the research, open-ended questions allowed participants to respond with information they considered important with regard to online social networking and community life. The questionnaire is provided in Appendix D.

The interview questionnaire begins with general open-ended questions that deal with each participant's opinions and thoughts about activities on SNSs and their local community life specifically. For instance, participants were asked to respond to questions, such as 1) What makes you use the social network sites? 2) What are you usually doing on social network sites? 3) In general, who are you communicating with on social network sites? 4) How many close friends and family do you have on social network sites from your local community and other communities? and 5) How many friends do you have on social network sites who you have never met in person?

Several questions concerning the participants' perceptions of social network sites, social relationships, and community life were also included. For instance, participants were asked to respond to questions such as 1) How is using social network sites helpful for having relationships with family and friends? 2) How is using social network sites

helpful for having relationships with your neighbors? 3) Have you used social network sites to organize meetings or events in your local communities? How is the site helpful for living in a small community? 4) How do you use the social network sites to get information and help from others online? 5) When do you think you feel uncomfortable about living in a small community, if at all? and 6) How do you think using the social network sites (or the Internet in general) affects any convenience features of living in Zapata?

Finally, several questions were designed to understand how rural residents' Internet use supplements other communication means such as telephone or cell phone calling and in-person contacts. Participants were asked to respond to questions, such as "How do you usually get in touch with your family and friends who are living in the town or outside the town?" "When do you use a cell phone (or telephone) and when do you use the Internet including SNSs?" "What do you think the advantages are of each means of communication?" Finally, a few closed-question demographic questionnaires were asked to know respondents' gender, age, education, household income, ethnicity, immigration background, and other technology uses (e.g., cellular phone, high-speed Internet, wireless Internet, digital camera, etc.).

3.4.4. Data Analysis

An important first step in the analysis of each interview was the transcription of the digital audio recording. The benefit of transcribing one's own interviews is that it begins the analysis and allows for the recognition of emergent themes (Rubin & Rubin, 2005). Rubin and Rubin (2005) note this process includes deciding what and how much

to transcribe. In the present study, each interview was transcribed from start to finish, including micro-linguistic utterances, such as "uh" in the text. In addition, certain contextual elements of the conversation were noted. For example, if the interviewee seemed hesitant to answer a question or laughed during the interview, those behaviors were noted in brackets within the transcription. Para-linguistic features were included in the transcripts because this detail enables a researcher to examine not only the words that were said, but how those words were presented (Rubin & Rubin, 2005). This detail is important from a discourse analysis perspective because the content of a participant's talk can never be separated from the words uttered (Wood & Kroger, 2000). Transcript reliability and accuracy was established by repeatedly listening to the audio-taped interviews to verify that all important information was recorded. Finally, to protect participant confidentially, all identifying material (i.e., names of people and places) present in the transcripts was replaced with pseudonyms.

Transcripts were coded using ATLAS. ti, a computer software program for qualitative data analysis. After initial inductive coding of transcribed research text with ATLAS. ti, all texts were sorted for uncovering and connecting of themes. In general, small conceptual fragments of story parts (bits) are organized into progressively larger themes. The second step of the coding framework employed in this study focuses on grouping the small conceptual bits into meaning clusters or axial codes. The final step is pulling the axial codes together into one or two overarching themes (selective codes). The selective code or codes might be thought of as the basic story line of the findings.

In creating codes to help answer the research questions, four broad categories were developed: different types of social ties, connections of online social networking with offline community life, perceived social support, and comparison between cell phones and SNSs use. Each broad category was coded by specifying sub-categories (see Appendix E). Within each category, data were then coded sentence by sentence. When significant statements by interviewees were identified, they were listed under the sub-categories. Each significant statement is organized in the sub-categories and the statements and descriptions under each sub-category synthesize main themes or meanings that answer the research questions. For example, if interviewees' statements are related to whom they communicate with through SNSs, they are labeled as one of the sub-categories, such as family (e.g., parents, siblings, in-laws, grandparents, or cousins), friends (classmates), neighbors, or partners. The clustered and labeled constituents are organized into the larger core theme, "different types of social ties."

In order to code and analyze the transcripts of interviews, this study used the constant comparative method in conjunction with categories drawn from the literature about the phenomenon that the researcher is studying. Interview data were sorted and organized based on the initial coding scheme including the themes related to social networks and exchanged social support. Transcripts were carefully reviewed for salient patterns, recurrent themes, and key concepts. Each time a new theme or concept, that was not included in the initial coding scheme, was found, it was written down and a new category was formed. As new insights were gained, the shape and direction of the research project was adjusted. After working through all the transcripts, each category

was compared and contrasted to ensure that the best possible constructs remained (Glaser & Strauss, 1967). This process of constant comparison also "stimulates thought that leads to both descriptive and explanatory categories" (Lincoln & Guba, 1985, p. 341) based on the participants' own descriptions and language.

Each transcript was treated as a unit of analysis. Using constant comparison, the researcher identified detail codes, which were finally conceptualized into themes. Themes and concepts were looked for in single sentences, phrases, or in a series of statements. Both the audiotapes and the transcripts were analyzed in order to extract recurring themes, ideas, and insights. If a topic emerged in more than one transcript, it was recorded as a theme. If a concept, and words that associate with the concept, emerged in more than one transcript, it was recorded as a construct. Remaining as descriptive as possible during data analysis, participants' translated words were recorded as detail codes. In all, nine themes to answer the research questions were identified. These are discussed in Chapter 5.

Chapter 4: Online Communication and Social Support

4.1. DESCRIPTIONS OF KEY VARIABLES AND SCALES

Before exploring the formal research questions, it is important to understand respondents' characteristics and Internet use. Table 4.1 shows descriptive statistics of respondents' demographics, and reliability estimates and item wording of the scales that measure extraversion, perceived social support, and extent of communicating online with friends and family. The mean of household income was between $20,000 and $34,999 and 89% of the respondents were Hispanic. The mean of years of education that the respondents reported were 11 years after kindergarten. Comparing those demographics of the sample to information about the Zapata County population as a whole, the sample of this study appears to be representative with a few exceptions. Female and older respondents were slightly overrepresented in this study (c.f., 50.8% of the residents is female and the mean of age is 29.6 in the whole Zapata County). In the sample, 36.5% of the Internet users were currently using the high-speed Internet at home. In addition, the respondents reported that they had used the Internet for about four years and spend two to three hours on the Internet per day (see Table 4.1).

Table 4.1. Descriptions of Key Variables and Scales

Key Variables		M or %	SD
Gender	Female	66%	
	Male	34%	
Ethnicity	Hispanic	89.8%	
	Other	9.9%	
Age (Years Old)		43.78	17.42
Household income[a]		3.26	1.95
Education excluding kindergarten (Years)		11.55	3.93
Proficiency to reading in English[b]		5.28	2.54
Longevity of Internet use (Months using the Internet)		45.36	59.77
Average time of Internet use (Hours)	On weekday	3.5	2.5
	On weekend	2.1	2.5
Broadband Use	User	36.5%	
	Non-user	63.5%	
Size of social circle (Numbers of people meeting regularly)		29.44	35.76

(Continued)

Key Variables	M or %	SD
Extraversion Scale[c] (Cronbach's alpha = .80)	22.57	4.82
I like to have a lot of people around me.	5.20	1.85
I really enjoy talking to people.	6.08	1.07
I like to be where the action is.	5.22	1.82
I am a cheerful, high-spirited person.	6.08	1.20
Online Communication in Local Community Scale[d] (Cronbach's alpha = .94)	2.46	3.20
Communicating with friends from your local community?	1.27	1.67
Communicating with family from your local community?	1.19	1.63
Online Communication in Other Communities Scale[d] (Cronbach's alpha = .94)	2.57	3.26
Communicating with friends in other communities	1.27	1.66
Communicating with family in other communities	1.30	1.71
Perceived Social Support Scale[c] (Cronbach's alpha = .84)	42.27	6.70
I have a special person who is a real source comfort to me.	6.31	1.19
My friends really try to help me.	5.86	1.31
I can count on my friends when things go wrong.	5.78	1.50
I can talk about my problems with my family.	6.24	1.19
I have friends with whom I can share my joys and sorrows.	6.01	1.30
There is a special person in my life who cares about my feelings.	6.39	1.21
I can talk about my problems with my friends.	5.68	1.61

Notes: [a]Response categories ranged from 1=under $10,000; 2=$10,000-$19,999; 3=$20,000-$34,999; 4=$35,000-$49,999; 5=$50,000-$74,999' 6=$75,000-$99,999; 7=$100,000 or more.,[.b]Response categories ranged from 0=uncomfortable to 7=very comfortable., [c]Response categories ranged from 1=strongly disagree to 7=strongly agree., [d]Response categories ranged from 1=not at all to 5=a great deal.

4.2. RELATIONSHIP BETWEEN ONLINE COMMUNICATION AND SOCIAL SUPPORT

Regression analysis was conducted to explore research questions regarding the relationship between online communication and perceived social support. Demographics, such as age, education, and proficiency of reading in English, were controlled to determine if the extent of online communication counted for variance in perceived social support over other variables.

4.2.1. RQ1a: How is the extent of online communication related to perceived social support?

To answer RQ1a, this study investigated how the extent of online communication with friends and family predicts the amount of perceived social support reported by respondents. As shown in Table 4.2, the total variance in perceived social support explained by the regression model was 11%. Most importantly, the contribution made by online communication with friends and family from the local community and in other communities to the amount of perceived social support was small but statistically significant. Online communication in the local and outside communities was positively related to perceived social support ($\beta = .21$, $p < .05$; $\beta = .23$, $p < .05$, respectively). Respondents' extraverted personalities and length of Internet use were positively associated with the amount of perceived social support ($\beta = .19$, $p < .01$; $\beta = .25$, $p < .001$, respectively).

Table 4.2. Regression Predicting Perceived Social Support

Variables		Perceived Social Support (N = 362)	
		β	t
Age		.07	1.22
Education		.13	1.83
Reading English		- .03	- .50
Size of social circle		- .05	- 1.01
Longevity of Internet use		.19	2.61**
Extraversion		.25	4.68***
High-speed Internet use (broadband use)		- .02	- .28
Online communication with friends and family	from local community	.21	2.01*
	in other communities	.23	2.19*
R^2		.11	
Adjusted R^2		.09	
Sig. of Change		.00	

*p <.05, ** p < .01, *** p < .001
Notes. Regression coefficients are unstandardized, controlling for all other variables. Statistical significance is derived from two-tailed *t* tests.

4.3. INTERACTION OF VARIABLES RELATIVE TO EFFECTS OF ONLINE COMMUNICATION ON PERCEIVED SOCIAL SUPPORT

RQ1b to RQ2c asked if the relationship between online communication and perceived social support varied according to broadband use, length of Internet use, the degree of extraversion, and size of the user's social networks. Those research questions were explored to determine if the four variables accounted for variation in the association between online communication and perceived social support. To answer the questions, a series of interactions between the extent of communicating online and broadband use, length of Internet use, extraversion, and size of the user's social networks were entered into the regression model of perceived social support.

4.3.1. RQ1b: How does the relationship between online communication and perceived social support differ between broadband users and non-broadband users?

For the model predicting perceived social support, interactions between online communication and broadband use were not significant. Table 4.3 presents findings that interaction between online communication with friends and family in the local community and broadband use was not significantly related to perceived social support ($\beta = -.10$, p = n.s). In addition, the interaction between online communication with people outside community and broadband use showed no significant relationship with perceived social support ($\beta = .04$, p = n.s, see Table 4.4). In other words, broadband use was not a statistically significant variable to account for varying relationships between the extent of online communication and perceived social support.

Table 4.3. Interaction terms of online communication with local friends and family and four variables (extraversion, size of social circle, broadband use, and Internet longevity) on perceived social support

Variables	Perceived Social Support (N = 362)	
	β	t
Age	.02	.31
Education	.13	1.80
Reading English	- .04	- .50
Online communication with friends and family from the local community*extraversion	.15	1.95
Online communication with friends and family from the local community*size of social circle	.12	1.47
Online communication with friends and family from the local community*broadband use	- .10	- 1.27
Online communication with friends and family From the local community*longevity of Internet use	.26	2.21*
R^2	.05	
Adjusted R^2	.03	
Sig. of Change	.01	

* p < .05, ** p <.01, *** p < .001
Notes. Regression coefficients are unstandardized, controlling for all other variables. Statistical significance is derived from two-tailed *t* tests.

Table 4.4. Interaction terms of online communication with friends and family living away and four variables (extraversion, size of social circle, broadband use, and Internet longevity) on perceived social support

Variables	Perceived Social Support (N = 362)	
	β	t
Age	.01	.17
Education	.13	1.86
Reading English	- .02	- .26
Online communication with friends and family in other communities*extraversion	.17	2.38*
Online communication with friends and family in other communities*size of social circle	.12	1.67
Online communication with friends and family in other communities*broadband use	.04	.51
Online communication with friends and family in other communities*longevity of Internet use	.28	2.36*
R^2	.05	
Adjusted R^2	.03	
Sig. of Change	.02	

* p < .05, ** p <.01, *** p < .001
Notes. Regression coefficients are unstandardized, controlling for all other variables. Statistical significance is derived from two-tailed *t* tests.

4.3.2. RQ2a: How does the relationship between online communication and perceived social support vary depending on the length of Internet use?

As shown in Table 4.3 and 4.4, interactions between online communication with friends and family living in local and outside communities and the duration of Internet use were significantly related to perceived social support ($\beta = .26$, $p < .05$; $\beta = .28$, $p < .05$, respectively). Specifically, respondents who had more experience using the Internet appeared to perceive social support if they communicated online more intensely with friends and family from the local community and outside communities (see Figure 4.1 and 4.2).

Figure 4.1. Interaction terms of online communication with local people and length of Internet use on perceived social support

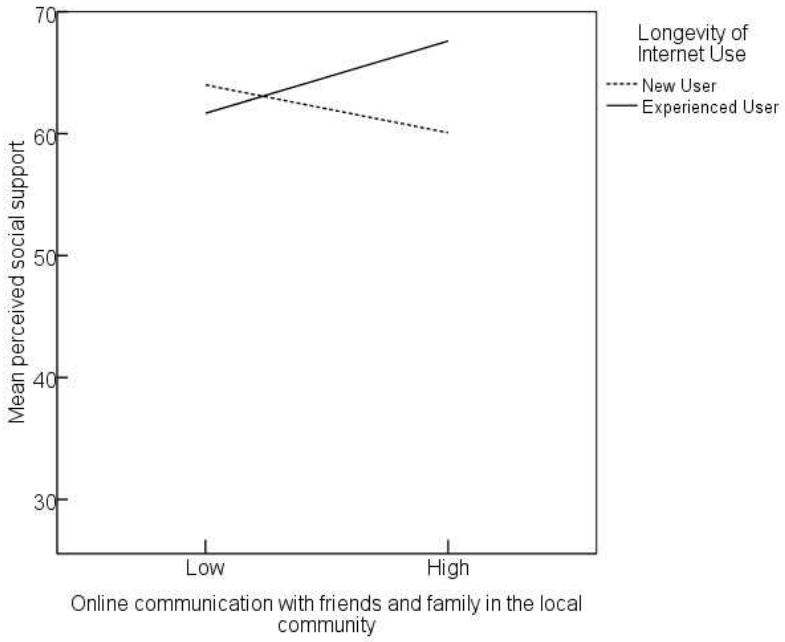
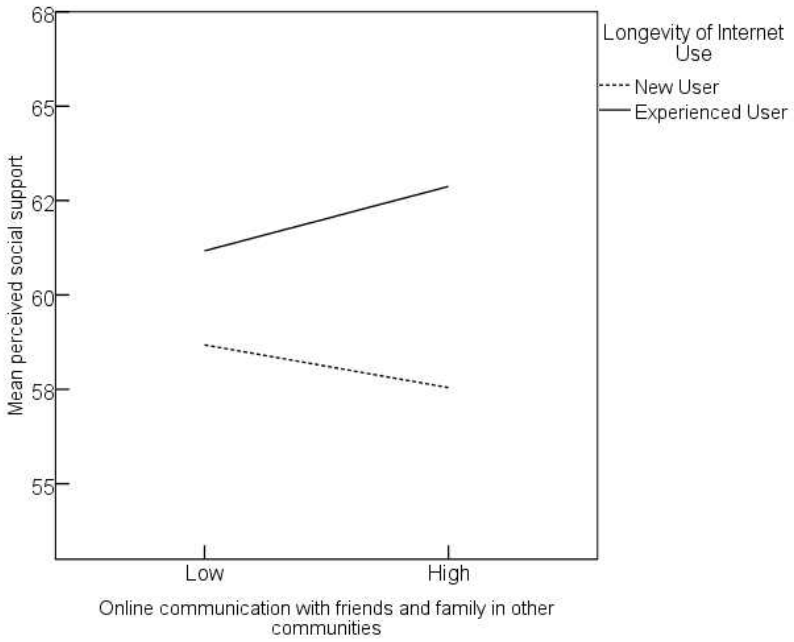


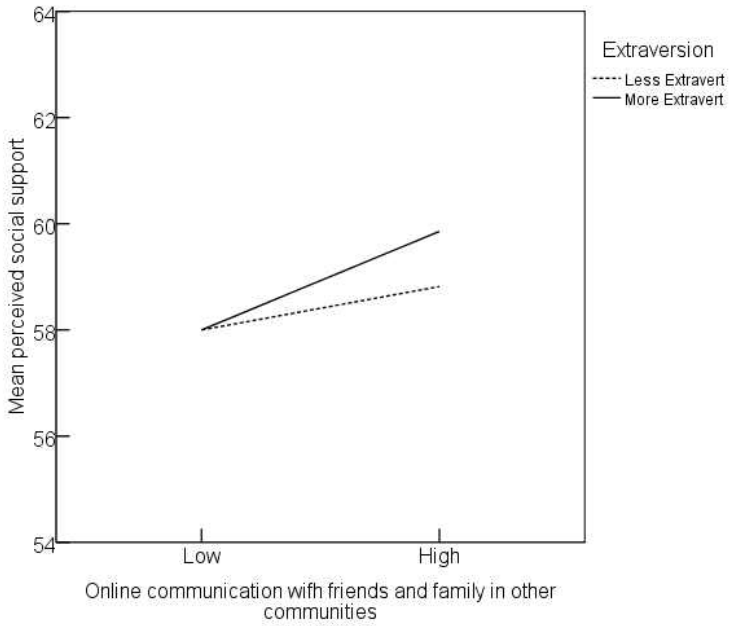
Figure 4.2. Interaction terms of online communication with outside people and longevity of Internet use on perceived social support



4.3.3. RQ2b: How does the relationship between online communication and perceived social support vary depending on the degree of extraversion?

The regression model explored interactions between online communication with friends and family in the user's local community and found the interaction with the degree of extraversion was not statistically significant ($\beta = .15$, p = n.s., see Table 4.3). On the other hand, in the regression model, there was a positive, significant interaction between online communication with people living outside the town and extraverted personalities ($\beta = .17$, $p < .05$, see Table 4.4). This result suggests that the relationship between online communication with people away and perceived social support vary depending on the degree of extraversion. Respondents who have more extraverted personalities are more likely to perceive higher levels of social support (see Figure 4.3).

Figure 4.3. Interaction terms of online communication with people in other communities and the degree of extraversion on perceived social support



4.3.4. RQ2c: How does the relationship between online communication and perceived social support vary depending on the size of social networks?

As shown in Table 4.3 and 4.4, interactions between communicating online with people living in local community and outside communities and the size of social networks were not statistically significant ($\beta = .12$, p = n.s.; $\beta = .12$, p = n.s., respectively). In other words, respondents' social network size is not a statistically significant variable to account for variation of the relationship between the extent of online communication and perceived social support.

Chapter 5: Use of Social Network Sites and Perceived Social Support

In order to examine the use of social network sites (SNSs) by residents of Zapata and perceived social support, qualitative in-depth interviews were conducted. This chapter presents results which answer the three research questions proposed earlier:

RQ3: What kinds of social ties do rural participants form on SNSs?

RQ4: To what extent and in what ways does rural participants' SNS use support their lives in rural community?

RQ5: How can rural participants' SNS use supplement telephone or cell phone use for sustaining social ties?

5.1. OVERVIEW OF FINDINGS

5.1.1. The Respondents

Fifteen respondents were interviewed, ranging in age from 22 to 56, with the average age being 34. Eleven respondents were female and four were male, indicating the interviewer was more successful in obtaining female respondents than male respondents. The lack of diversity in gender may reflect the constitution of SNS users in general nationwide when in November 2007 there were found to be more female SNS users (63%) than male users (36%) (Hsu, 2007). The majority of respondents were Hispanic, consistent with the majority of the population (89.1%) in Zapata. Specifically, 12 of the respondents were Latino oriented English and Spanish bilingual speakers, while three were non- Hispanic White and English-only speakers. The respondents' household income ranged from $35,000 to $ 100,000. Eleven of the participants subscribe home

broadband service and four did not have home broadband connection due to the absence of service in their neighborhoods. They accessed SNSs via Internet enabled cell phones. The respondents' average length of Internet use was 12 years (see Table 5.1).

Table 5.1. Overview of the Interview Respondents

Respondents' General Information		**Values**
Age (years old)		22 to 56
Gender	Male	4
	Female	11
Ethnicity	Hispanic	12
	White	3
Language Use	Only English	3
	Spanish and English Bilingual	12
Household Income		$35,000 - $100,000
Internet Connection	Broadband Connection	11
	No Broadband Connection	4
Average Internet Longevity (years)		12

Overall, the interviewers were found to be frequent SNS users. Every respondent indicated that she or he used SNSs on a daily basis. There are 10 respondents who login to an SNS at least once a day and three reported logging in once every two days. Two participants appeared to check an SNS when they received email notifications that others' SNS pages had been updated. Eleven of the interviewees used MySpace only and three

used both MySpace and Facebook. One interviewee, a technical director in the Zapata public school district, used a certain social network site for professional technicians all around the world. This result reflects socio-economic divisions between MySpace and Facebook users that danah boyd (2007) has investigated. According to danah boyd (2007), while a majority of Facebook users are those from families who emphasize education and going to college, dominant users of MySpace are Latin/Hispanic teens, immigrant teens, and others who do not have "hegemonic value". In fact, Zapata participants who did not go to college perceived that Facebook is what the college students do. Some respondents who are using Facebook mentioned they switched from MySpace to Facebook after going to college, although they check out MySpace to contact their high school friends who are mostly on MySpace.

Four respondents, unable to subscribe to broadband service at home login to SNSs through regular cell phones, blackberries, or wireless Internet via Cricket.

5.1.2. Summary of Findings

Table 5.2 provides a summary of findings that are covered in the remainder of this chapter. As shown in Table 5.2, respondents provided a wealth of information about the meaning of SNS use for maintaining or creating social ties and providing different dimensions of social support. Additionally, the interviews demonstrated how an SNS is structured into existing communication channels such as telephones or face-to-face meetings. The titles used to identify these various themes correspond roughly to the sub-heading used in the remainder of this chapter where each primary finding is discussed in detail.

Table 5.2. Visual Overview of Findings

Research Questions	Themes
RQ3: What kinds of social ties do rural participants form on SNSs?	1. Maintaining existing social ties: ▪ Distance communication - Family ties - Uniting friendship ▪ Organizing offline social meetings with friends and family 2. Widening social ties: ▪ Making friends with strangers ▪ Looking for dateable people online 3. Blurry boundary between neighbors, friends and family
RQ4: To what extent and in what ways does rural participants' SNS use support their lives in rural community?	1. Emotional support ▪ Feel psychological closeness with strong ties ▪ Compensating social isolation ▪ Empowering woman 2. Instrumental support ▪ Enjoyment: - Social game - Picture browsing ▪ Information resources 2. The absence of a sense of belonging to community
RQ5: How can rural participants' SNS use supplement telephone or cell phone and in-person contacts for sustaining social ties?	1. Digital divide between the old and young generations 2. Bridging telephones and face-to-face meeting 3. Social factors ▪ Economic condition ▪ Limited broadband service: Access to a SNS through cellular phones

5.2. ANALYSIS OF INTERVIEWS

5.2.1. Social Ties Connected through Social Network Sites (SNSs)

As Table 5.2 reveals, there are three themes that answer Research Question 3 (RQ3), "What kinds of social ties do rural participants form on SNSs?" This study begins the in-depth description of the research findings with a look at the structure of different social ties that the rural participants maintain through SNSs. As examined in Chapter 2, social and geographical isolation are key challenges of life in rural and remote regions. Residents of such localities rarely see friends and family who live at a distance, since the chance to travel outside their area is more limited than in urban settings. Out-migration and fewer opportunities for face-to-face meetings call for alternative communicative tools to mediate long distance relationships. As a result, rural residents are inclined to maintain and strengthen existing strong social ties rather than to create looser ties that are useful for diversified social networks (Gilbert et al., 2008).

This trend of social ties mediated through SNSs was addressed in most of the interviews. While participants in this South Texas rural town mainly use MySpace to maintain and strengthen their network of strong ties, they are not willing to create new social networks online. In other words, they rarely perceive the necessity of additional social contacts other than friends and family. Exceptions were a few female respondents who were dating men they had met through MySpace. As for relationships with neighbors, despite having lived in the same neighborhood for a long time, the participants did not necessarily feel intimate with other residents and, as a result, had no interaction through SNSs. The next section of analysis clearly presents that Zapata participants'

social ties using SNSs are bound to relationships with intimate friends and family members.

5.2.1.1. Maintaining Existing Social Ties on Social Network Sites (SNSs)

Foremost among the social networks that interview participants sustain through SNSs are strong ties with intimate friends and family members. The interviewees' social ties in a physically small community are narrowly based and form densely knit clusters of close friends and family. Supportive and companionable relationships with friends and family are important components to sustain the respondents' rural life. The interviews demonstrated that the out-migration of former residents was a key issue for respondents in Zapata. Among younger single participants, in particular, the out-migration of friends and cousins to pursue a college education was a central issue running. One interviewee, *SD*, a 22-year-old single woman, reported that most of her cousins who had grown up together in the same neighborhood left Zapata after high school graduation. She sympathized with her cousins who decided to move to urban areas, commenting:

> They [her cousins] all get a better job over there and cause she's a nurse. So our aunt and all that so. I know she got it was better for her and well, my cousins are going to college over there and everything. It's like more opportunities over there than here. There's not much of choice here.

This account illustrates that inadequate resources for education and careers or even to get a job are likely to make residents feel the limitation of living in the rural area. This quote was echoed by other respondents who described their daily lives in the rural area. "Staying in a small town, there's nothing to do" was their initial reaction to rural

settings limited opportunities for leisure time activities. When talking about their peers' out-migration, almost all participants explicitly stated that small towns were inherently lacking in different types of resources. Although they did not express a need to have additional access to information, goods, or education available in their physical locations, they agreed it was inevitable that young people would leave town in order to achieve a better life. *JR*, a 56-year-old public school teacher, said:

> I told my former students who are already doing their life in Austin and San Antonio. Because they're all young adults so they're either in college or graduate. There' no place here to do your life. There's nothing here for young people. Nothing. My children get out from here.

The out-migration of students, those who are unemployed, and their families means that the remaining Zapata residents have many long distance friends and relatives with whom they would like to keep in contact. An SNS seems to satisfy the rural participants' desire to stay connected. During the interviews, the respondents conceded that the greatest affordance of SNSs is connectivity and availability to maintain long distance relationships. Some interviewees' friends and relatives live a long drive or airplane ride away and it is often easier to maintain relationships online than it is to get together face-to face. As for the necessity of convenient means of communication, *BB*, a 28-year-old single woman, reported:

> If you're like in the small town and living with your family in the same town, you can go and see your family members. I mean you can just direct this walk and see your family. With a bigger reason, if your family is

> living out of town, you should go out of town see your family. I mean with economy right now, it's kind of hard to do it, but I don't really see a problem with having a relationship or could be keep in touch with them the family if I use MySpace.

This quote suggests that this respondent feels uncomfortable travelling outside town to see her family members who have moved away. Almost all participants' initial use of SNSs was motivated by suggestions by friends or family members living outside the local community, rather than by local contacts.

A pattern was observed among South Texas rural participants' SNS use with respect to local and non-local friendship ties. In addition to relationships with immediate family members and relatives, the rural participants' social networking helped them maintain friendship networks. Out-migration is prone to disruption of strong relationships with close friends and family members, and throughout the interviews, the respondents revealed that they had experienced a subsequent decrease in communication and interactions with friends since high school graduation. For example, one 23-year old woman pointed out the role of MySpace had played in reuniting high school friend ties:

> Most are my friends here [in Zapata]. The majority of them, they moved out cause for college and still so, some are in College Station and some are in Austin and San Antonio and I guess so. For college, and actually they've finished and they like being stay there. Some do come back and the majority of my friends graduated then they are teaching in there so they came back once a year or so. They're still your friends, but I wasn't

> as close to them. MySpace is the other way to be able to talk to them or send messages just to make sure that they are okay.

Most interviewees were generally explicit in acknowledging that MySpace motivated them to reconnect with friends. The convenience of MySpace became even more obvious in the context of border-to-border communication between residents of Texas and Mexico. *BB*, a 28-year old woman, who emigrated from Mexico to the border town of Zapata reported that she felt communication gaps with friends far away. She was disconnected from her friends who had grown up together in her neighborhood when she lived in Mexico. She said:

> I am now more connected to the, yeah, actually, yeah, there're people that are like I say, that I hadn't seen them the long time and I actually found of them on MySpace. Even my classmates when I was back in Mexico. I've seen them there [MySpace]. They've found me there. So that's weird.

When queried about MySpace use of friends living in Mexico, she went on to say:

> I had no idea how they login cause you know it's in English and I think there's a Spanish version of it. So actually one of my friends when I was in first grade she, um, wrote me a message and she add me. She's like oh, I like uh, I don't know it's been a year, oh my god, how did you loggin so, yeah. I wouldn't have imagined she was there you know. I don't know how she did it.

This participant did not appear to anticipate meeting her friends who use MySpace in Mexico, since Internet access in Mexico is not as pervasive as in the United

States and Spanish speakers may have a language barrier to English. However, for this participant, the accessibility to MySpace definitely helped to shrink the communication gap with her friends in Mexico. Although Mexico is physically close to Zapata, people living in the Texas border town do not feel easily accessible to their friends in Mexico because of the border between two countries. In addition to spatial barriers, the interviewees implied a psychological barrier that accompanies the absence of interaction and communication with people in Mexico. From interviews with participants who have relatives in Mexico, the psychological distance between Zapata and Mexico is greater than the geographical proximity. When asked about relatives or friends who are living in Mexico, one interviewee, *AG*, a 26-year-old woman, answered:

> Um well, across we were in Laredo, some of my uncles from my dad's side. I don't have much communication with them except for, um, two of my cousins. They have MySpace. [Laugh] I guess I've always gone since I was small. But not now. It's kind of scary. There's like a lot of Mexican military there dock in the above bridge.

Another major contribution of a SNS to reconnecting friendship ties in the rural town is associated with organizing class reunions through MySpace. Throughout the interviews, class reunions were recognized as the most significant event for rural participants to get in touch with their high school friends. *GG*, a 26-year-old female interviewee, recalled one class reunion and reported:

> […] We have really good communication and another thing is um, a lot of the classmates that you know you really did have a good, it's not a good

> relationship but you really, you weren't as close to them as you were with your friends, um, when I comes to like class reunions and stuff like that, you really, uh, MySpace becomes like awesome because they send you messages and we're actually thinking about having our class reunion in the cruise. The reason why I found out was because my class president wrote me a message from MySpace.

This quote illustrates how convenient SNSs are in organizing and promoting social meetings, such as class reunions, birthday parties or commencement. Many participants indicated that their social networking is based mostly on offline relationships, and they frequently use MySpace and Facebook for inviting family members and friends to social meetings taking place in the physically bound community. For example, *VR*, a 26-year-old woman, sent a message through Facebook to invite relatives to her younger brother's commencement last year. Her cousins, uncles and aunts as well as immediate family members regularly check Facebook. Although she initiated the invitation in the face-to-face church meeting, she recalled that sending messages through Facebook was easier than using a cellular phone to send a reminder of the event to multiple people at the same time.

In addition, for the rural participants MySpace plays a role as a convenient platform to facilitate offline socializing with acquaintances at long distance. When queried about social contacts in an SNS, many interviewees revealed that an SNS is the primary means of communication with acquaintances such as former co-workers or distant high school classmates. They are usually former residents of Zapata and visit their hometown around holidays or special occasions. According to the participants' accounts,

the acquaintances usually keep in touch with them by sending short messages on a MySpace page. Since they get in touch with each other infrequently, they do not have phone numbers. Thus, when former residents plan to visit the town, they are apt to contact the participants on MySpace and ask for phone numbers. This example illustrates how MySpace maintains rural participants' existing weak ties with the acquaintances otherwise outside of their social circle. For example, *JR*, a 49-year-old man, explained:

> I traveled from Kentucky to here. I still have contact with my boss to work with me in Kentucky. I talk to her once in a while through Facebook. She just, you know, want [to know] what was going on. We hardly ever use telephones. I, just send a message to her once in a while.

5.2.1.2. Widening Social Ties

Although the rural participants' online social networking is bound to their existing social relationships, especially friends who have left home and kin who have moved away, some reported that MySpace makes it easier to meet new people. Most of the participants have received friend requests from people unknown on MySpace and they retain at least couple of strangers on their friend list. All acknowledged that MySpace provides a new avenue to make friends with strangers, but they had different reactions when asked about meeting new people on MySpace.

On the one hand, respondents recognized that MySpace could widen the pool of potential friends that had been narrowed by their rural physical location. They were willing to have face-to-face meetings with online friends, if the friends were living in areas near Zapata. In particular, a few single female respondents thought that MySpace

could increase opportunities to meet men who can make a date with them. Two female participants were actually in romantic relationships with men they had met through MySpace. They were generally explicit in their acknowledgement that Zapata was lacking in potential dateable people in Zapata. *GG*, a 26-year-old single woman said:

> Um, the one's that they are here like not, [laugh] boy, so it's usually you go out and, um, if MySpace didn't exist or the Facebook or chat lines or stuff like that, um, I think you know you'd have to go to another city or another town in order to try to find that romantic interest that you're looking for. Um, but since you know MySpace is just like it's like a telephone call. It's like a wide range of different pictures and different uh, fish in the sea.

From this excerpt, she characterized the difficulty to meet a dateable person as simply a part of everyday rural existence and as a challenge that could be overcome by going online. How rural participants meet someone on MySpace is suggested in discussions with other users. Even though they did not prefer meeting someone online over a face-to-face meeting, they certainly endorsed online dating. Some female single interviewees who expressed qualms about meeting someone on MySpace, however, most agreed that MySpace could become an alternative channel to widen a potential dating pool. For example, *WB*, a 40-year old married male participant, revealed that his major activity on MySpace is for entertainment but recognized the dating potential of MySpace for a single person:

> I mean I'm married I've got kids. I don't have you know the reason that beyond that besides that. For single people, probably it's great. You know you meet all kinds of new people from different places.

The other pattern of reactions to meeting strangers on MySpace contradicts a basic attitude towards making new friends online and an actual use of MySpace for that purpose. Specifically, some interviewees talked openly about the difficulties of meeting dateable single people around town. However, when asked if they would ever use MySpace to meet strangers, they said "I'm for it, but I wouldn't do it." For example, *BB*, a 28-year-old single woman, reported:

> I have [met] a few strangers. Probably just keep in touch through the web, but not really meet. Cause you never know who it is. Maybe after a while, after having the saying forever, I mean, a year or so, I mean you get like appointed whatever and you see know that I'm okay I mean. Actually I've met people like that but uh, it's kind of hard to trust somebody you know because […]

This seemingly contradictory attitude was present throughout many interviewees. Although the participants espoused the same general schema for how MySpace can be used for meeting someone new, their stated personal behaviors were often different from their initial positive perception.

The respondent in the excerpt above revealed a positive attitude to making new friends online, but she hesitated to meet them in person. These sentiments may be related to the issue regarding respondents' trust of others about whom they lack personal

information. When asked how they felt about meeting new people online, many participants in this study said, “Totally strangers? No. No. And it’s scary.” Some interviewees, particularly women, had concerns about cyberbullies and the disclosure of information associated with MySpace use. The interviews indicate that the mainstream media have raised popular concerns about the use of SNSs. For example, *YS*, a 34-year-old married woman, states that she has frequently read news articles regarding cyberbullying that targets teenage girls who use MySpace. The news reports contributed to her feeling intimidated at the prospect of meeting strangers on MySpace. She reported:

> I don’t usually answer strangers’ messages oh, because, I don’t know why. Cause, cause I’ve seen like the news or all that like what happened to that, 13 years old girl? The one that they had played the prank on her something like that I don’t know, I just, I mean I could be it’s like her whatever. No. I think, I think that, that, like really serious.

Part of this concern is based on the inability to physically see with whom they might be interacting and the absence of preexisting expectations for background knowledge of someone new. Here it is possible to see how living in a rural area affects one’s perception regarding forming relationships online. People in this area live in a context where they “know everybody.” Fear about the likelihood of online deception was common among many participants who had grown up in a rural community where, literally, “everybody knows your name.” In attempting to apply those experiences to the online realm, it seems that participants in this sample were caught between safety concerns and the desire to meet new people. Seeing online communication with “persons

unknown" as a trade-off between background knowledge ensuring safety and opportunities to meet new people was a tension present in comments of many participants.

Additionally, disclosure of personal information was viewed as a psychological barrier to creating new social ties through MySpace. In particular, rural women respondents were likely to set their profiles to private at much higher rates than male respondents. As for female respondents' social contacts mediated through MySpace, they already possessed deep knowledge about each other and viewed detailed interpersonal knowledge as an important prerequisite for exposing their personal information and pictures. The empirical findings of this study demonstrate that the female participants are reluctant to reveal their personal lives and pictures to strangers whom they have never met in person and about whom they have no information. *AG*, a 26-year-old female participant, mentioned her decision about privacy protection in MySpace:

> Um, I used to have a lot of strangers that would be popped up but MySpace has that um, privacy option where you get to make your, probably. I created it private or so I wouldn't have the problem. Um, they also have or you can like in order to add you, you have to like either your email or your last name. So, um, that way you won't have any problems with people like going into your profile and looking at your pictures and stuff like that.

In her correspondence, she tends to feel secure by setting the privacy protection on MySpace. Additional participants talked about how to determine if it was okay to

"friend" someone on an online networking site. One of the determining factors was if another of their friends had met the new individual face-to-face. Even though users did not have direct or indirect interpersonal information about new people, they were apt to give some hospitality to new people who were from a small town nearby. This pattern is illustrated by a 26-year-old woman interviewee:

> Um, you get to meet different people, um, you have a lot of people like from Zapata or like oh, she's in Zapata I'm gonna add her, and and, basically you like hey what's going on and um, actually all the people that I have them on MySpace are people that I know either directly or indirectly. I do, I don't approve or I don't like to meet people from out of town or out of Texas and stuff. If I don't know them, I won't.

Exploring this pattern of forming new social ties leads to a deeper understanding of how awkward rural residents feel about expanding their social ties to someone new, without interpersonal clues. Conversations with the research participants indicated they regard direct or indirect relationships as well as deep interpersonal knowledge as prerequisites for creating new social ties. They believed that they were able to have better opportunities to develop and build more solid relationships with people who have a social connection with themselves.

Meanwhile, the interviewees' social ties mediated through SNSs rarely contained networks with neighbors in the local town. Although participants had resided in the town for a long time, most did not have intimate ties or strong attachments to people in the same neighborhood. Before discussing the issue of online social networking with

neighbors, it should be noted that most of the respondents did not neatly distinguish neighbors, neither family nor friends, from friends and family members living in the same neighborhood. When queried about relationships with neighbors, many respondents generally mentioned cousins, other family members who were in-laws, or friends who lived next door.

This reaction illustrates respondents' sense of "neighbor" is related to the nature of rural residence. Zapata, the site of the current empirical study, is a small rural village which is tightly composed of homogeneous kinship groups and friendship circles. In this circumstance, people easily perceive most of the people living in the same neighborhood as neighbors. They tend to foster relationships with closely knit friends and family members so that they are not likely to develop new relationships with neighbors who are neither family nor friends.

5.2.2. Social Support Provided by Social Networking Ties

5.2.2.1. Emotional Supportiveness between Strong Ties

Research Question 4 (RQ4) of this study seeks to examine how social ties mediated by SNSs provide social support that rural participants may perceive in their real lives. In discussing benefits of MySpace use for rural residents, almost all respondents made statements regarding the "ruralness" of the region. They felt their lives were slow-paced and boring and mostly described their rural lives with expressions such as "nothing to do" or "nothing fun." These phrases indicate that ruralness is the most salient theme for understanding the way rural residents use SNSs and cultivate social ties through the sites.

As Figure 5.2 indicated, there are three sub-themes that emerged in the interviews to describe different dimensions of social support that rural participants experienced as a result of online social networking. Differences in types of social networks maintained through SNSs constitute a primary characteristic of social support. Previous studies found different consequences depending on different types of social networks used. Granovetter (1982) observed that strong ties provide emotional support, while weak ties tend to be more instrumental. A similar pattern was uncovered in this empirical research.

From the interviews, there is substantial evidence of reciprocal supportiveness in the participants' strong ties with friends and family, mediated through SNSs. The always-on connectivity facilitated by high speed Internet, in comparison to dial-up, allowed Zapata residents to be accessible to family and friends. This way of communication afforded them a sense of co-presence akin to being there in person. The addition of the high-speed Internet to the residents' existing communication routines was viewed as having added and enlarged bridges to the outside community. These bridges connect residents with already-familiar family members, relatives, friends and places in ways that served to overcome some of the psychological, if not physical, isolation of life in the remote rural town. Therefore, it appears that the respondents' most common emotional needs were for care and support provided by family members and intimate friends. The female respondent, *BB*, explains physical distance between her family members and her feeling of fear in losing strong and supportive ties with family. She said:

> Um, we're so far and far. We don't see each other that much. We see each other barely, holiday or stuff like that. Cause it's, it's a very far. It's like

> uh 9 hours. I have a lot of um, family members in Mexico. Actually I got used to everything after I moved here, but I don't get used to this, I mean, uh, too far to go and see my family members. It's a different, way different life without family. If I would live together with family and do something, time would fly. I mean, I'm afraid if we don't feel closer to each other, I mean, end up, um, [pause] I'm afraid if we don't care about each other.

The respondents agree SNSs offer a flexible and convenient way of maintaining and developing social networks and can help them cope with the loss of social contacts associated with out-migration. By joining MySpace and Facebook, they continued to communicate with their relatives and high school friends, often at a distance. These social ties represent an important source of social support that helps the rural population compensate for isolation from their families. In particular, social cues with pre-college friends tended to help respondents look back upon the days when they went to school with their friends. The opportunities to reconnect become the basis for sharing their emotions with old friends and strengthening long-term friendship by increasing the frequency of communication. For example, *MG*, a 23-year-old female participant, recalled the moment when she found her old friends on MySpace for the first time:

> When I see my friends who [I] haven't talked with [in a] long time it's like a you know I was with them a day before to a like you makes me go up too then, yeah, what are you doing, what are you up to. You know very different two like maybe we were be in the distance and we hardly like ever like talked after we were graduated or after we haven't seen that's for long time. I would be like hi you know and hey you are. That's buddy. I

> feel like it's like a closer relationship toward hey, and I know I saw that you'll be part of it too, you know.

Throughout the interviews, the respondents expressed the psychological closeness they felt when exchanging messages and sharing photos. The respondents reported that online activities undertaken for the purpose of updating their everyday lives made them feel in constant connection with each other. An anecdote shared by one of the respondents, *MG*, about use of MySpace shows how messaging and photo browsing creates a sense of co-presence among SNS users in Zapata. She mentioned:

> I had stopped uploading pictures for a while and then, yeah, I started uploading pictures mainly because uh, people, like, they don't live here, like, don't get to see her. I'll show her off. She's my beautiful niece. Actually I have, um, the main one on my list, [laugh], is my sister and she's her daughter. […] MySpace becomes like awesome and it's real easy, um, I love doing that to see my niece. Take pictures and I load them up. I like to, like, you know, the updated files, those for uh, like, updated friends and sister and niece, uh, and, send messages, [pause] and for this status. And I keep like a page open cause I get to see what they're updating and feel like uh, we're all together. It's like, "Oh, cool, I like this picture and wow!" We're actually chatting at the same time.

Indeed, according to many participants, the convenience of picture uploading is the most significant feature of MySpace and Facebook. In browsing pictures on SNSs, the geographical distance between social contacts living in different regions seems to be overcome. This way of online social networking may compensate for fewer opportunities

for face-to-face meetings. The visibility that online communication through SNSs promotes helped respondents feel psychological closeness to their intimate friends and family members whom they had not seen for a while. A 26-year-old interviewee, *VR*'s accounts illustrate this point. She reported:

> I like MySpace mainly because you get in touch with your people and you can talk to them every day. My friends from San Antonio and my best friend lives in Laredo. I send them like a little comment so they can know what you think about them and you know you get you hanging out here you go to like take pictures and stuff on birthday party something. You put him there your friends cause see hey you now we had fun and stuff like that and get to comment them and stuff like that. You look forward to their comments.

The main advantages of SNSs, visibility and accessibility, become more significant when discussing emotional support, such as a sense of consolation and supportiveness perceived from family members. Particularly, for Latino interviewees, this type of social support obtained from family has a much greater importance for their daily lives. As discussed in Chapter 2, there are positive relationships between family support and psychological well-being among people of Mexican origin because of the importance of traditional family values in this group (Rodriguez et al., 2007; Rivera, 2007). From the interviews for this field research, Latinos, who represent the majority of the participants, identified family as a central construct among different values of their lives. However, because family interaction is diminishing due to out-migration, the respondents seemed to feel that they were losing a valuable source of emotional support. They acknowledged

that by offering opportunities for family interaction, social networking contributed to narrowing the communication gap and strengthening supportive relationships. Emotional support and a sense of consolation that a strong family tie ensures among Latino groups were actually important themes running through the interviews regarding SNSs use. For example, *GG*, a 26-year-old woman, reported:

> My family is very very important, I guess. That's why I wouldn't be able to move to anywhere else cause of my family. I was living one time in Laredo, but I just last living there like for 6 months. I couldn't, I just live by myself but they were just like what am I doing over here by myself when I have my family is in Zapata. So I just left for over there and came down living here in Zapata. That's how close and I am a part of my family means to me. We cannot be separated you know we're very attached to each other. And anything you need, they're always there for you. My brother is living in South Carolina and he's doing MySpace. We all miss him and see his pictures on MySpace. When we see his pictures, we all like to see him in person. We'll all waiting for his graduating.

In addition to ties with immediate family, Zapata participants' relationships with their cousins tend to supplement connections with friends. For young female participants, in particular, cousins were reported to be almost as emotionally supportive as immediate family members and intimate friends, because cousins are oftentimes classmates as well as relatives. When asked questions about neighborhood and kinship ties, all female participants pointed out cousins as significant social contacts who are consistently helpful and supportive. According to their accounts, cousins are a prominent group of peers who

have strong relationships and provide different dimensions of emotional aid. Since they grew up together in the same neighborhood, they are likely to have shared common experiences and memories. Therefore, the companionship they reported feeling is considered likely to reduce loneliness and anxiety due to the lack of supportive relationships in their rural environment. Comments by a 22-year-old woman interviewee, *DS*, who got first married at 14 years old and divorced a few years ago, are insightful. Her most frequent correspondent on MySpace is her cousin who left Zapata 11 years ago. In the interview, she said that MySpace had become a primary platform for receiving advice from her cousin about difficulties that she was experiencing. The quote below illustrates how this interviewee exchanged emotional support with her cousin and how MySpace mediates and strengthened that supportive relationship.

> Like I, actually my cousin, the one in Oklahoma, we're always messaging each other. We end up crying. [Laugh] Like, we're end up crying when we read messages of each others, like oh my god, like it's cause I miss you so much, or whatever. I know. Since we grow up together but like I said she left at 11 years ago, so […]

Another significant support that SNSs provide is related to consolation and relaxation that rural married female participants report as a result of connecting with old friends. They seemed to be happily married mothers who played roles as nurturers of their families during the interviews did not explicitly complain about their lives and roles as housewives. However, because their husbands appeared to be very conservative in terms of gender roles within the family, the wives spent little time with friends because of

their household and family responsibilities. The wives said that due to the limited amount of time available to socialize with friends, they felt isolated from their social groups. All the married women interviewees reported that their husbands are very conservative and give them primary responsibility for child care. For example, *AG*, a 26-year-old married woman discussed her duties for family and her husband's patriarchal attitude:

> I can't, I would never see my friends. Like if I get [to] travel like those in Laredo, I, I would go and see my family, not them. And I can't, I don't know. I just can't because of like my kids, usually my husband, he doesn't wanna take care of my kids, while I'm out, so, cause my kids are terrible, so. He goes crazy with them. My husband doesn't want for me to go into MySpace at home. But I like to watch other people's pictures. My friends, see like when they're partying, whether at a who they're with, um, at least I know like who they're hanging out with, what they're doing, like or they're doing good, or they're doing bad like uh, I don't know. Like if they've finished college or who've they're having fun like that. I like to know how they are.

This quote is illustrative of the gap that MySpace fills for housewives whose supportive peer networks offer frequent communication and strength of relationships. Meanwhile, almost all the married female respondents said they did not spend as much time on MySpace as they would have liked. They agreed that interaction via MySpace offered an escape from daily routines.

5.2.2.2. Instrumental Support from Social Networking with Weak Ties

In addition to emotional support, the interviews indicated that online social networking could mobilize supportive resources for information and entertainment that. Kavanaugh et al. (2005) are different types of social support that tend to be more functional and practical. This type of support is usually a consequence of interactions among people linked through weak ties who have little clue of offline social relationships (Granovetter, 1982).

The participants, particularly men, reported they are more apt to create relationships using SNSs to find social resources such as entertainment and information. Previous research has noted the different nature of communication between men and women. Wood (2005), for example, explained that women are inclined to engage in rapport-building talk, and this underscores a general perception of women's tendency to actively engage in interpersonal communication online regardless of context. Fallows (2004) found that women, compared to men, are more likely to send and receive email to friends and family.

Similar findings were demonstrated in responses in this study. The male participants said they utilize MySpace as an entertainment medium to play games rather than as a communicative outlet to sustain strong social ties. They expressed a desire for access to more entertainment tools not currently available in their physical locations. For the men, living in rural areas meant not having access to the diverse leisure resources often available in urban areas. That is to say, the male participants considered MySpace a way for them to circumvent their perceived lack of local resources. One of the two male

respondents who reported playing games on MySpace, *WB*, a 40-year-old married man, said he spends his spare time on Mobster, a social game on MySpace. He described his activity as follows:

> I usually, it's basically MySpace is entertainment for me. I mean I'm married I've got kids. I don't have you know the reason that beyond that besides that. For single people, probably it's great. You know you meet all kinds of new people from different places. But most of the time I'm playing games on MySpace. There is here in Zapata. I, the only other entertainment is going out to drink at the bars and, or gamble.

Whereas playing games on MySpace is an activity with an explicitly recreational purpose for the male participants, there is another dimension of enjoyment social networking sites offer to the female participants. For them, SNS use offers a way to spend their spare time. Although all of the activities available through MySpace were sources of entertainment, the women said they most liked photo browsing. Previous studies have shown that photo browsing is an important part of people's SNS activities. Since MySpace and Facebook are "social" media, photo browsing is one way users share their experiences (Watkins, 2009).

The responses of interviewees reinforced that their primary use of the SNS is for socializing with former residents who are now at a distance. The remoteness of their rural setting tends to make them eager to spend time browsing pictures of friends and family members who have moved away. In other words, an activity such as photo browsing becomes "social browsing" that shrinks the communication gap between people who live

far away and cultivates different dimensions of social ties. At the same time, photo-browsing may be understood as a source of entertainment in rural areas. For example, *YS*, a 34-year-old female respondent, said:

> There [MySpace] you can see their pictures, their family pictures and all that a lot of my friends took post their pictures there and uh, there's more fun. I would think it's more fun. It's about the only entertainment. It's like sit in front of TV or in front of video games or in front of computer. It's hard to find friends who hang out here. Nothing fun. I don't actually go out of my way anymore.

This quote illustrates that the interviewee perceives photo browsing on MySpace as akin to using other entertainment media, such as television or video games. That is, photo browsing plays a role as additional entertainment in ways that compensate for the absence of diverse entertainment resources in a rural area.

Another dimension of instrumental support that the participants realized from their social networking was informational resources. According to Castells (2000), rural areas have been increasingly marginalized from the established information networks present in metropolitan areas. The informational disparity between rural and urban areas has been the subject of much scholarly debate related to issues of digital divide. In rural areas, the Internet provides an effective tool for gathering useful information (Chen and Wellman, 2003) and interviewees substantiated they consider an SNS as a conduit for access to information and knowledge. For example, *JM*, a 53-year-old man, joined a certain social network site which is composed of a group of professional technicians all

around the world. He did not want to identify the exact name of the site, but revealed that social networking contributed to building knowledge and developing diverse discussions in his field. He said:

> We can post pictures and videos, of course, they're work related you know, we needed, I needed help with this item ah, if I'm having trouble, explaining it. I'll post pictures, post little video, or if I come up with the technique to uh, you know do some, some, uh, work or something or find something to do as you can see here. I'm do [doing] a lot of, they're tinkering. It's going around. We have all sorts of technology that we operated and then we're not a very small community. It's very, very helpful. We found a lot of solutions to a lot of the situations that we run into our work here with the school through that site than those blogging times we spent online. We found a lot of solutions and help and we've helped I'm just for sure we help other people with things that we do. And, whenever we don't have solution we just hey it's very simple to connect online you know it's really just post questions.

This interviewee did not explicitly state that small towns inherently lack in information and human resources. However, his statement implies that small towns are often slow to receive current information and, as a result, can be out-of-touch with current standards or solutions. In addition, referred to concerns about not having human resources to discuss solutions for technical problems or professional knowledge related to his work at school.

5.2.2.3. Sense of Belonging to the Local Community

Another type of social support provided by rural participants' social networking is a sense of belonging to their local community. Most participants did not clearly distinguish friends and relatives from neighbors. Instead, their understanding of the local community was that of a physically bound space where they have grown up and continued to live near familiar people, relatives and friends. This finding illustrates a perception of community that differs from that often described by urban residents in other research. While people residing in urban areas tend to perceive that they belong to a larger network that extends beyond family and friends, the rural perception is limited to territorially-based relationships within a locality (Wilkinson, 1989). When queried about relationships with neighbors, most of the respondents said, "My neighbors? My neighbors are my good friends and cousins." A possible interpretation of "a sense of belonging to community" that the participants may feel could be "deep companionship" that they may receive from their association with friends and family who live in the neighborhood.

In general, the interviewees were neither interested nor engaged in community events, except for social activities with their family and friends. One interviewee, *RM*, a 24-year-old Zapata deputy auditor, mentioned a nationwide fundraising event, called *Relay for Life*, which supports cancer patients, their families and survivors. She is in charge of the local branch and coordinates the fundraising event in Zapata. Recognizing that many Zapata residents use MySpace, she sent short messages and a few users responded by helping to promote the local event. According to her accounts, the

residents' reactions to the message and the event were not impressive. Interviewees revealed that promoting the event through MySpace was not impressive, that use of MySpace was not successful in mobilizing participation. Most of the respondents were not interested in community events taking place in Zapata, so that they did not read carefully messages about that particular event. Their response suggests that an SNS is not an effective tool to encourage rural participants' engagement in social meetings and collective actions in a rural setting.

The chilly reaction and low engagement to the community-related event is likely rooted in the participants' negative perception of Zapata. Basically, most interviewees made negative statements about their rural town. Throughout the interviews, they used expressions, such as "boring town," "nothing to do," and "no fun." Participants viewed their town as a place that lags behind bigger cities like Austin and San Antonio. They generally claimed that the "ruralness" of Zapata had impeded their education and career development. Many participants expressed a willingness to leave Zapata if they had better opportunities to live and work elsewhere. For example, *JG*, a 29-year-old deputy sheriff, is planning to move out Zapata and has registered for online classes to obtain a teaching certificate. Generally, she had negative impressions of Zapata and her remarks highlighted the salience of the urban and rural distinction in providing local resources for individuals. She said:

> Exactly, because everybody decides that after you know you graduated anything or just leaves because of the small little town there's not really much you can do here. Um, you can't get rich over here and this you know

> you do illegal things or your parents you just grew up rich and then but, you just move away. You know because you don't want, staying in a small town there's nothing to do. I love my town, but I just, as community has, it's a very different thing to you know to that. There's not much stuff to do here so, there's not really much to, about to discuss the community and stuff.

The young people's out-migration may result in the widening communication gap between old and young generations. The interviews in Zapata demonstrated that while young people are apt to leave the town after high school graduation, older people tend to stay in the same neighborhood for a relatively long time. This social pattern, as manifest in the interviews, may contribute to disconnection between the generations. The Zapata participants said they used to have close relations with their neighbors at one time. However, nowadays, they said, younger people rarely talk to the older people after their younger neighbors, living in the same household with the elderly, have left the house. According to Wilkinson (1991), rural life encourages integration among contacts by increasing the probability that the social contacts will be repeated and intimate. However, in this rural location, the shortage of the younger peers in the neighborhood tended to decrease the opportunities for community interaction and integration. *DS*, a 22-year-old woman, recalled her childhood when she interacted with her older neighbors:

> I have, like my neighbors in like a childhood. Um, like when we were little, we hang out with whatever. We used to all play in the church, cause my parents would, my parents talk to her parents and, stuff like that. So, that's why we were really close. But the children, they leave the town like

> my friends, they left. They all come back here holidays and I know special occasions or whatever. But now old people are living in my next doors. I don't talk to them that much.

This quote indicates weak local community linkages in Zapata that results from frequent out-migration and the generation gap. The generation gap will be furthered elaborated upon with another theme that also characterizes by the generational digital divide issue in the following section.

Another interpretation of loose relationships with neighbors may result from characteristics of the Zapata community, including diverse ethnicity, language usage, redevelopment of residential areas, and influx of "winter Texans," retirees from other states that move to the town in cold weather. Throughout the interviews, rural participants expressed awkward feelings with respect to their neighbors. For example, *AS*, a 38-year-old woman, talked about her neighbors' hostile attitude towards her family:

> I do have one of the neighbors. He's very like to himself and his family and he doesn't like, we can't even step you know have a little step on his land because he's like, you know call the cops and everything like, you know it's a bad.

She did not explain why she has a problematic relationship with her neighbor. However, other interviewees' comments brought up several community issues that disrupt interaction between neighbors. The participant's reaction to her neighbor may be a factor of the composition of ethnicity in Zapata. *YS*, a 34-year-old Hispanic woman, hesitated to discuss the awkward relationship with her neighbor, who is a white man:

> It's just that sometimes um, people, some people are racists so, we don't want, we know who those people are, so we just try to keep away from them, so we won't have any problems with them. They don't like Mexicans. [Laugh] They're Anglo. We do talk sometimes but it's very a few words. That's it. Just like […]

Related to this interviewee's perceived tension between Latino and Anglo residents, a language barrier may contribute to the reluctance on the part that new residents feel part of the local community. Most of the residents in Zapata, a border town, are fluent Spanish speakers, because about 90% of the population is Hispanic or Latino. In this setting, residents who do not speak Spanish may feel frustrated and isolated from co-workers or neighbors who speak Spanish fluently. For example, *JR*, a 49-year-old mechanic, who moved from Kentucky, said that Spanish was a significant barrier that made him feel like an outsider in the local community, even though he has lived in Zapata for more than 10 years. He commented:

> I feel like an outsider here. Well they're all stand around talking in Spanish and I can't understand a flipping word they say. I can't speak Spanish at all. I, I like the community but, but, but um, I mean, it, there, there's um, like I said, there's tons of feel like an outsider but, you know, that's, that's just me. So well, I'm just gonna go like this, okay, well, I'll go to somewhere I'll listen to.

The interviewee's statement about social relationships in the workplace and neighborhood suggests that he may have problems understanding conversations with Spanish speakers so that he feels a difficulty in becoming assimilated with his neighbors.

A similar pattern of relationships with neighbors was revealed in talks with other interviewees, particularly, Anglo residents who moved to this town from other regions. According to *RJ*, a 56-year-old public school teacher, she still feels uncomfortable getting along with her neighbors even though she has lived in the town for 20 years. Throughout the interview, her reactions conveyed the impression that she barely perceives herself as a Zapata resident. When asked about social ties with neighbors, she reported that her contacts in the geographical community as well as on Facebook are mostly her children and former students at high school. She constantly used the word "different" to indirectly show her awkward feelings with the neighborhood. This sentiment illustrates that living in Zapata is challenging and that rather than making friends with neighbors in the town, she wanted to look for someone new through MySpace. She said:

> I don't think that the community has much to do with that. I think that we connected because I was their science teacher. Because I'm not related to anyone here. No one. I don't have one relative here. If you're talking to [people] who are my age, everybody knows everybody in this town. But not me. I feel like myself isolated and an outsider here. I moved here because of my husband. My husband died and I buried him here, but I didn't have any reason to move anywhere [else] out. So I still live here, but people around me are very different here. I was born in Hawaii and lived [there] before I moved here. Very different. So I rather can go into search for a friend and let people get into my account. I would send them messages and then they would send me a message back or not. Sometime it didn't work out that way I thought it would be. But that's all right.

The other explanation for the unattached and isolated sentiment that participants reported may be related to a frequently changing population. The interviews indicated that Zapata has experienced a great deal of in- and out-migration, and some of it associated with migrant labor patterns. Besides the out-migration into bigger cities, the number of empty houses in the rural area is increasing because the town is undergoing redevelopment and building houses in several areas. As a result, it may be difficult for current residents to sustain consistent relationships with neighbors. When asked about relationships with neighbors, *BB*, a 28-year-old interviewee, described her neighborhood:

> Actually my neighborhood is pretty scared of. There's not much people living there right now. It's barely getting populated. I live in the very like, on the area that there's not so many people. Just with the one of the neighbors I used to live next to has moved to somewhere. She's the only one that comes to the house, whatever, overall. Well, actually two of them. But in that street, there's only left like four houses, so, you can't really talk to many people.

"Winter Texan" accounts for another category of Zapata residents that give the town a sense of a floating population. Since "Winter Texans" are seasonal residents of the town, their houses are usually empty during the other times of the year. Thus, ordinary residents may not feel a sense of connection with "Winter Texans" as their neighbors. This finding was frequently revealed in talks with interviewees with whom there is little interaction. *VR*, a 26-year-old respondent stated:

> I have a neighbor, Winter Texans that came. They just bought a house there, but I've, I've rarely met them. We haven't spoken that much, but she seems nice. She did like she's like oh, come over whenever you want. I don't like say like why's, you can go to my house, so […]

In sum, the interview analysis indicates that SNS use does not play a significant role in encouraging community integration and cohesion. Rural participants do not have intimate relationships with their neighbors, except for old friends and family members, in a physically bound community. For this reason, it is difficult to ascertain if the research participants' neighbor relationships are mediated through SNSs. With respect to social support, participants did not feel the necessity to give or receive support from neighbors and they did not anticipate close relationships. Traditional social relations in rural settings are mainly based on strong ties involving repeated contacts and intimate exchanges of social support (Wilkinson, 1989). A transitory and impersonal weak tie does not contribute to participants' perception of emotional support and consolation. However, different activities on SNSs do allow residents of rural areas to form meaningful weak ties to compensate for the lack of information and sources of entertainment.

5.2.3. Structuring SNSs into Other Modes of Communication

In order to answer Research Question 5 (RQ5), "how can rural participants' SNS use supplement telephone or cell phone use for sustaining social contacts?" the interviews with participants looked at how different modes of communication are negotiated for certain contexts. At each interview, participants expressed similar thoughts about what the SNS was useful for and how it added to other modes of communication in their daily

lives. Interviews revealed that most participants chose SNSs because they were affordable in comparison with other modes of communication. However, there were some reasons why they reported negotiating SNS use with telephone or cell phones. For example, they often preferred telephones or cell phones when communicating with their older family members because older people do not usually use the Internet or an SNS. On the other hand, Zapata interviewees preferred SNSs when they needed a more cost-effective means of communication. Also, their preference often depended on the nature of the conversation. Although variations came up as the interviews progressed, all participants provided similar descriptions of structuring SNSs into the existing communication technology. The study participants' understandings or constructs were once linked together and then made up their shared schema for the SNSs.

5.2.3.1. Digital Divide between Older and Younger Generations

When asked about their means of communication for purposes of sustaining social relationships outside the local area, a majority of the participants reported that face-to-face interactions and telephones, including cellular and landline, are the main conduits available to older people to stay in touch. Respondents' accounts demonstrated the explicit generational digital divide between older and younger residents in Zapata. Almost all participants reported communicating with their parents, grandparents, and other older relatives through landline and cellular telephones because older family members are not computer and Internet literate. On the other hand, the main communication technology used to maintain peer networks includes a variety of different formats of electronic media, such as instant messaging, email, text, and SNSs. Young

participants and their peers are apt to use different modes of communication depending on the circumstances. Study participants and their peer groups have available a range of diversified communication outlets that embrace the new order of constant connectivity, whereas older non-users are committed to remaining without the Internet. For example, *MG*, a 23-year-old female respondent said:

> My mom doesn't know how to use the Internet and MySpace. Actually my dad is into the Internet because of his job, but he doesn't know how to use MySpace. My younger sister and brother have MySpace. They have Facebook, too, but don't use very often. We're also texting, or, like, um, we're always signed onto, uh, Yahoo or MSN, I mean, instant messengers. But not with my parents. I'd rather face-to-face or stuck on the phone with them. Actually my mom or grandparents don't want to learn Internet. It should be hard to learn it on their age. But if they create their MySpace pages, I will surely add them.

In Zapata, even greater generational differences occur when it comes to social networking use as well as the Internet, in general. Participants' accounts raised the concern that opportunities for frequent interaction between the younger and older generations are diminishing due to the gap in Internet adoption. For example, although the majority of interviewees were aware that SNSs facilitate organizing plans for a family gathering, they felt it would be difficult to include their parents and grandparents by the Internet.

On the other hand, older people's needs to strengthen family ties in a more affordable manner may encourage their use of SNSs. For example, *AS*, a 38-year-old

female participant, reported that her father became an avid SNS user when he moved to Spain. He quickly set aside qualms about going online in order to keep in touch with his daughters and grandchildren in Zapata. *AS* explained that her family talks to him more often than when they relied only on telephones. This example demonstrates the usefulness of social networking to supplement other means of communication in order to strengthen family ties in rural areas.

5.2.3.2. Bridging Cellular and Landline Telephones

Another sub-theme, based on the way in which SNSs supplement other means of communication, such as cellular and landline telephones, was revealed in interviews where patterns in switching devices were uncovered. The "localness" of social contacts is a significant factor in determining whether people use SNSs or cellular phones. Interviewees generally agreed that SNSs are better suited for communicating at long distance due to their asynchronous nature. However, with closet friends and family who are seen on a regular basis at work, school, or in the neighborhood, telephones were favored. On SNSs, the message sender and receiver do not need to be online at the same time; thus, people in different time zones can communicate at their own convenience (Stern, 2008). With the telephone, on the other hand, calling after or before certain times can be normatively inappropriate. This issue may be particularly true for people who often live at a great distance from others. *BB*, a 28-year-old facility director, said:

> I think nowadays you don't really have the same time, the same schedule to talk to somebody. So it's much easier just to typing a message whenever they signed in and answered than just giving a normal call when

> they're asleep or they're in the house I mean they're cooking or they're in class. I think it's more convenient, to just typing the message on uh, see when they have time to reply.

For respondents who have family and friends in different towns, SNSs are perceived as much easier channels for long distance communication. *WB*, a 40-year-old firefighter, said:

> It [MySpace] was the way you know talk to friends and you know cause I, I like uh, say, I'm not from here so it was an easier way than picking up the phone and calling. Cause I, I've notice I just recently got on the Facebook and, I have only been on Facebook about um, maybe two months? So, I'm finding a lot of people that I used to go to school with that I didn't find on MySpace.

The content of conversations and types of messages may also influence modes of communication. Zapata interviewees tend to choose different modes to maintain intimate friendship. The question of which mode of communication people use to communicate comes up with the arrival of new information technologies. The most prominent question in previous research has concerned the appropriateness of a given medium for a particular circumstance (Draft and Lengel, 1986). For example, when the subject of a conversation is of a personal nature or is difficult to explain, face-to-face interactions are preferable.

Preferences for certain modes, depending on the nature of the communication, were observed in this study, as well. During the interviews the respondents deemed SNSs inappropriate for having conversation about personal or complicated topics. Exchanging

messages through SNSs is asynchronous and public. In other words, senders and receivers do not need to be present at the same time and same place. This way of communication through SNSs precludes the message provider from using oral or visual clues to give a context to the message receiver. From the interview, *BB*, a 28-year-old woman, compared writing messages on MySpace with making phone calls:

> You can express yourself better when you're like on the phone um, than being an hour typing a message. When, let's say, when you keep up with the person and you just wanna tell them something brief, I mean it's a good thing to just typing a message in MySpace. That's it. But if you wanna tell them whole story that is happen whatever I mean it's kind of hard.

Although participants recognized MySpace as a possible solution to make long distance communication affordable, they reported using landline and cellular phones for certain purposes. Specifically, they said they were more likely to use cellular phones if they need to send messages immediately. For example, *VR*, a 26-year-old woman said:

> Sometimes cell phone is much easier to contact people than MySpace. The cell phone is always you know quick access to anything. Um, I look at it if cell phone is being like more of like in emergency like I need to talk to them.

The participants' preference for mode of communication both complemented and supplemented weaknesses of other media. However, as a whole, the participants reported their phone calls tended to be fewer since they used MySpace much of the time,

especially to socialize with friends and family. *WB*, a 40-year-old male participant, described advantages of social networking, compared to telephones:

> You can see different pictures of people you know I would say you get more of an idea how somebody use. It's easier I mean people can write whatever they wanna write but at least you have a general, um, you get a kind of general I mean, it's when you get to MySpace um, I personally I can usually tell by looking at them on um, what type of person they're going to be. So, by seeing pictures of somebody, you can get a general impression rather than hearing their voice.

Pointing out another convenient feature of MySpace and Facebook, he went on to say:

> You can write your moods or what's going on in your life. It's like a brief summary of your, your label, that's […]

Although there were some variations in preferences for telephones and SNSs, participants acknowledged the convenience of SNSs for keeping social relations viable. In general, briefness and visibility are favored features of SNSs in rural areas.

5.2.3.3. Economic Conditions and Limited Broadband Service in Zapata

The last sub-theme relates to a social factor that may have affected the interview participants' choice of mode of communication, namely, economic conditions. Although landline or cellular phones are more appropriate for synchronous communication, they are often not affordable to rural participants. Making phone calls and having face-to-face meetings with close friends were the preferred to SNSs, however, due to the expense of

phone calls, participants were apt to choose SNSs based on flat rate Internet connections. *GG*, a 26-year-old woman said:

> I use MySpace more frequently, because, you know, how now the economy the way it is. Um, whether you like it or not, you're gonna be broke. Uh, and, um, traveling or all that, it's really cut down you to you know the economy. Hm, so you can't use your cell phone that much because your bill's gonna go up. I mean I just had my last bill was 500 dollars at, yes.

The current economic recession may make SNSs more popular as an affordable means for sustaining relationships. For participants with family members and significant others far away, MySpace offers a significant communicative medium to supplement phone calls, especially where long distance fees are required. Lower cost was the reason why respondents preferred using MySpace to phone calls. The need to maintain long distance relationships was a critical issue frequently raised among interviewees. As discussed in Chapter 3, the local economy of Zapata tends to be specialized in natural resources such as oil, gas, ranching, and tourism. The abundance of natural resources and the dependence of the local economy on these natural resources have tended to significantly limit economic diversification (Leamer and Schott, 1999). Participants with lower incomes reported they felt financial pressure to pay off costs related to communication.

On the other hand, some interviewees commented that cellular phones have become an alternative device for obtaining access to an SNS as well as the Internet in

general. Although residential broadband service was introduced a few years ago, there are some parts of Zapata where service is not available. One of the areas, Siesta Shores, was mentioned by a few participants who do not have broadband access. *BB*, a 28-year-old interviewee who is living in Siesta Shores, said:

> We have where I live the high speed Internet [is] not there yet. They haven't like from I believe this like a block or two down from here like pass that, you can't, you don't have Internet service, the high speed Internet service. They have the regular. Um, what, this is Siesta Shore area. That's the name of the neighborhood.

DS, a 23-year-old female participant reacted more seriously to the absence of the broadband service in that area:

> Um, right now what I don't like, it's, I live in Siesta Shore, there's no network over there like such as like DSL, AT&T. I am having a hard time so I don't have any of that right now. So I have to use it at least I am using that Cricket wireless, it's too too slow because we don't have either one like in Siesta Shore. We don't and it's hard.

When questions related to alternative access to the high speed Internet were probed, interviewees said they were using mainly Blackberry. Although they tried to use the wireless service like Cricket for home connections, the speed did not support diverse activities that require high bandwidth, such as downloading and uploading pictures or music. Thus, Blackberry or the Internet enabled cellular phones provide more appropriate and convenient service. *BB*, went on to say:

> I have, um, addicted the wireless? [Laugh] But it's not as fast. It's just starting. But it's not like, um, you had DSL like a Yahoo or Roadrunner anything like that. It's very slower. But it's alright. I don't have any complaint. I keep up with MySpace with my Blackberry. Probably I login to MySpace often on my Blackberry than on the regular Internet. It's easier. It's more convenient. I mean if you're just standing on the airport for an hour you can just have something to do.

These quotes illustrate the way in which rural participants overcome limited access to high-speed Internet by using mobile devices. Existing research has suggested that wireless technology in rural areas is needed where towns lack solid telecommunication infrastructure in order to provide more affordable and sustainable Internet access (Peha, 2008). In Zapata, wireless broadband service was initiated in 2004, but suspended (LaRose, Gregg, Strover, Straubhaar, & Carpenter, 2006). In order to improve the technical disadvantages of this rural town, mobile phones could be an important alternative to compensate for a lack of broadband service.

5.3. SUMMARY OF ANALYSIS

Identified themes and patterns clearly overlap, intertwine, and work in tandem. Diverse features and uses of SNSs are connected to participants' perceived social support. In addition, the advantages of SNSs are linked to the maintenance of long distance relations and serve as alternatives to the existing communication technologies. The messy boundaries between various determining factors (age, gender) that influence rural participants' SNS use hints at limitations of discussing each theme defined by any one factor, including "ruralness." Participants' consistency in their initial descriptions of

potential SNS use having to do with geographic isolation reflects the existence of a coherent schema, but their deviation from this cultural schema revealed meaningful patterns shaped by individual characteristics among users, purposes of communication, and socioeconomic factors in the community. Finally, culturally-shaped communication values present in the interviews demonstrates how "ruralness" interacts with participants' perceptions about sustaining strong and weak ties both within and beyond a physically bound community.

Chapter 6: Discussion and Conclusions

The purpose of this study is (1) to examine rural residents' perceived social support from Internet use for communication and (2) to understand the meanings associated with rural Internet users' social media use, particularly with respect to mediating diverse social ties and exchanging different types of social support. To assess how Internet use affects rural residents' sense of social support, this study investigated dynamic relationships between online communication and perceived social support by looking at interaction effects relative to extroversion, size of social networks, broadband use, and length of time using the Internet. To explore how social technologies are situated in a rural area, the present study investigated how rural residents use social network sites (SNSs) to maintain social contacts and exchange social support with members of their networks. This study examined that social interaction mediated by SNSs could provide different types of social support. Social networking provides emotional support and a sense of consolation by strengthening supportive family relationships and maintaining friend ties. Online social networking with weak ties could provide supportive resources for information and entertainment. This chapter discusses the findings in relation to previous theoretical and empirical research, the theoretical and methodological implications and contributions of the present study, the limitations of the present study, and offers suggestions for future research.

6.1. DISCUSSIONS OF FINDINGS

6.1.1. Relationships between Online Communication and Social Support

Online communication with friends and family living in the same neighborhood had a small but statistically significant relationship with the amount of social support perceived by the residents of Zapata, while the amount of online communication with friends and family living outside the town had a strong and positive relationship with their perceived social support. Those results are consistent with findings of existing research that show positive outcomes of Internet use for social interaction and individual well-being.

Previous studies (e.g., Wellman & Hampton, 1999; Hampton & Wellman, 2001) found evidence of a positive impact of Internet use on encouraging and integrating face-to-face interaction among local community residents. Nie (2001) and Kraut et al. (2002) observed that increased contacts with neighbors, family, and friends reduced social isolation, loneliness, and depression. Kraut et al. (2002) concluded that Internet users who spend less time in family communication tend to maintain fewer local social ties, receive less social support, and report higher level of stress. The results of this study extend findings in this research area by examining the ways in which rural Americans construct the meaning of Internet technologies in their lives. However, it must be noted that this community's Internet communication in general *did* focus on ties with family

and friends who had already have relationships in their local community, a pattern which is not always found in other studies.[4]

The positive relationship documented in this study between online communication with people in the same neighborhood and perceived social support may be partly explained by the fact that increased online contacts in a local town facilitate supportive relationships with local people. Previous studies argued that computer mediated communication (CMC) did not contribute to a significant increase in the exchange of support to physically distant ties (Hampton, 2001), because distance between network members makes it difficult to provide many goods and services. For instance, instrumental aid, such as lending household items and providing child care, relies more on physical access and is more appropriate to be exchanged with physically reachable local network members (Wellman & Wortley, 1990). The findings of the present study imply that increased online contact provides opportunities for interaction with social ties in physical proximity, and that an intimate relationship is increasingly linked to positive consequences in supplying support.

The findings that residents of a rural area spent time online for long distance communication were more likely to perceive social support, despite the distance factor, may be explained by the fact that intimate relationships with distant ties provide different

[4] The strong Hispanic traditions of Zapata community explain the reason why this community's online interaction focuses on the family ties. About 90% of the population is Hispanic or Latino of any race in Zapata. Since a significant characteristic of Latino culture is strong attachment and cohesion to family ties, it is important to maintain contact with more remote relatives and family. Contacts with local friends also take an important part in their online communication. It was common to see that they are as close as family members, since they were born and grown up together in a small town for a long time. In addition, there is no diverse social network they could encounter in a small town. For this reason, local family and friends are primary social contacts in Zapata community.

types of support. Of particular importance in this study is that there is a frequent turnover in population in the area when friends and relatives move to urban areas to go to college or get jobs. Also important may be the fact that many of those interviewed were Hispanic and the Hispanic culture encourages the maintenance of close family relationships. Although relationships with distant ties do not contribute to providing many goods and services, they can convey social support that does not require in-person contacts, including emotional support (Hampton & Wellman, 2001). The social support index used in the present study is composed of items to describe rural residents' emotional support (e.g., a sense of comfort and care from family, friends and neighbors) as well as instrumental aids (e.g., watching house and helping in the event of emergency or crisis) (see Appendix A). The results of this study imply that the lower costs and temporal flexibility of the Internet may increase the exchange of emotional support from social ties in distant locations.

The interaction effects assessed in the findings of this study show varying relationships between the amount of online communication and perceived support, depending on the levels of users' experience of the Internet and factors of personality extroversion. Results showed that Zapata participants' level of extroversion affected the degree to which that online communication with distant ties accounted for the variance in amount of perceived social support. These results reflect Kraut et al.'s (2002) and Lee's (2007) findings that individuals' levels of extroversion moderates the social outcomes of Internet use. People who have outgoing personalities and already have strong social relationships are more likely to use online communication which, in turn, predicts greater

benefit from Internet use. Applying this finding to the present study, socially anxious and shy individuals who expect to communicate with others online would be less likely to perceive social support than extroverted individuals. The findings of this study suggests are that more extroverted individuals are likely to perceive more support from friends and family in distant locations than less extroverted people, when they are involved in the greater amount of online communication. Since more extroverted individuals are likely to be more sociable than less extroverted people, they may tend to be eager for maintaining relationships with social contacts known to possess qualities of interpersonal familiarity. In other words, even though their friends and family members of residents who currently live in Zapata have moved away for, extroverted people who remain in that rural area tend to perceive social support by staying connected with those who have left.

Longevity of Internet use is the other variable that influences the relationship between the amount of online communication and perceived social support. The more experienced Internet users were found to be more likely to perceive social support than the less experienced users when they communicated with family and friends online. This finding implies that social support may be a cumulative outcome of Internet use. In order to perceive emotional support exchanged within social networks, a prerequisite may be to maintain consistent interaction and to build trust and companionship for a relatively long period of time. In other words, by engaging in online social networking persistently, individuals form lasting social relations and develop social intimacy which results in a sense of supportiveness (Cho, 2002). Since experienced individuals in this study had used the Internet for communication longer, they were apt to gain more

opportunities to establish and strengthen social relationships to exchange social support than are the less experienced Internet users.

Experienced users' diverse online activities may partly explain the variation in the relationship between the amount of online communication and perceived social support. Compared with individuals who have used the Internet for a short period of time, experienced users tend to be involved in more diverse activities online (Gibson et al., 2000). Instead of relying on the limited tools for interaction with people online, the more experienced users are likely to utilize multiple channels for communication, such as email, instant messengers, social network sites, or online networking games simultaneously. As they communicate through more diverse channels online, they are able to obtain more opportunities to develop social relationships and form intimate bonds, which, in turn, convey higher levels of social support.

6.1.2. Meanings of Social Media Use in a Rural Setting

By conducting in-depth interviews, the present study explored how rural participants amend, deepen, and extend social ties by using social network sites (SNSs). The results of this study demonstrate that rural participants' core social networks consist mainly of their existing social ties with family and friends, although there are a few participants who extended their social networks into relationships with new contacts met on SNSs. This quality of rural online social networks could be explained by the "ruralness" of Zapata. For example, pervasive in participants' discussions was a belief that online social interaction should be pursued when people have already obtained background knowledge about each other. This theme is captured in Larson's description

about “generalized fear of meeting unknown people online” with an emphasis on their inability to know “the truth” about who people online really are (Larson, 2007, p. 66). Having spent formative years interacting with a relatively few number of people in the same neighborhood, residents of rural areas get to know everything about the people with whom they interact. As a result, they retain shared historical and personal knowledge that has been accumulated in a tightly knit community over time. The expectation of background knowledge is unique to rural areas because the small number of people that reside there allows residents to have increased knowledge of everyone’s histories (Collins & Wellman, 2009). Based on this theory, rural participants may be hesitant to disclose themselves to someone new online with no offline interpersonal clues. This study supports previous research and provides no significant evidence of people extending themselves to new people online.

The findings show few ties with new people in social networks, and this may be explained also by rural participants favoring strong ties. The lack of weak ties in rural areas is a research topic that has been addressed in previous studies (Wilkinson, 1991). Weak ties are extremely important and provide access to the non-redundant information found outside the network of strong ties (Granovetter, 1982, 1983; Gilbert et al., in press). The shortage of weak ties tends to make a rural place less robust in different social domains, such as economic, cultural, or political awareness, and previous studies argued that the Internet could complement such disadvantages in small rural towns (Wilkinson, 1991; Falk & Kilpatrick, 1999; Larson, 2007). However, the findings of this study indicate that SNSs are not that helpful in making up for disadvantages derived from a

paucity of weak ties in a rural community. Despite the importance of the weak ties, residents in Zapata reported a preference for strong ties over weak ties. This study, therefore, shows that the role of SNSs, analyzed through the lens of rural users, is to provide emotional strength through strong ties rather than to create new relationships or augment weak ties.

Another unique use of SNSs in the rural context examined is that most Zapata participants became motivated to use SNSs initially by their desire to maintain social contacts with those who had moved away. Spatial barriers and issues of territoriality can further inhibit social contact (Newman, 1972). Online social networking, thus, makes it possible to bridge a communication gap that creates geographical disadvantages for people who live in rural areas. Stern and Dillman (2006) identified a negative relationship between rural Internet use and having close friends or relatives living locally. They found that people whose socially closest friends live outside the community are more likely to use the Internet to communicate with their friends. However, research findings on Internet use and local- and non-local communication are not conclusive. Hampton (2001) has shown a converse result that people use email locally *and* non-locally. In order to explain these issues, Hampton and Wellman (2003) used a theory of 'Glocalization' that suggests Internet use both expands users' social networks outside the local area and simultaneously binds them to the local area.

The observation of Zapata participants' photo browsing complements previous discussions regarding Internet use and maintenance of local and distant relationships. Hampton and Wellman (2003) argued that the most viable relationships are the most

physically accessible. According to their research, limited frequency of physical contacts has the effect of limiting people's familiarity with others in the community. Extending this discussion to the current study, the visibility that online communication makes available through SNSs helps respondents feel psychological closeness to friends and family members they have not seen for a while. Photo browsing practices that take place among friends who are far away from each other offer a convenient way to stay close and engaged despite geographical distance (Watkins, 2009).

On the other hand, Zapata respondents' social networks on SNSs shows typical patterns of SNSs usage found in other social media studies (Ellison et al., 2007; Watkins, 2009). The findings of this study demonstrate that rural participants are likely to keep alive a considerable number of previously active, but suddenly latent social ties. Many interview participants mentioned concerns about losing existing relationships, because friends and relatives had moved elsewhere to go to college or work. Thus, they used an SNS to keep in touch with a social tie that was based on a previous offline connection but that had not been recently activated socially due to a lack of communication. A similar pattern was found in college students' Facebook usage in maintaining social relationships on SNSs. Ellison et al. (2007) noted that Facebook makes it easier to convert latent ties into weak ties because such sites provide personal information about others and make visible one's connections to a wide range of individuals. This technical characteristic of SNSs facilitates finding out-migrated latent ties and reestablishing prior strong relationships with them.

On the other hand, rural social SNS users and college students have different perceptions of the value of such weak ties converted from latent ties. While college students tended to identify weak ties as those that might be useful in some capacity in the future (Ellison et al., 2007), rural interviewees in the present study were more likely to perceive weak ties as emotional support-givers who could enable residents of Zapata to recall their childhood or school days. The findings of the interviews demonstrate that the rural participants do not seek the capacity of weak ties "being useful in the future." Even if residents in Zapata no longer have frequent in-person contacts, relationships of weak ties converted from latent ties are based on friendships that were built in offline relationships. What they seem to obtain from these relationships are feelings of companionship.

Although rural participants in this study had a limited scope of online social networks, they exchanged different types of social support with their network members. Social support from strong ties, such as close friends and family members, was substantially associated with various emotional aids that helped respondents cope with stresses of lie. Interviews with Zapata participants showed that friends and cousins are viewed as crucial supportive resources in helping with large and small problems. For example, one interviewee has led a tumultuous life as a separated single mother and part-time bowling alley cashier. Her closest cousin living in Oklahoma was someone she could talk to when she could not talk to someone in her own house. She said that she always logged into MySpace and said what an awful day she had had. Her cousin also stays logged into the site and responded her messages instantly. As Wellman and Wortley

(1999) observed, the degree of support exchanged depends on the strength and accessibility of relationships within networks. The Zapata participants tended to feel weaker or less support from friends and cousins whom they rarely saw in person or who lived farther away than from those with whom residents had frequent face-to-face communication. However, in general, the findings of this study indicate that an SNS can serve as a new mode of interpersonal communication to build reliable, supportive ties and, as a result, can provide mutual support among network members even at a great distance.

The married female interviewees' supportive relationships through SNSs are reminiscent of Janice Radway's (1984) observations on women's reading of romance novels in a family setting. According to her analysis, reading novels is in part an escape and maybe a small illustration of resistance for the women who are devoting much energy and time to their extensive responsibilities for caring for their husbands and children. So too, females using SNSs in this rural town may illustrate a similar impetus to assert their independence from the typical gender-bound obligations and routines. Farmers or men in rural areas still tend to follow traditional and conservative patterns in terms of a lifestyle or a gender role as contrasted to urban areas (Wilkinson, 1991). According to this rural value, most of the married women tried not to violate the social norms about women's responsibility within household. The interviews underscored that Zapata is a patriarchal rural community. The married female interviewees spend little time with their friends and oftentimes lose friendship ties because of housekeeping and nurturing chores. Just as romance novels meant some space of freedom to women, SNSs

may serve as a useful outlet to increase interconnections with the women's peer groups and, further, foster supportive interactions, and provide relaxation and consolation to married women in a rural community. It is likely that companionship provided by supportive relations decreases married women's domestic concerns as well as feelings of isolation that result from unsupportive relationships with their spouses.

Interestingly, SNSs could provide an entertainment resource to the participants, while they could be important channels to maintain and strengthen supportive relationships. The interview results presented that sharing and viewing photos were entertainment features of SNSs. By giving easily accessible spaces, SNSs encourage users to create their own contents, mainly photos that drive online communication. This type of online communication becomes entertainment among the Zapata participants. In addition, games directly playable within SNSs are important entertainment resources particularly to the male participants. The games could provide the platform for passing time and creating social connections with strangers. Although the social network games the participants play are casual games which do not require complex techniques and solutions, they could be 'Just for Fun' applications to the rural participants due to their virality, accessibility, and spontaneity.

Another interesting finding of the present study is that SNSs are not helpful in fostering residents' interest in their local community and their sense of attachment and belonging to their community. Online social networking is conceived as an effective medium to activate people's awareness of the social agenda and mobilize collective actions (Rheingold, 2003). Since message receivers are tightly linked to each other on

SNSs, it is relatively easy and fast to spread messages and awareness (Park, Kee, & Valenzuela, 2009). Although the Zapata participants mentioned some examples of SNS usage relating to community involvement, such as advertising of community events on MySpace, they generally paid little attention to such messages.

This finding may be partly explained by the fact that an SNS is not a pervasive tool that encompasses different age groups in a rural town. Although the number of older people who use SNSs is growing (Hassanyeh, 2009), young people comprise a dominant user group throughout the U.S. as well as in Zapata. The young interview respondents rarely communicate with their older family members on SNSs because most older people do not use SNSs. In addition, the young dominant SNS users did not reveal interest in or strong attachment to their home town. Such loss of connection to community may make it difficult for them to keep an interest in community related messages that encourage community involvement.

This explanation raises the issue of the Zapata participants' engagement in their community and the role of Internet use. In general, many of the interview participants were not civically engaged in Zapata. They were not members in voluntary organizations and did not attend meetings or contribute money. In addition to few organizational involvements, the Zapata participants rarely socialized with each other or talked with their neighbors who were not bound to them by kinship or friendship. Socializing, like getting involved in organizations, creates networks of trust and understanding that help build and maintain civic involvement (Putnam, 2000). In addition, many of the participants expressed negative views about their community. Their use of SNSs does not

appear to have significantly changed the decline in community involvement due to the residents' inherent negative perceptions about the local environment.

The results of this study provide some confirmation to findings of earlier studies that have examined the role of the Internet in building a sense of community in a rural context. For example, Collins and Wellman (2009) argued that the Internet is unlikely to fundamentally change rural participants' local socializing and voluntary participation in their community. They report that the time spent online from home or work is not correlated with the rural residents' sense of community, the number of voluntary organizations to which people belonged, and local socialization activities such as going to a regular hangout or talking with neighbors. Analyzing the meaning of SNSs for community interaction in a rural setting, the present study shows evidence to support the conclusion that pro-social activities are positively associated with each other and they are not significantly changed by online activities. In other words, regardless of Internet use, the more positively people feel about their community, the more social activities they undertake, the more voluntary participation they engage in, and the greater their sense of community.

The findings of the present study also demonstrate how SNSs are able to supplement existing social technologies that rural residents had previously adopted. Previous studies have examined how communication technology mitigates social isolation and broadens social life in a rural community. Their studies investigated how social technologies were appropriated in ways unique to rural settings. For example, rural people very enthusiastically adopted the telephone, which is perceived as the first

widespread social technology in the United States (Fischer, 1992). Fischer argued that the device would ameliorate rural isolation and bridge social distance.

With the Internet situated in a rural area, some rural leaders see the Internet and online communities as tools for ensuring the viability of their communities (Maine Rural Partners, 2009). Larson's study (2007) also pointed out how rural residents appropriate the Internet in ways unique to their settings. Her findings emphasized the importance of social ties connected through the Internet. The interviews in her study demonstrated that rural Kansas community residents understand the Internet as a communication device to interact with their neighbors, friends, and children and to search for information online. Larson concluded that social networks and the social capital attached to this network influence how rural Kansas residents understand and interact with Internet technologies, although they, like the Zapata residents, generally distrust meeting new people over the Internet. The pattern of SNS use in Zapata is analogous to Larson's findings. The present study illustrates how useful SNSs are in bonding and strengthening Zapata residents' strong family ties. The Zapata participants often prefer strong ties over weak ties, and value emotional support from strong ties. In view of the importance of Hispanic family values, the family support they exchange through SNSs may be the most significant outcome for SNS use in Zapata. This recasts the notion of "community viability" through using the Internet. To the extent that stronger family networks equate with a stronger community, the finding is valid. However, if the concept implies something else, such as a larger and more abstract sense of belonging, the findings reported here do not support it.

In addition, findings of present study suggest SNSs could be an important communication tool for older people. As one interviewee, *AS* said, MySpace plays a significant role in keeping her family connected to her father who lives abroad. According to Hassanyeh (2009), the gap between older and younger digital users is shrinking, especially as users over 55 are headed to different types of online activities. He reports that communication and social networking particularly becomes an integral part of online activities that allow younger and older family members to actively engage and stay connected with each other. Since many family members often live in different parts of the country or even the world, frequent face-to-face contact is neither easy nor feasible. In this environment, not only the phone, but also email, social networking and text messaging have become integral means of staying in touch for the older generation.

In fact, more and more older people are joining SNSs such as Facebook and MySpace. The number visiting social networks grew almost twice as fast as the overall rate of Internet use among older people (Clifford, 2009). According to Clifford (2009), one of the greatest challenges or losses that older adults face is the deterioration of one's social network because their friends become sick, their spouse and friends pass away, or children move. Therefore, social networking may become a large part of technology that will allow families to stay connected and create new ways to make new connections and new friends. In addition to facilitating family communication and interaction, online social networking may offer older people "a place where they do feel empowered, because they can make these connections and they can talk to people without having to ask a friend or family member for one more thing" (Bambina, 2007).

Finally, the present study indicates that SNSs provide additional channels of long distance communication in a small rural town. Zapata respondents tend to negotiate appropriate communication devices such as cell phones, SNSs and face-to-face communication in different contexts. Analyzing social media use through the lens of rural life, this study provides some insights that SNSs fill rural participants' technological needs for long distance communication by reducing the cost of mobile phone communication. Rather than paying the expensive cost of long distance calls, the Zapata participants often choose to leave messages through SNSs.[5] They are likely to use SNSs when they need a cheaper channel to communicate with social contacts at a distance and want to deliver non-urgent messages, although they prefer phone calls or face-to-face communication in other circumstances. In short, rather than replacing in-person and telephone connectivity, the SNS makes a contribution by developing and continuing ties between meetings, both local and long-distance.

6.2. IMPLICATIONS OF FINDINGS

The present study has several theoretical implications. First, while SNSs, such as Facebook or MySpace, have been highlighted as new venues for facilitating social interactions, there is a lack of empirical research on how rural people are using this latest technology. The present study explored social media use in rural town and suggested the potential of new communication technology for promoting vibrant social interactions in a

[5] In the interviews of this research, some participants make long distance calls to Mexico frequently. They mentioned the need for a cheaper communication channel and said that MySpace often replaced phone calls. In addition, other participants revealed that they had the basic calling plans that do not have provisions for flat rate long distance calling. MySpace was also an affordable communication channel for them.

rural setting. A rural location can influence community interaction by affecting the probability of interpersonal contacts with members of social networks. Due to the distance disadvantage derived from the location of rural places, participants in this study conducted in Zapata, Texas, were found to frequently lose offline social connections with family and friends who emigrated to urban areas. Unique features integrated into SNSs (e.g., friend searching with hometown, extending individuals' social networks through their friends' networks, photo sharing, chatting, private messaging) are perceived as important technologies to reduce the effect of distance on social interaction by recovering lost- and weakened-social ties and maintaining existing strong relationships. This new communication practice was found to strengthen social ties among people who live in a rural area and make them feel a sense of social support. Thus, the present study suggests that SNSs can serve as an effective tool for overcoming the distance disadvantage of rural areas.

Second, the present study recognized entertainment as a type of social support that can make rural life vibrant. Although previous studies have investigated social support derived from social interactions (e.g., Wellman & Wortely, 1990; Cho, 2001), most have paid little attention to the dimension of entertainment that could be related to support obtained from social networks. The findings of the present study demonstrate that an SNS can be an important resource for spending leisure time in a small rural village. In addition, applications supported by SNSs such as games, quizzes, pictures, and videos play an important role as "fast entertainment" tool that enables users to enjoy their leisure time quickly and easily (Watkins, 2009). Except for the emotional aids exchanged with

strong ties, entertainment was found to be the most substantial support and reward that participants received through online social networking. The in-depth interview analysis showed that rural participants were apt to perceive their rural life as dull due to the absence of entertainment resources. Considering monotony of rural life that the rural interviewees expressed with phrases such as "[there's] nothing to do," the entertainment resource could be important in enriching rural life.

Third, the present study considered several factors to characterize individual Internet users when analyzing survey data to examine the relationship between online communication and perceived social support. Although the amount of online communication was positively related to the degree of perceived social support, the relationship between the two variables varied depending upon each individual user's level of extroversion and longevity of Internet use. These findings modify and specify previous literature that examined the benefits of Internet use for increasing the quality of rural life. The main critique of existing rural Internet research is that it disregards individual users' characteristics which determine outcomes related to Internet adoption. In order to overcome this limitation, the present study presented more nuanced results by examining the potential of the Internet for individuals with different characteristics. Distinguishing types of online activity was also helpful for understanding the social impact of the Internet in a rural context. Focusing on Internet use for communication purposes, this research addressed the limitations of previous studies that examined general use of the Internet in a rural community. Differentiated analysis focusing on Internet use for social purposes can articulate how the Internet has affected the ways in

which rural residents connect with each other, including the significance of eliminating the financial cost of long-distance communication and reducing the time cost of contacting people who have moved far-away.

Fourth, the present study developed the notion that rural residents define the concept of community differently from general assumptions around that term. The findings of the interviews demonstrated that Zapata participants conceive of community as neighbors who are family members and friends living in the same neighborhood. This perspective may reflect aspects, in part, of the Hispanic culture which is predominant in Zapata which is located on the border of Texas and Mexico. On the other hand, urban residents tend to consider community as a larger network in the metropolitan area, including going outside the neighborhood (Wellman & Leighton, 1979). Network analysis of social networking on MySpace conducted by Gilbert et al. (2008) offered implications for a different boundary that rural and non-rural MySpace users perceive. Gilbert and his colleagues wrote that the socially close residents of a rural area who use MySpace may live in physically closer proximity to one another than urban users with socially close ties, and rural MySpace users may have fewer friends online than urbanites. The findings of the current study elaborated this pattern of online networks. Residents in a village or small town usually identify community with the local place where they were born, raised, and where their ancestors died (Driskell & Lyon, 2002). Similar to this perspective, Zapata participants also perceived members of community with respect to interpersonal relations with friends and family co-present in the same neighborhood. They did not tend to extend their perception onto the larger social system.

This finding suggests different scopes of community between rural and non-rural residents.

Fifth, the findings of this study contribute to telecommunication policy to promote the diffusion of broadband Internet service in rural America. The availability and quality of Internet access in rural contexts, as compared to urban contexts, is an essential starting point for rural Internet use research. Although rural-urban divides in high speed Internet are less important than these of education or income (Whitacre & Mills, 2007), in predicting adoption, discrepancies in the adoption of high speed Internet between rural and metro populations remain salient (Hargittai & Hinnant, 2008). The recent survey, *Broadband Adoption and Use in America*, conducted the FCC (Horrigan, 2010), showed that rural non-broadband adopters are twice as likely as urban and suburban non-broadband adopters to say broadband is not available in their communities. Although broadband Internet service has been available to Zapata residents since 2005, the interviews with Zapata participants found that there is still a gap in coverage of broadband service in a particular part of town. Residents who live in that area are using smartphones as an alternative device for compensating for the absence of broadband service. Rather than using the Internet available in the Zapata public library, the rural participants wanted private Internet access with their personal mobile devices.

These accounts suggest a reconsideration of the policy solutions that address broadband adoption in rural America. The public access solution suggested in previous studies (Simpson, Daws, & Pini, 2004) is not necessarily sufficient to bridge the rural broadband gap. Since Internet use for communication is mostly related to private

activities, such as sending/receiving emails, sharing pictures on SNSs, and chatting via instant messengers, Internet users may need private access in order to fully enjoy the activities. The finding that many of Zapata participants are using smartphones implies that wireless broadband technologies favored by many rural broadband providers need to be supplemented or substituted by mobile Internet connections. By providing diverse applications that rely on cellular networks, the smartphone could be solution for improving connectivity in rural areas that do not have affordable Internet service.

A National Broadband Plan proposed by the Federal Communications Commission (FCC) in March 2010 addresses these challenges in rural areas. The primary goal of this plan is to ensure access to broadband network services and to expand the benefits of broadband across the country. As part of the plan for closing the broadband availability gap in the United States, the FCC attempts to revise the existing rules and policy in order to improve broadband connectivity conditions of rural and broadband unserved communities. Throughout the plan, developing mobile broadband network is suggested as one of significant solutions for providing seamless coverage of broadband in rural areas (FCC, 2010). To provide flexible and cost-effective broadband services in rural and remote areas, the FCC made recommendations for improving the availability of spectrum and for considering rights and obligations of mobile broadband service providers. The plan indicates that the FCC should conduct an in-depth examination of consumer mobile use with particular focus on rural Americans in order to achieve the goal of the national broadband plan.

Finally, as for methodological contributions, the present study combined quantitative and qualitative analyses in order to examine social implications of rural residents' Internet use for communication. This research attempts to show that when used in conjunction with quantitative data, qualitative data can overcome some of the shortcomings of utilizing quantitative data alone. Using multiple methods and multiple sources of data for this research was effective in gaining a better understanding of attitudes and behaviors about online activities, from the perspective of the individual as well as that of the community. The quantitative approach employed in this research is better suited for obtaining a broad picture of the relationship between rural Internet use for communication and social support. The qualitative interview analysis discerned the ways in which rural participants use SNSs, the particular type of online communication used to facilitate relationship maintenance and provide social support. Using a single research technique for exploring the benefits of online social interaction in a small rural town would not have yielded satisfactory answers. A mixed methodology approach can be used for gaining a better understanding of the complex nature of rural human relationships that are created, amended, and expanded through computer-mediated communication.

6.3. LIMITATIONS AND FUTURE RESEARCH

The present study has several limitations that should be addressed in future studies. First, sets of samples used for the quantitative and qualitative data sets used in this study were limited to Zapata residents. It may be difficult to generalize these results beyond that one setting due to the unique social settings of Zapata. For example, because

Zapata is located on the Texas-Mexico border, about 90% of the local population are of Hispanic origin who are strongly attached to their family members. In this study, findings related to close family ties and support epitomize the characteristics of core Latino values. These distinct family values may influence different patterns of online behaviors and different benefits from those characteristics of residents of other rural areas in America. Therefore, the findings of this study may, in part, reflect the uniqueness of the Zapata community, although this research could provide a case study to understand the nature of Internet use for communication and social networking and social support in Zapata as well as in other locations.

Second, qualitative data analysis is limited in terms of its generalizability. The in-depth interviews provide detailed valuable and profound information about rural participants' SNS use and exchange of social support. On the other hand, generalizations about the results are likely not possible because small samples were chosen and random sampling methods was not used. This limitation of in-depth interviews could be ameliorated when supplementing studies with other methods of data collection. Based on the themes, issues, and topics that emerged from the interviewees, future research could create questionnaires and undertake a survey with a sufficient sample size.

Third, this study cannot conclude that there is a causal relationship between Zapata residents' online communication and perceived social support. It may well be that extroverted Zapata residents who spent more time on the Internet for communication are more likely to perceive a sense of social support. On the other hand, the result of the regression analysis could be interpreted to indicate that those who are more extroverted

and feel more support from friends and family are more likely to choose to communicate through email, instant messengers, and SNSs. This limitation could be better addressed by a longitudinal study to track changes in the extent of online communication to alterations in the exchanged social support variable and the influence of extraversion on accounting for the variation in results.

At the same time, longitudinal designs would allow for disentangling the causal links between use of SNSs and exchange of social support in Zapata. In-depth interviews over a short period of time limited the researcher's ability to obtain valuable and rich findings. Future research is suggested to conduct an online ethnography to overcome this limitation. Although traditional ethnography is a powerful way to study and explain human behavior for a long period of time, it also has serious limitations, such as slowness and labor intensiveness. Online ethnography is a new approach that overcomes some of those shortcomings of traditional ethnography. Particularly, observing research participants' actual use of SNSs, online ethnography could picture the nature of social networking much more vividly.

Fourth, the present study does not measure the density of Zapata participants' social networks. Underlying participants' online communication and social networking are based on an interaction between users' social networks. Since the current research did not employ a social network analysis, it is difficult to definitively describe how members of a participants' social network are geographically dispersed for social interaction online. Ease of physical access to members of a social network influences their perceptions of the Internet as a medium for communication (Campbell & Russo, 2003).

In addition, social networks are critical to the creation of social capital and for providing social support (Stern, 2008). Although the findings of this study provide hints at a relationship between online social interaction and exchanged support in rural life, they did not discern with whom the rural participants keep in touch and how far they are away from each other. This limitation also provides fertile ground for future research. Scholars will need to analyze the constituents of rural social networks in order to understand how rural residents overcome distance challenges imposed by rural locations.

Fifth, by more carefully considering the roles of the cell phone, particularly, smartphones in a rural context, the present study suggests that how the two technologies act in tandem with the Internet; this is an important area for future research. Zapata interviewees regularly mentioned and implicitly compared cell phones with SNS connections during interviews. Their accounts revealed that smartphones and SNSs complement each other by filling niches created by geographical and social phenomena. However, because the goal of the in-depth interview was to describe and explain rural residents' SNS use, it was difficult to make detailed claims about how these technologies work together to create a comprehensive picture of rural information and communication technology use. The concept of the media multiplexity suggested by previous scholars (Haythornthwaite & Wellman, 1998; Stern, 2008) could be an important theoretical grounding for the present study. In addition to cell phones, an instant messenger is an important device that people use in other locations to receive support from friends and relatives (Quan-Haase, 2007). Quan-Haase argued that the instant messenger resolves the lack of social presence as a barrier to obtaining social support from a distance.

Considering the technologies which are less susceptible to distance effects, future research needs to address the use of other ICTs such as the cell phone, email, or instant messengers and the availability of and proficiency with the technologies and describe how those technologies allow people to conduct different modes of communication in diverse contexts.

6.4. CONCLUSIONS

Internet use is becoming increasingly embedded in everyday social interactions in rural communities. With the prevalence of the new technology in these areas, the time has come to identify how computer mediated communication integrates offline relations into online environments and how it is likely to afford the greatest increase in exchange of support among social networks in a rural context. The present study suggests that the Internet has affected the ways in which people connect with each other, eliminating the financial cost of long distance communication and reducing the time cost of contacting people who live far away. In addition, this study presents findings that increased overall interactions with friends and family are linked to a great increase in the exchange of support. The evidence here suggests that the Internet is slowly deepening and expanding rural residents' social networks but does not significantly contribute to building a strong sense of community and an interest in strengthening neighborhood ties beyond those already established.

While rural residents may want to reach beyond their geographic isolation using social media they have issues in terms of establishing trust and attachment with new people online. Rural users seem to communicate with strong ties more often than weak

ties. The rewards of using the Internet to communicate appear to come in the form of a significant increase in feelings of social support from existing social contacts. At the individual level, frequent interactions with strong ties make rural life more supportive for consolation and friendship.

Extending the benefits of the Internet to a broader level to increase the number of weak ties in neighborhood may be important for collective action, collective efficacy and neighborhood safety. Bellair (1997) discusses the importance of weak neighbor ties in helping stitch neighborhoods together and establishing neighborhood safety. He explains that interaction with weak ties may increase the ability of neighborhood residents to engage in neighborhood crime control because weak ties strengthen community organization by creating important linkages across networks and homogeneity in communities. Hampton (2007) showed how effective online community network service would help create weak ties among neighbors. He found that the large number of weak neighborhood ties have supported residents' ability to organize collectivity when dealing with local issues and concerns. The studies imply that construction of a community computer network could be helpful to build local ties and increase neighborhood interactions in a rural area like Zapata.

However, the Internet may not be the ultimate solution for non-existent neighborhood ties and interactions. Although scholars have continued to emphasize the role of the Internet for enhancing community interaction in a rural community, *motivation* to engage in the community is the significant and permanent criterion for commitment and attachment to the local community. When commitment to social

relationships going beyond kinship and friendship is manifested in offline social life, more active engagement in community could be enacted in the online sphere.

This discussion implies that this project is grounded in social shaping of technology (SST), a perspective developed by MacKenzie and Wajcman (1985). In contrast to traditional approaches which only address the outcomes or impacts of technological change, MacKenzie and Wajcman explains that SST explores a range of factors, such as organizational, political, economic and cultural, which influence the design and implementation of technology. SST proposes that technologies do not have inherent or pre-set social consequences that are predictable or universal. This means that technologies are not neutral tools, but are instilled with both the values and social goals of their creators and shaped in meaning by people in particular social contexts (MacKenzie and Wajcman, 1985; Bijker and Law, 1992). Thus, technologies do not follow a determined trajectory, but are instead shaped by social factors within the contexts where they were developed and currently exist. In other words, a range of social factors influence the content of technology and their social implications.

This study continues in this theoretical tradition by examining the ways in which rural Americans construct the meanings of social networking through their interviews. This study suggests that the nature of online social networks and benefits are bound to relationships constructed in the real world. Communication technology can construct a more dynamic communicative process in rural life. When integrated into offline social life, online relations may slowly foster bonds and commitment to a community. However, the Internet is unlikely to save rural and remote areas from loss of community

and out-migration. Distant online communication has not completely revolutionized rural life. Yet, the experiences of the Zapata residents show that Internet use can make rural communities better connected to friends and family in other locations. With convenient and affordable means of communication, people living in rural areas may feel they have joined the broader society.

Appendix A. Survey Questionnaires

Online Communication

Thinking of your use of e-mail, instant messaging, or social networking sites (such as: MySpace)…
To what extent do you communicate with friends from your local community?
To what extent do you communicate with friends in other communities?
To what extent do you communicate with family from your local community?
To what extent do you communication with family in other communities?

(1) Not at all
(2) A little
(3) Somewhat
(4) Quite a bit
(5) A great deal

Initial Social Relationships

Estimate the size of your "social circle." Define this s the number of people, including relatives and friends, whom you interact with at least once a month.

_____ People

How many voluntary associations, such as clubs, churches, youth programs, and any other community associations are you a member of?

_____ Enter number of organizations, enter 0 if none

Introvert/Extrovert Personality

The following questions ask you to think carefully about who you are. The higher the number, the more you agree.
I like to have a lot of people around me.
I really enjoy talking to people.
I like to be where the action is.
I am a cheerful, high-spirited person.

(1) Strong disagree
(2) Disagree
(3) Disagree slightly
(4) Neither agree nor disagree
(5) Agree slightly
(6) Agree
(7) Strongly agree

Perceived Social Support

How much do you agree with each statement?

Your Community
I can count on my neighbors to watch my house when I am gone.
If I was in trouble, most people in this community would go out of their way to help me.
My neighbors would be helpful in the event of a personal emergency or crisis.
I have a special person who is a real source of comfort to me.
There is a special person in my life who cares about my feelings.

Your Family and Friends
My friends really try to help me.
I can count on my friends when things go wrong.
I can talk about my problems with my family.
I have friends with whom I can share my joys and sorrows.
I can talk about my problems with my friends.

(1) Strongly disagree
(2) Disagree
(3) Disagree slightly
(4) Neither agree nor disagree
(5) Agree slightly
(6) Agree
(7) Strongly agree

Appendix B. Interview Cover Letter

March 23, 2008

Dear Zapata Residents:

I am a doctoral student in the Department of Radio-TV-Film at the University of Texas at Austin. I am trying to find out how social network sites (such as MySpace or Facebook) might benefit you and your community. Your responses will help me understand the use of the social networking services in your area and their impact on social relationships in your community better. Your opinions are very important to me, so I hope you will help me with my study.

The questions will take about 40 minutes and I will keep your responses confidential. Your participation is completely voluntary and your identity will be never revealed. You can terminate at any time or decline to answer specific questions and you can stop me to ask questions at any time. Your privacy will be protected to the full extent permissible by law, and all of the information we collect will be kept in a secure location destroyed after a period of three years.

This study has been reviewed and approved by the University of Texas at Austin Institutional Review Board (IRB Study Number: 2008-11-0065). If you have any questions about this study, please contact me at the addresses at the bottom.

If you agree to talk to me, please read and sign on the consent form. Thank you very much.

Sincerely,

Namsu Park
Department of Radio TV Film
University of Texas at Austin
1 University Station
Austin, TX 78712-0108
512-363-0639
nspark@mail.utexas.edu

Appendix C. Interview Consent Form

Consent Form

Social Network Sites Use Study

This is to indicate you have read the introduction letter and you understand the following:

RISKS inherent in this study are unintentional release of private information, however the precautions designed in this project minimize this risk as much as possible.

BENEFITS: The study will add to society's knowledge of the effects of advanced Internet services on rural communities and rural residents. The study will help us understand how to serve rural residents better.

Please indicate that you understand these conditions, below.

____ I have read and understand the conditions stated above, and I consent to participate in this study. I realize I am free to withdraw my consent and to withdraw from this activity at any time.

____ I consent to having the audio of my interview tape recorded.

_____	_____	_____
Participant's Printed Name Signed	Signature	Date
_____	_____	_____
Researcher's Printed Name Signed	Signature	Date

Appendix D. Interview Questionnaires

General Information about Social Network Sites Use

1. What makes you use the social network site?

2. How often do you login to the social network site?

3. What are you usually doing on the social network site? (e.g., watching video, reading newsfeed, participating groups or organizations, etc.)

4. Overall, how many friends do you have on the social network site?

5. Of the people you know locally, do you interact with them using the social network site? What do you usually do with them on the site?

6. Do you have friends on the social network site who have never met in real life? How many? What are you usually doing with them?

7. How are the online friends who never met in-person helpful to you?

Users' Perceptions of Social Network Sites Use and Rural Community Life

8. Some people have said that living in a small, rural community means they can't see their friends very often. Do you agree? If so, do social network sites help with this?

9. How is using social network sites helpful for having relationships with your neighbors?

10. Have you used social network sites to organize meetings or events in your local communities? If yes, what were they? How is the site helpful?

11. How do you use the social network sites to get information and help from others online?

12. A few people have said that social network sites are good for joining groups and enjoying entertainment things. Do you agree? If so, how do you use social network sites for these purposes?

Users' Other Communication Means and Social Network Sites Use

13. How do you usually get in touch with your family and friends who are living in the town or outside the town?

14. When do you use cell phone (or telephone) and when do you use the Internet (social network sites)?

15. What do you think the advantages of each means of communication in different situations?

General Information about Participants

16. Sex: Female Male Other

17. What is the year of your birth? 19_____

18. What is the last grade or class you completed in school?
    (1) None
    (2) Grades 1-8
    (3) High school graduate (grade 12 or GED certificate)
    (4) Business, Technical, or vocational school after high school
    (5) Some collage, no 4-year degree
    (6) College graduate (B.S., B.A., or other 4-year grade)
    (7) Post-graduate training/professional school after college (MA/Ph.D)
    (8) Refused

19. What is your family's total household income before taxes?
    (1) Under $10,000
    (2) $10,000 to $19,999
    (3) $20,000 to $34,999
    (4) $35,000 to $49,999
    (5) $50,000 to $74,999
    (6) $75,000 to $99,999
    (7) $100,000 or more

20. Are you (Choose as many as apply)
    (1) Black or African American
    (2) White
    (3) Asian (including Chinese, Korean, Japanese and Southeast Asians)
    (4) Pacific Islander
    (5) Native American or Alaskan native
    (6) Something else _____

21. Are you of Spanish, Hispanic, or Latino origin, including Mexican-American, Chicano, Mexican, Puerto Rican, Cuban, Central or South American, or other Hispanic?
    (1) Yes
    (2) No

22. Immigration History
    Were you born outside the United States?
    Were one or more of your parents born outside the United States?
    Were one or more of your grandparents born outside the United States?

    (1) Yes
    (2) No

23. Which of the following do you have in your home? (Choose as many as apply)
    (1) Regular telephone line
    (2) A second phone line
    (3) Cell phone
    (4) Cable television
    (5) Desktop or laptop computer
    (6) Home satellite receiver
    (7) Wireless router (Wi-Fi)
    (8) Computer modem
    (9) High-speed Internet connection (over 56K)
    (10) Digital Camera

Appendix E. In-Depth Interview Coding Scheme Using ATLAS.ti

Key words	Sub-categories	Definition
1- Different Types of Social Ties	- Family (parents, siblings, in-laws, grand ma and pa, cousins, nephews, etc.) - Friends (classmates) - Neighbors - Strangers (never known) - Partner in a romantic relationship	- People communicating through social network sites - People adding to friend lists on social network sites
2- Connections between online social networking and offline local community	- Community events - Organizing meetings - Invitation to birthday party or graduation - Sharing photos with neighbors	- How people's virtual relationships are related to their social ties in real life
3- Perceived social support	- Strengthening social ties - Staying connected with friends and family - Feeling security - Staying in community - Helping each other - Community attachment	- How social network sites help people feel stronger: → family & friends ties → community attachment → emotional comfort
4- Cell phones and social network sites use	- Cell phone - Telephone - Preference - Comparison of cell phone with social network sites - Problem of Internet connection in rural places	- How people negotiate cell phone and social network sites in different contexts of communication - Pointing out the problem of rural broadband connection (telecom policy issues

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