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Resilience in small towns: an analysis of economic shocks, social capital, and quality of life

Nicholas Lee Recker
Iowa State University

Resilience in small towns:
an analysis of economic shocks, social capital, and quality of life

by

Nicholas Lee Recker

A dissertation submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Sociology

Program of Study Committee:
Terry L. Besser, Major Professor
Stephen Aigner
Anastasia Prokos
Andrew Hochstetler
Paul Coates

Iowa State University

Ames, Iowa

2009

Dedicated to my parents

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<u>ABSTRACT</u>

This dissertation examines how small Iowa communities respond to sudden events that significantly impact the local economy (economic shocks). I focus my analysis on two specific types of economic shocks: 1.) internally generated and positive in regards to the local economy and 2.) externally generated and negative in regards to the local economy. As these economic shocks occur, some communities may retain their local quality of life where others do not. I focus on social capital as a pivotal concept in explaining why some communities are better able to retain their quality of life. The literature suggests that quality of life may be affected differently in communities depending on the type of shock(s) and the amount of social capital within the community. Utilizing longitudinal survey data and over 600 key informant interviews I found that social capital offered a greater explanation of quality of life in 2004 and the percent change in quality of life from 1994 - 2004 in small Iowa towns than the cumulative effects of either type of economic shocks.

<u>INTRODUCTION</u>

In the 1990's the rural population of the United States increased by 5.2 million

people, over 10% (Whitener, 2005; Johnson, 2003). The growth was not limited to

population; jobs in rural areas also grew faster than in metropolitan areas during this period

(Johnson and Beale, 1998). The growth in rural population and jobs during the 1990s has

been termed "the rural rebound" (Johnson, 2003; Johnson and Beale, 1998). The rural

rebound marked a change from the decline rural areas had been experiencing prior to the

1990s. As is often the case, the rising tide did not lift all boats. Thus, rural communities did

not equally share in population and job growth during the 1990's. Rural areas that grew in

population and jobs during the early 1990's were generally located near metropolitan areas or

possessed natural resources (Johnson and Beale, 1994).

Amenities are qualities of a location that make it an attractive place to live and work

(Goe and Green, 2005). Over the years, the economy has become more service oriented

(Chevan and Stokes, 2000; Bluestone and Harrison, 1982). While many rural towns are

losing manufacturing jobs, it is argued that amenities allow them to increase tourism and

better capitalize on service oriented economic development. Also, it is argued that amenity

rich areas attract high quality workers, which attract more businesses (Florida, 2002). Thus,

in the early 1990s rural towns in high amenity regions such as the Mountain West, the Upper

Great Lakes, the Ozarks, parts of the South, and the rural Northeast saw increases in

populations and jobs (Johnson, 2003).

Despite a rural rebound, many rural towns were left out. Towns that were generally

not lifted by the rural rebound were located in the Corn Belt, Mississippi Delta, and Great

Plains (including Iowa). On average, these towns saw declines in both population and

employment opportunities (Whitener, 2005; Johnson 2003). Examples of firms downsizing or closing in small Iowa communities are easy to find. For example in Iowa, Story City lost a Pella Windows factory, displacing 244 workers in March of 2008. Charles City lost Winnebago Industries displacing 270 workers in August of 2008. Also, Marshalltown endured a mass lay off displacing 250 workers when Lennox Incorporated downsized in August of 2008. The loss of large employers often leads to negative consequences for the community (Broadway and Stull, 2006; Uchitelle, 2006; Knapp and Harms, 2002; Illes,1996; Dudley, 1994; Perucci, 1988; Bluestone and Harrison, 1982). As a consequence of declining employment opportunities and a lack of desirable natural resource amenities, many of the rural communities in the heartland lost their "best and brightest," the young, most highly educated, and most skilled of its population (Lichter, 1995: 254).

Not all rural communities in the Corn Belt, Mississippi Delta, and Great Plains were affected the same way. Rural communities in these areas which possessed more natural amenities saw growth compared to rural communities in the same regions that lacked amenities (Krannich and Petrzelka, 2003). Often, amenities are one of the few advantages for rural areas (Eudes-Beuret and Kovacshazy, 2005). On that note, many rural communities have become proactive and developed amenities in order to retain or increase their populations and economic opportunities. While not every Iowa community can be located next to a metropolitan area or natural amenity (such as the Mississippi River), several have developed man made amenities such as aquatic centers, golf courses, and/or hiking trails to realize amenity benefits. These man made amenities may draw people to the community to use recreation facilities (Marcouiller and Clendenning, 2005).

Despite opportunities, there are also threats to the community associated with amenity development (Flora and Flora, 2008; Fruedenberg and Grambling, 1992). The population growth, additional income, and higher home values associated with amenity development often benefits the local economy (English, Marcouiller, and Cordell, 2000). However, the impact on community quality of life is mixed. Newcomers may have different expectations for community life and may weaken community ties and values (Salamon, 2003). Additionally the influx of strangers into the community may lower trust in the community. Thus, these changes may lower the quality of life of long term community residents. For purposes of this analysis, I use Shuessler and Fisher's (1985) definition for quality of life which is the level of satisfaction associated with life in one's community[1].

Both amenity development and firm closings may be types of economic shocks. Economic shocks are defined as sudden events which have a significant impact on the local economy. By this definition, a multitude of events may be considered economic shocks. They can include: firm openings, firm closings, firm expansions, firm contractions, natural disasters, school expansions, school consolidations, school closings, and amenity development. The shock itself may not be economic in nature (such as a flood), however, by definition it must have significant economic consequences (positive or negative) for the community. A firm closing is one type of shock that generally has negative consequences for the community's economy (Broadway and Stull, 2006; Uchitelle, 2006; Knapp and Harms, 2002). Conversely, amenity development may make the town a tourist destination and attract new residents or increase the quality of life for current residents. Community members worked together to bring the amenity to fruition. As a result, community cohesiveness and

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[1] Individual responses will be aggregated to the community level of analysis.

overall community vitality may increase. Thus, economic shocks differ in their effects on the community. Some shocks are corrosive and fragment the community. Others are consensus shocks which bring the community together.

The trend in quality of life has been downward for small Iowa communities (Besser, Agnitsch, and Friestad, 2005). However, some communities are better at retaining quality of life following an economic shock compared to matched communities. This dissertation examines why some communities possess higher levels of quality of life in 2004 or experienced increases or smaller declines in the percent change of quality of life between 1994 and 2004 compared with other shocked and non-shocked communities.

In this analysis a community's ability to maintain or enhance its quality of life after experiencing an economic shock is defined as community resilience. Specifically it is "a measure of the robustness and buffering capacity of a community in a changing system" (Varghese et al, 2006). In order to gain a better understanding of community resilience, I will focus my dissertation on characteristics which allow communities to maintain their quality of life in spite of economic shocks. I maintain that assessing community residents' perception of quality of life and changes in perceptions of quality of life after economic shocks provide a good overall assessment of community resilience.

Since I am concerned with the community level of analysis, a conceptual definition of community is needed. I define community as, 1) A geographic locality where people live, 2) a set of organizations and institutions that enable local people to meet their needs, and 3) the interrelated actions through which local people attend their common interests (Wilkinson, 1991). Using this definition allows me to more aptly capture Wilkinson's "community field". A territory where people live and meet their daily needs together. Therefore, people

who live outside the city limits are included in this definition. The terms community and town are not synonymous. Unlike a town which has a political boundary (the city limits); a community's boundary is less rigid. Therefore a person who resides outside the political boundary of the town but still needs local organizations and interactions to meet his/her daily needs is considered part of the community.

Although economic shocks may appear to have an impact on community quality of life, the underlying social structure of a community can explain how the community responds to the shock (Miller and Rivera, 2007; Dudley, 1994). This provides a way to see whether the shock will have a corrosive or consensus building effect on the community. Whereas corrosive shocks fragment the community, consensus shocks bring the community together. The literature suggests that social capital is a resource allowing communities to maintain their quality of life following an economic shock. Social capital is defined as "features of social organization such as networks, norms of reciprocity, and social trust that facilitate the coordination and cooperation for mutual benefit" (Putnam, 1993, 167). Although Wall, Ferrazzi, and Schryer (1998) warn against social capital becoming a "panacea for the ills of modern society", many academics highlight its benefits. Communities with more social capital are better able to act collectively to solve local problems (Putnam, 2000; Putnam, 1993), have higher educational achievement (Coleman, 1988), offer greater economic prosperity for immigrants (Portes and Sensenbrenner, 1993), have more successful housing programs (Briggs de Souza, 1998, Lang and Hornburg, 1998), enjoy greater regional economic development (Fedderke et al 1999; Putnam, 1993), have lower homicide rates (Rosenfeld, Messner, and Baumer, 2001), enjoy greater economic stability and equality (Casey and Christ, 2005), and enjoy higher levels of volunteerism (Liu and Besser, 2003;

Wilson and Musick, 1997). This dissertation focuses on the role of social capital in helping to create resilient communities. I argued that by examining the social capital within a community, we gain a better understanding of the impact of economic shocks on changes in quality of life and level of quality of life following the economic shock.

The significance of this research

This research will contribute to previous literature in several ways. Although there are veins of research which address the consequences of economic shocks for communities, they tend to focus primarily on large disruptions involving one type of shock, focus on a limited sample size, and are conducted only after the shock has occurred. Examples include studies that examined boomtowns (Brown, Dorius, and Krannich, 2005; Smith, Krannich, and Hunter, 2001; Greider, Krannich and Berry, 1991), factory closings (Broadway and Stull, 2006; Uchitelle, 2006; Broadway and Stull, 2006; Knapp and Harms, 2002), and natural disasters (Erickson, 1994; Drabeck, 1986; Erikson, 1976). In contrast, I utilize a relatively large sample of communities and examine the consequences of several economic shock types and the cumulative effect of multiple economic shocks across 99 small Iowa communities. Furthermore, Murphy (2007) points out that disaster resilience literature is often missing pre-disaster data. This dissertation employs longitudinal data about community features gathered before and after the economic shocks. Having longitudinal data provides a unique and more comprehensive community analysis. Finally, I am able to compare communities which experienced different types of economic shocks with each other as well as non-shocked communities.

This study advances social capital theory by incorporating it into a community resilience framework. Adding a social capital element allows policy makers to better understand resilient communities. Being able to predict the extent an economic shock will affect a community and how social capital will fit in that relationship will allow leaders to formulate policies grounded in theory and research, rather than being produced ad hoc.

Also, I focus on small communities which are often under researched and left to fend for themselves (Swanson, 2001). Many small Midwestern communities are in need of revival (Johnson 2003). Therefore, resilience research on small Iowa communities may be particularly helpful in addressing revitalization for communities least served by past research. From a research standpoint, I believe studying small communities may also be advantageous because they are less complex than metropolitan areas. Just as a geneticist may prefer to study a fruit fly due to its simpler genetic code, studying smaller communities may provide a better research site since the effects of economic shocks and social capital are more easily observable. For these reasons, this dissertation advances knowledge and elaborates social capital and resilience theories.

RESEARCH GOALS AND QUESTIONS

The main purpose of this research is to gain an understanding of resilience in small Iowa communities. In addressing the overarching question I will examine the relationship between social capital, economic shocks, and quality of life. This will include disaggregating economic shocks into two types of shocks: 1. those which are internally generated and have a positive effect on the local economy and 2. Those which are externally generated and have a negative effect on the local economy.

Overarching question:

What makes a community resilient?

Specific research questions:

1. To what extent are negative and externally generated economic shocks related to community resilience in small Iowa communities?

2. To what extent are internally generated and positive economic shocks related to community resilience in small Iowa communities?

3. To what extent is social capital related to community resilience in small Iowa communities?

4. To what extent does social capital mediate the relationship between negative and externally generated economic shocks and community resilience in small Iowa communities?

5. To what extent do positive and internal economic shocks mediate the relationship between social capital and community resilience?

Organization of chapters

This dissertation consists of five chapters. The preceding chapter (Chapter one) is the introduction section. Chapter two reviews the theoretical literature. This chapter will refine key concepts (social capital, community resilience, and economic shocks), integrate them,

and explain their theoretical implications. At the end of this chapter testable hypotheses will

be put forth. Chapter three focuses on methodology. In this chapter I will explain the data

collection procedure and how variables were operationalized. Chapter four puts forth my

findings and offers an explanation of them. Chapter five discusses the policy implications

and conclusions of my findings. This chapter explains the findings in more detail and

explains their theoretical and practical use, sums up the analysis highlighting key points to

take away, provides insight to application for policy makers, and provides some direction for

future research.

ECONOMIC SHOCKS, RESILIENCE, AND SOCIAL CAPITAL

Economic shocks

As I have discussed, several types of events are considered economic shocks. I divide shocks into two categories based on their community impact: Corrosive shocks which fragment the community and consensus shocks which bring the community together. I will discuss each in turn.

Corrosive shocks

A corrosive shock is a type of economic shock which is divisive for communities. Corrosive economic shocks are divisive because they sever ties between friends, neighbors, and family (Freudenburg, 1997). The corrosive community may then experience "corrosive social cycles" where the social disruptions are prolonged and social relationships continue to breakdown (Picou, Marshall, and Gill, 2004; Freudenburg, 1997). Boomtowns often exemplify corrosive shocks. Boomtowns are places which experience rapid economic growth. Sudden and significant economic growth may have negative social consequences for a community, at least temporarily (Brown et al, 2005; Smith, Krannich, and Hunter, 2001). Social disruption theory posits that rapid growth may lead to significant community disruption. The community disruptions may then contribute to social problems (Greider, Krannich and Berry, 1991; England and Albrecht, 1984).

Wilkinson et al (1982) refined the approach to studying social disruptions caused by boomtowns when they critiqued the research done on energy related growth in small Western communities. Although these boomtown studies were conducted before the early 1980's, they were criticized for questionable methodologies and exaggerated findings (Wilkinson et

al, 1982). The contribution Wilkinson et al (1982) made was to spearhead reorganization in the way social disruptions were studied. Heeding Wilkinson et al's (1982) critique, England and Albrecht (1984) found that energy boomtowns in intermountain areas experienced a decline in almost all community services (with the exception to the economic sector). Furthermore, rapid community growth was inversely related to community satisfaction, attachment, and social integration (Brown, Geertsen, Krannich, 1989). Rapid population growth and economic changes were related to increased crime (Freudenburg and Jones, 1991; Sampson and Groves, 1989) and fear and perceptions of crime (Hunter, Krannich, and Smith, 2002; Krannich, Berry, and Greider, 1989). The central hypothesis here is that the boom preceded increases in social problems within the community. Although the economic boom may create social disruption, that disruption may not be permanent. Brown et al (2005) suggests a post-boom rebound where social disruption is reduced over time.

Most of the boomtown studies focused on the impacts stemming from expanding energy industries in rural Western towns. Boomtowns have risen around other industries as well. These include radioactive waste facilities (Albrect, Amey, and Amir, 1996), meatpacking plants (Broadway and Stull, 2006), and the tourism industry (Park and Stokowski, 2009). In each of these instances support for social disruption theory has been found. Several parallels exist between tourism based boomtowns and Western energy boomtowns. Park and Stokowski (2009) examined rural Colorado communities which differed in tourism growth. They found that high tourism growth was related to increases in crime, particularly property crime. This finding supported the earlier study by Freudenburg and Jones (1991) which examined crime in energy boomtowns. Social disruptions consequences have also been documented in boomtowns built around the casino/gaming

industry in rural South Dakota and Colorado towns (Long, 1996). Residents in those communities reported economic gains via jobs and income but also social disruptions such as increased perceptions of crime, noise, and traffic congestion (Long 1996).

Interestingly, the relationship between attitudes towards gambling and perceptions of quality of life was negative in non-gambling communities and positive in gambling communities (Perdue, Long, and Kang, 1999). Perhaps this means that communities become desensitized to the social effects of casinos. If this is true, it lends support to (Brown et al, 2005) who suggested the social disruption is temporary and residents may adjust to the social changes. Individuals also had differing opinions of the social disruptions caused by casinos depending upon their gambling habits. Stitt, Nichols, and Giacopassi (2005) found that individuals who gambled perceived less of a social disruption in their community than non-gamblers.

Boomtown research points out that residents weigh the economic benefits from growth (e.g. jobs) against potential changes to local quality of life. Logan and Molotch (1987) assert that commodities have a social context affixed to how they are used and exchanged. Use and exchange values are applicable concepts because they highlight how finite community resources will be employed. Thus, some community members may be unwilling to sacrifice low levels of crime, noise, and traffic congestion for economic gains. Social disruption theory is predicated on the idea that economic growth is not the only determinant for quality of life. Perdue, Long, and Kang (1999) studied casino/gaming based tourism boomtowns and concluded that community characteristics (community safety, social environment, and community involvement) had the largest impact on resident quality of life in small Colorado and South Dakota towns. The perception of the disruption was much

greater in communities which have not had a casino located there previously and thus could not have adjusted to the new industry (Perdue, Long, and Kang, 1999). The changes in social factors explained more in terms of community quality of life than increased job opportunities and demographic characteristics (Perdue, Long, and Kang, 1999). This finding led the authors to conclude "both communities and businesses must take a broader perspective, providing opportunities and support for programs that focus on community social environments" (Perdue, Long, and Kang, 1999: 174).

Broadway and Stull (2006) highlighted the experience of Garden City, KS. Garden City represents a fairly typical boomtown. In 1980 a large beef processing plant opened there. Three years later another beef processing plant opened. From 1980 – 1984 the population of Garden City grew by 33% (Broadway and Stull, 2006). Consistent with social disruption theory, crime increased, the number of mental illness cases increased, and community services were strained (Broadway and Stull, 2006). Additionally, although the meat packing plants brought new jobs, those jobs did not pay well (compared to the energy boomtown jobs) and poverty levels increased (Broadway and Stull, 2006).

What distinguished the Garden City, KS story from other boomtowns is what happened next. Another economic shock occurred. A fire destroyed the Con-Agra beef plant and overnight 2,300 workers were out of work (Broadway and Stull, 2006). The economic and social effects on the community were significant. In Garden City population declined, unemployment tripled, crime rose, charitable dependency rose, and poverty again rose (Broadway and Stull, 2006). Garden City is interesting for two reasons 1.) it represents a different type of boomtown spurred by the meat packing industry and 2.) it shows the impact of a specific type of economic shock – a firm closure.

Like a boomtown, communities that experience the loss of an employer will likely experience economic and social disruptions. Much scholarly attention has focused on the negative effects of firms closing (Uchitelle, 2006; Broadway and Stull, 2006; Knapp and Harms, 2002; Illes,1996; Dudley, 1994; Perucci, 1988; Buss and Redburn, 1983; Bluestone and Harrison, 1982). Early researchers such as Bluestone and Harrison (1982) and Buss and Redburn (1983) disaggregate the effects of plant closings by into economic and social consequences. They assert that plant closings have a ripple effect which goes through the community. Economic effects included rising unemployment, loss of income and benefits, and loss of corporate taxes (Buss and Redburn, 1983; Bluestone and Harrison, 1982). This creates a second group of impacts which include decreased retail sales and declines in businesses that supply goods and services to the closed employer (Bluestone and Harrison, 1982). This secondary impact contributes to a "tertiary effect" which increases demand for public assistance, demand in social services, and increases in unemployment in other sectors (Bluestone and Harrison, 1982: 67). The social changes which resulted when a steel plant closed in Youngstown, Ohio included increased crime, temporary drops in charitable giving, and strained family relationships (Buss and Redburn, 1983). Other studies have confirmed relationships between worker dislocation and social issues such as: declines in the quality of parent/child relationships (Perucci et al, 1994); changes in perceptions of individual locus of control (Legerski, Cornwall, and O'Neil, 2006); and changes in mental health (Hamilton et al, 1990).

Workers displaced by the closure of a Zenith plant experienced decreases in their standard of living (Knapp and Harms, 2002). The average worker took a 10.2% pay cut and significantly fewer benefits when re-employed (Knapp and Harms, 2002). The effects of a

plant closing are not felt equally by all individuals. Education has a significant impact on the job loss experience. College educated people were much more likely to the re-employed quicker compared with non-college educated workers (Knapp and Harms, 2002; Kletzer, 1998). Additionally, after being re-employed people with greater amounts of formal education were more likely than uneducated people to earn more income than in their previous job (Nord and Ting, 1991). Non-high school graduates also perceived higher levels of anxiety following a plant closing compared to graduates (Hamilton et al, 1990). Age is also a significant factor. Younger workers were likely to be re-employed quicker than older workers (Knapp and Harms, 2002).

Although factors such as education and age seem like individual characteristics, they have community implications. Florida (2002) argued that the composition of workforce in the community will have an impact on the type of employers drawn to the community. Dudley (1994) explained that when the Chrysler plant closed in Kenosha, Wisconsin, over half of the 7,600 workers were over age 40 and most lived in Kenosha. Considering the age of the workforce, their blue collar skills, and union membership, companies were reluctant to locate in Kenosha. This lends support to the conclusions Collins and Quark (2006) draw from examining the garment industry in Wisconsin. As plant closures occur communities are unevenly effected (Collins and Quark, 2006). Furthermore, manufacturing jobs are often replaced with service jobs that are lower paying and less secure (Collins and Quark, 2006).

By definition, economic shocks occur relatively quickly. The quickness of the loss of a major employer has implications for displaced workers. Nord and Ting (1991) found an inverse relationship between advanced notification of workers about a plant closing and losses in re-employment earning as well as experiencing one or more weeks of

unemployment following the closure. This finding suggests that when communities and workers are given more warning, the shock is partially mitigated.

Dudley (1994) recounts how community culture effects the response to plant closings. She points out that the identity of many workers was tied to a cultural system which had been built up for generations around the blue collar auto industry. Thus, many in the community fought to save the Chrysler plant from closure to preserve the culture engendered in their jobs and social life (Dudley, 1994). However, the plant closed and the community network which had strengthened around a common cultural system and perceived threat was fractioned. Underlying rifts in the community surfaced as blame for the plant closure was doled out. Thus, the shock ultimately had a corrosive effect on Kenosha, Wisconsin.

Consensus shocks

Not every economic shock is corrosive. Consensus shocks bring the community closer together. An event which creates social cohesion from a possible threat is termed a "consensus crisis" (Drabeck, 1986). Consensus crises may increase community solidarity as community members come together to fight a threat (Couch and Kroll-Smith, 1994). Couch and Kroll-Smith (1994) examined the conflict surrounding a proposed landfill site in one rural Pennsylvania community and perceptions of exposure to poison gases stemming from old coal mines in another community. The fervor surrounding where the landfill would be located actually brought the community together and allowed them to more effectively fight a perceived threat (Couch and Kroll-Smith, 1994).

Just as Portes and Sensenbrenner (1993) argued external pressure exerted on an immigrant community increases their communal identity, consensus crises are economic

shocks which strengthen social cohesion enabling them to better address the threat. Natural disasters are generally one common types of consensus crises because they frequently increase the sense of community in spite of the disaster (Erickson, 1994; Drabeck, 1986). Drabeck cites seven reasons why natural disasters may not lead to conflict and instead bring the community together. First, the threat is external, no one in the community created it. Second, the disaster can be perceived and specified. Third, there is a high consensus on priorities. Fourth, disasters create community wide problems that need to be quickly solved. Fifth, disasters cause a focusing of attention on the present. Sixth, there is a leveling of social distinctions. Seventh, disasters strengthen community identification (Drabeck, 1986). Gunter, Aronoff, and Joel (1999) concur by asserting that natural disasters may bring community members together because the natural disaster is "swift, unambiguous, and attributed by their victims as acts of God" (Gunter, Aronoff, and Joel, 1999: 624). Additionally, once the worst is past, residents often rally with friends, neighbors and families to rebuild the community, thus further helping residents recover (Gunter, Aronoff, and Joel, 1999).

Natural disasters are not always consensus shocks, in fact, some natural disasters may be very corrosive for the community. The aftermath of Hurricane Katrina highlighted many issues which hindered a quick social and economic rebound. Hurricane Katrina did not bring about Drabeck's (1986) conditions which would bring a community together following the shock. The hurricane itself acted as a triggering mechanism while the aftermath demonstrated retrospectively how unprepared and exposed to risk New Orleans was (Comfort, 2006). This contributed to significant attitudinal differences between racial groups

concerning perceptions of blame in regards to the Katrina response (Dach-Gruschow and Hong, 2006).

The probabilities of a shock being corrosive or consensus has as much to do with the underlying social structure of a community as it does with the shock itself. This argument adds a predictive element to how economic shocks will effect communities rather than simply viewing the effects of a shock in retrospect. Hurricane Katrina failed to achieve a common consensus in New Orleans because it did not level the social distinctions. Miller and Rivera (2007) argued that Hurricane Katrina dispelled the belief that natural disasters effect everyone equally because poor blacks (arguably the group most in need of help) were disproportionately left out of recovery efforts. Thus there was perceived inequality in the response and priorities were not put in place to help those most in need of help. Hurricane Katrina did not create the racial and class rifts, but rather highlighted the pre-existing rifts and intensified them (Miller and Rivera, 2007).

Some communities have attempted to increase their resilience by creating consensus shocks through amenity development (Green, 2001). Amenities have the ability to change community well being and create economic development and bring about higher quality of life for residents and tourists (Goe and Green, 2005). In addition, there are several possible economic benefits which are created via amenity development. Florida (2002) argued that communities with amenities are better able to attract a well educated and skilled labor force (he calls this group the creative class). Attracting the creative class drives economic development because businesses will want to locate where the best and brightest workers are. Though Florida focuses on metropolitan areas, McGranahan and Wojan's (2007) research demonstrates that rural areas can successfully attract the creative class through amenity

development. Previous studies have linked high amenity rural counties with population

growth and tourism (McGranahan, 1999; Beale and Johnson, 1998), which was related to

higher per capita income levels (English, Marcouiller, and Cordell, 2000). In addition,

relationships exist between amenities and regional economic growth (Deller et al, 2001).

McGranahan (1999) found that over the past 25 years high amenity counties experienced

three times the job growth compared to low amenity counties. It is important to remember

that this will only be consensus shock if it brings the community together. If the amenity

creates conflict and fragments the community's social structure it is a corrosive shock, not a

consensus shock.

It has been argued that economic shocks can have a corrosive or consensus building

effect on communities. These two effects will have differing effects on community quality

of life. Consensus shocks may increase a community's quality of life whereas corrosive

shocks may diminish it. Though it is unclear what the effect will be simply by looking at the

type of shock. Just because a shock is perceived to increase quality of life (such as natural

disasters according to Drabeck, 1986) that outcome is not guaranteed (Miller and Rivera,

2007; Dach-Gruschow and Hong, 2006). So what makes a community more resilient to a

corrosive shock thereby allowing the community to retain its quality of life?

Resilience

The resilience framework was originally developed in the ecology discipline

(Holling, 1973). Resilience theory focuses on the source and role of change in adaptive

systems (Holling, Gunderson, and Ludwig, 2002). Pimm (1991) used resilience to connote

the speed of recovery for a system experiencing a disruption. However, resilience can also

focus on the amount of disruption a system can endure (Holling, 1973). In line with the latter focus, resilience is defined as the capacity of a system to undergo a disturbance and maintain its function and controls: essentially resilience refers to the amount of disturbance a system can tolerate and still persist (Gunderson and Holling, 2002).

The resilience literature recognizes an integration of ecological factors and social systems (Berkes and Folke, 1998). However, Adger (2000) pointed out that "the concept of resilience has not effectively been brought across the disciplinary divide to examine the meaning of resilience of a community or a society as a whole" (348). He proposed that social resilience is related to ecological resilience. Social resilience is defined as "the ability of communities to withstand external shocks to their social infrastructure" (Adger, 2000: 361). A resilient community is able to maintain its social norms which promote social benefits when faced with external stress (Adger, 2000). The focus on resilience through human and environmental systems (as opposed to treating each system independently) increases the ability of people to cope with changes associated with future surprises and unforeseen risks (Tompkins and Adger, 2004) and to better understand community responses to shocks.

Using a resilience framework is advantageous for understanding community dynamics for several reasons. Resilience helps us understand the repercussions from several types of shocks holistically (Berkes, 2007). Second, resilience focuses on the system's ability to deal with the hazards. It allows for increased understanding of how the system absorbs the disturbance, adapts to the disturbance, or reorganizes following the impact (Berkes, 2007). Third, resilience is forward looking and helps explore policy options associated with uncertainty and change (Berkes, 2007).

Sources of community resilience

Drawing on Berkes and Folke (1998) and Machlis and Force (1990), Varghese et al (2006) defined community resiliency as the ability of a community to "maintain, renew, or organize social system functions and ecological functions; it is a measure of the robustness and buffering capacity of a community in a changing system" (Varghese et al, 2006). For Varghese et al (2006), community capacity contributes to community resilience. Community capacity is defined as "The collective ability of a group to combine various forms of capital within institutional and relational contexts to produce desired results or outcomes" (Beckley et al, 2001: 7). Community capacity relates to resiliency because it helps account for a community's ability to respond to changes (Nadeau, Shindler, and Kakoyannis, 1999).

Beckley et al (2008) argued that community capitals underlie community capacity: economic (physical capital and infrastructure), social (trust, norms and networks), natural (natural resources) and human (formal education and informal learning). Community changes were conceptualized as "catalysts for action" (Beckley et al, 2008: 63). They may be positive or negative for the community and may therefore provide opportunities to develop or threats to diminish community resilience (Beckley et al, 2008). The model proposed by Beckley et al (2008) is similar to that proposed by Flora and Flora (2008). It asserts that challenges and changes in the community marshal community capitals to achieve desired outcomes in motion. Thus, a community capitals framework is linked with community capacity which helps create community resilience.

Flora (2001) highlighted the productivity of capital when she asserted that when "resources are used to create new resources they are called capital (9)." Flora (2001) argued that human and social capital are necessary to mobilize action which enhances other types of

capital (such as natural capital). The capitals framework presented by Flora and Flora (2008) and Flora (2001) is important to understanding the concepts of community capacity and community resilience. Building off Flora (2001), conceptual distinctions must be made between the "foundational assets" and "mobilizing assets" in a community (Donoghue and Sturtevant, 2007: 909). Foundational assets are resources present in the community – including physical infrastructure, natural resources, and economic capital. Mobilizing assets are the social processes and interaction which make-up collective action – typically including social, human, and political capital[2] (Donoghue and Sturtevant, 2007). More specifically, mobilizing assets mobilize foundational assets into productive uses to achieve desired outcomes (Donoghue and Sturtevant, 2007).

Donoghue and Sturtevant, (2007), Flora and Flora (2004), and Flora (2001) would argue that capitals are important community resources for resilient communities. Miller and Rivera (2007) pointed out the social divisions highlighted by Katrina existed before the hurricane hit land. Inclusivity and connectedness plays a significant role in creating resilient (or non-resilient) communities (Berke and Campanella, 2006). As economic shocks occur, the social fabric of a community is important (Berke and Campanella, 2006; Vale and Campanella, 2005). Rifts in community social structure may fail to spur community action in the face of a natural disaster (Flora, 2001). Comfort (2006) asserted that resilient communities have inclusive models of civic engagement which includes all sectors of their population. As a result of inclusivity, resilient communities have strong information infrastructure that allows information to be exchanged quickly between individuals and

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[2] Political capital consists of: "organization, connections, voice, and power…[it] is the ability of a group to influence the distribution of resources within a social unit" (Flora and Flora, 2008, 144).

public, private, and non-profit groups (Comfort, 2005). When certain groups are excluded,

the planning process is generally dominated by technical experts (top down) (Burby, 2003).

These experts do not understand or have access to local knowledge or information, thus their

plans may be inconsistent with local values, needs, and customs (Burby, 2003). Varghese et

al (2006) concluded that communities which have greater inclusion of the community were

more resilient as a result. As inclusivity increases among ownership structures (across

employees, managers, and community members) the greater the support for community jobs,

community programs, and the overall business viability (Varghese et al, 2006).

Economic shocks are theorized to impact communities by increasing community

consensus or creating corrosive communities. Some communities will be more resilient to

the corrosive impacts of economics shocks. The underlying social structure contributes to

community resilience (Miller and Rivera, 2007; Varghese et al, 2006)   When addressing the

question, "Do communities act?" Charles Tilly concluded that "Some communities act some

of the time" (Tilly, 212: 1973). He argued that the propensity towards community action is

linked with social elements (Tilly, 1973). Flora (2001) pointed out that human and social

capital can mobilize other types of capital to benefit the community. Likewise Donoghue

and Sturtevant (2007) listed social capital and human capital as mobilizing assets which can

activate foundational community capitals (e.g. physical, financial, natural capitals) to bring

about community change.

Social capital may offer the best explanation for the mobilization and equitable

distribution of foundational community assets because it focuses on the connections within

the community and the strength of those connections. If a community is steeped in human

capital (the other mobilizing asset according to Donoghue and Sturtevant, 2007) but no one

in the community will work together, then the community will not be effective at solving problems. On the other hand, networks, norms of reciprocity and trust (social capital) enable collective action (Putnam, 2000). As this collective action creates a "habit of cooperation" it establishes a community culture where taking action in response to community problems is the norm (Marwell, Oliver, and Prahl, 1988).

Social capital

I focus on social capital as a pivotal concept in explaining community resilience. Social capital is a concept that is employed by a variety of disciplines including sociology, economics, and political science. Drawing from a wide variety of disciplines and theoretical underpinnings inhibits the formulation of a consistent definition. Portes (1998) warned that excessive extensions of the concept may weaken its heuristic value. However, most authors agree with Coleman's (1990) basic formulation that social capital involves 1.) some element of social structure and 2.) social action. Coleman's (1990) formulation is too broad to be operationalized into research. As a result, there is an "impressive and growing body of context specific social capital definitions and applications in social science research" (Adam and Roncevic, 2003: 160). The definition adopted by a study will generally depend upon the discipline of the authors and the level of analysis (Robison, Schmid, and Siles, 2002). For purposes of this analysis, I define social capital as: "Features of social organization such as networks, norms, and social trust that facilitate the coordination and cooperation for mutual benefit" (Putnam, 1993, 167).

Despite the various uses across various theories and disciplines, Baron and Hannan (1994) note problems with combining the terms "social" and "capital". They protest the

indiscriminate importation of economic concepts into sociology. This raises the question, can something social be a capital? Like other forms of capital, social capital can be productive (Flora, 2001). Often productivity is manifest via collective action of a group (Putnam, 2000) or network ties to resources for personal benefit (Burt, 1992). Additionally, social capital can be appropriated (Coleman, 1988) or exchanged (Bourdieu, 1986) similar to economic capital. Moreover, social capital can substitute for (Adler and Kwon, 2002; Bourdieu, 1986) or compliment other types of capital, such as facilitating economic investments by reducing transaction costs (Fukuyama, 1995). These considerations led Adler and Kwon (2002) to state "Social capital falls squarely within the broad heterogeneous family of resources commonly called capitals" (Adler and Kwon, 2002: 22).

Although social capital fits into the definition of capital (Adler and Kwon, 2002), it is distinct from other types of capitals. One difference between social capital and other types of capital is where social capital is located. "Whereas economic capital is in people's bank accounts and human capital is inside their heads and bodies, social capital inheres in the structure of their relationships" (Portes, 1998: 7). Social capital is located in relationships. No one person owns social capital (Warren, Thompson, and Saegert, 2001). Person A can end the relationship with person B depleting the social capital for both individuals. Unlike financial capital, social capital does not diminish with use, but rather by not being used (Adler and Kwon, 2002). Actors must continually maintain relationships to retain or enhance their levels of social capital.

Social capital's beginnings and development

The term social capital emerged around the beginning of the 20th century. The first known use of social capital is often attributed to a West Virginia state supervisor for rural schools named Lyda Judson Hanifan (Putnam, 2000). Hanifan used social capital to explain the relationship between community involvement and successful schools (Hanifan, 1916). As individuals build connections with neighbors, social capital is created which improves the individual's position and the living conditions for the whole community (Hanifan, 1916). The basic elements of Hanifan's conceptualization are still present today (Putnam, 2000).

After Hanifan (1916) social capital's conceptualization was used sporadically until the 1980s. Prior to the 1980s, scholars examined the elements of social capital when studying suburban culture (Seeley, Sim, and Loosley, 1956) and city life (Jacobs, 1961). In his study of income differences among various racial groups Loury (1977) noted that high income families were more socially connected than low-income families. Loury concluded by stating that human capital (investments in individuals – typically education) has provided a rationale for inequalities, such as explaining the economic costs from dropping out of school (Loury, 1977). However, he argued that human capital fell short in explaining why similar per capita expenditures in low income areas yields a lower quality education compared to affluent communities in the same district (Loury, 1977). Loury (1977) recommended employing the concept of social capital to "represent the consequences of social position in facilitating the acquisition of the standard human capital characteristics" (176). In the 1980s social capital was examined more rigorously. Prior to 1981, 20 journal articles listed social capital as a key term (Baum, 2000). From 1981 – 1995, that number rose to 109 and from 1996 – March, 1999 the number reached 1003 (Baum, 2000).

Individual level resources

Social capital theorists are generally placed into two camps (Agnitsch, 2003). One camp recognizes the resources embedded within individual networks (Burt, 1992; Coleman, 1988; Bourdieu, 1986). The other camp focuses on group or community action (Fukuyama, 1995; Putnam, 1993; Portes and Sensenbrenner 1993). I will discuss each camp in turn. Table 1 indicates several definitions of social capital within the individual resource camp.

Table 1: Resource based social capital definitions.

Author	Definition
Bourdieu	"The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintanceship or recognition" (Bourdieu, 1986: 248).
Coleman	"Social capital is defined by its function. It is not a single entity but, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are in that structure" (Coleman, 1990: 302).
Burt	"Friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital" (Burt, 1992: 9).

For Bourdieu (1986), relationships represent social investments which dictate probabilities for individual success by granting or hindering individuals' access to other types of capitals (e.g. economic or cultural) (Bourdieu, 1986). He defined social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network or less institutionalized relationship of acquaintance and recognition – in other words, to membership in a group, which provides each of its membership with the backing of collectively owned capital" (Bourdieu, 1986, 248-249). Bourdieu focused on resources

embedded in social networks. To him the volume of social capital possessed by an individual depended on the size of the network he/she can mobilize effectively and the amount of capital (economic, cultural, or symbolic) connected to that network. Therefore, social capital and other forms of capital are not equally available to individuals.

For Coleman the individual is motivated by economic personal gain and self-interest. Coleman defined social capital by its function (Coleman, 1990). To him social capital possesses two fundamental characteristics: First, a social structure and second, productivity which facilitates certain action that would otherwise not have occurred (Coleman, 1990; Coleman, 1988). Coleman demonstrated how social capital assists in the creation of human capital or more specifically the educational attainment of children. He concluded that where social capital was more prevalent high school drop out rates are lower and educational attainment is higher (Coleman, 1988). By defining social capital by its function, Coleman's definition is criticized for being vague and opening the door for social capital to be tautological (Lin, 1999; Portes, 1998).

Coleman (1990) highlighted the importance of network structure and its relationship with the enforceability of norms and type of trust produced. He discussed how open and closed networks can facilitate specific forms of social capital (Coleman, 1993; Coleman, 1990). Coleman argued that closed networks are advantageous because they can more adequately enforce norms. For instance, if a network of parents and school children is closed to outsiders (all the parents and all the children are members of the same network with no outside ties) then the group can more efficiently monitor and guide behavior (Coleman, 1988). The closure of the network means that the group is better able to sanction group individual members who do not comply.

Unlike Coleman who examined how closed networks benefit the individual or groups, Granovetter (1973) highlighted how ties to distant acquaintances help individuals gain access to more resources and new information. He studied job hunting and found that most job seekers heard about their current job from acquaintances (what he called weak ties) rather than family or close friends (what he called strong ties). The strong ties often leads to information redundancy due to group homogeneity and access to similar information. In other words, homogeneous group members often have access to the same information. An individual with a diverse network has greater access to new resources and thus greater social and economic mobility (Granovetter, 1995; Granovetter, 1973).

Burt (1992) argued that diverse ties spanned "structural holes" and led to increased career success for individuals. The structural holes Burt referred to are gaps in access to information or resources which have highly homogonous networks would often miss. Therefore, the individual with a diverse network will have access to more information. Florida (2002) argued that strong ties not only promote conformity, but may also reduce innovativeness for the individual. He argued that weak ties led to greater tolerance and inclusivity which ultimately spurs innovation. Past research has also found relationships between diverse networks and having good ideas (Burt, 2004), increased creativity (Webber and Donahue, 2001) and better and faster problem solving skills (Page, 2007).

Underlying motivations of individuals

Social capital may be both a resource for individuals and groups, however, the underlying motivations for actions differ greatly. Portes (1998) distinguished between instrumental motives and consummatory motives to explain differences in human volition.

Consistent with the conceptualization of social capital from the individual level of analysis, instrumental motives promote economic self-interest (e.g. Coleman, 1994). Thus when Burt (1997) and Granovetter (1973) argued it is beneficial to network, they argued it was in the individual's best interest to do so. Portes (1998) would refer to this as instrumental motivations for action.

Consummatory motives refer to individuals who act with a community or group orientation (e.g. pay their debts, give to charity, and obey traffic laws) (Portes, 1998). An example of this would be a person who hires another from his community because he/she thinks that is what a good neighbor is supposed to do. Putnam highlighted consummatory motives in his discussion of generalized norms of reciprocity. General norms of reciprocity mimic "the golden rule" by looking out for the overall community well being instead of individual self-interest (Putnam, 2000). Thus, the community member's volition has a community orientation rather than a self interested orientation. Likewise, Paxton (2007) focused on the idea of generalized trust. Specifically, she examined how connectivity amongst volunteer associations was related with the creation of generalized trust. Yuki, Maddux, Brewer, and Takemura, (2005) referred to generalized trust as "depersonalized trust". Like Putnam's conceptualization of generalized norms of reciprocity, this conceptualization of generalized trust carries a community oriented connotation (as opposed to an individually specific one).

Social capital as a community resource

Consummatory motives connote acting in a group's or community's interest. The other social capital camp examines social capital as a group or community resource. Unlike

the resource focused camp, their definitions of social capital tend to be grounded in consummatory motives. Table 2 offers common definitions with a group or community orientation.

Table 2: Group or community social capital definitions.

Author	Definition
Portes and Sensenbrenner	"Those expectations for action within a collectivity that affect the economic goals and goal seeking behavior of its members, even if these expectations are not oriented towards the economic sphere" (Portes and Sensenbrenner 1993: 1323).
Putnam	"Features of social organization such as networks, norms, and social trust that facilitate the coordination and cooperation for mutual benefit" (Putnam, 1993, 167).
Fukuyama	"The ability of people to work together for common purposes in groups and organizations" (Fukuyama, 1995: 10).

Portes and Sensenbrenner (1993) note that group structure plays an influential role in the type and amount of social capital available to the group (see also Coleman, 1993; Coleman, 1990). This is accomplished through the group's open or closed network. In research examining immigrant communities, Potes and Sensenbrenner (1993) concluded that closed networks produce greater amounts of enforceable trust which increases the group's cohesion. The immigrant group has both a mechanism to reward people within the group who conform to group expectations and punish people within the group who deviate. If the individual is acting against the group, the group may deny resources and benefits to the deviating individuals. In a group where the network is more open, there is less direct control which can be exerted on the individual because the individual may have ties to outside resources and the group's importance is diminished.

Closed networks may provide resources and opportunities to group members (Portes and Sensenbrenner, 1993) while denying resources and opportunities to non-groups members (Bourdieu, 1986). The discussion of closed social networks harkens back to Ferdinand Tonnies's idea of geminschaft. Gemeinschaft is the German word for community (Tonnies, 1957). Gemeinschaft type groups are tight knit and rely heavily upon sentiment, mind, and heart (Tonnies, 1957). This creates a very strong bond between community members (such as the immigrant communities studied by Portes and Sensenbrenner (1993).

Types of community social capital

It is important to note that social capital can be disaggregated into different types: bonding and bridging. Each type will have a different effect on the community. I will discuss each in turn.

Bonding social capital

Portes and Sensenbrenner (1993) are referencing a specific type of social capital: bonding social capital. Bonding social capital is exclusive, meaning that benefits are mostly realized by group members and not by outsiders (Putnam, 2000). Portes and Sensenbrenner (1993) found that a tight knit group (utilizing bonding social capital[3]) strengthens solidarity amongst immigrants. This solidarity is a source of social and financial support for group members (Portes and Sensenbrenner, 1993). "The in/out group distinction strengthens in-group solidarity and bonding social capital while increasing ethnocentrism" (Putnam, 2007,

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[3] Although Portes and Sensenbrenner (1993) do not refer to their type of immigrant networks as bonding social capital, the structure they describe connotes bonded social capital.

144). Thus the community may be less able to come together to address community problems.

The fact that a person or group has bonding social capital does not necessarily translate into positive benefits for a community (Paxton, 1999). In fact, bonding social capital may have negative effects for the community when possessed by groups such as the KKK, Hells Angels, or the mafia (Paxton, 1999; Portes and Landolt, 1996). Speaking colloquially, Putnam (2000) describes bonding social capital as sociological superglue, which creates strong in-group loyalty and possible strong out–group antagonism. Fafchamps (2006) echoes this concern by pointing out that clubs can reify the polarization between the in-group and out-group. Furthermore, dominant groups may use social capital as a resource to preserve their social position (Bourdieu, 1986) or stifle individual choices by requiring group conformity (Portes and Landolt, 1996).

Shulman and Anderson (1999) highlight the dark side of social capital when they studied the embeddedness of social and economic relationships in southern mill towns. They demonstrate how social capital may be used to dominate community and work relationships by one faction of the town (Shulman and Anderson, 1999).

Loury had noted earlier that "whites might find it in their economic interests to act collectively against blacks" (Loury, 1977, 156). Duncan (1999) demonstrated how strong bonding social capital hindered community vitality. She concluded that communities with inclusive networks are more viable than communities possessing only bonding social capital. Putnam (2000) also pointed out that bonding social capital has contributed to several social problems such as racial discrimination and segregation in the 1950's.

Bridging social capital

Inclusive networks may ameliorate the negative consequences of bonding social capital. Paxton (1999) argued that the propensity for negative community social capital is decreased as positive and trusting ties are established between various community groups. Bridging social capital is inclusive and connects the individual, group, or community to outside resources – between groups (Putnam, 2000). The benefits of bridging social capital have become widely accepted at the community level (Putnam, 2000; Warren et al, 1999; Narayan, 1999; Gittell and Videl, 1998). Bridging social capital ties different groups together increasing community inclusivity. Inclusive networks are optimal for collective benefit (Wilson, 1996; Flora et al, 1997; Wilson, 1987). Johnson and Farrell (1997) found a positive relationship between racially diverse personal networks and individual income. Narayan (1999) found that "cross cutting ties", that is ties which connect different groups to each other, led to increased economic opportunities. The common theme between these researchers is that connections to people/groups different from oneself leads to greater community benefits.

Flora and Flora (1993) advance social capital theory by introducing the concept of entrepreneurial social infrastructure. Entrepreneurial social infrastructure includes three main components: 1) Legitimacy of alternatives, 2.) mobilization of resources, and 3.) network quality. They argued that communities with an inclusive network which is not dismissive of alternatives proposed by certain groups (e.g. the growth machine proposed by Logan and Molotch, 1987) in the community and that can marshal community resources will be more viable. Flora (1998) argued that communities with greater stores of these components will have a greater propensity towards collective action. Entrepreneurial social

infrastructure is advantageous because it focuses on the inclusivity of a community's
network.

Uniting diverse groups within the community may be easier said than done. Coffe
(2009) and Coffe and Geys (2006) concluded that heterogeneity was negatively related to the
creation of bridging social capital. Newton and Delhey (2005) found that countries with
greater ethnic diversity had lower levels of trust. Putnam (2007) observed that ethnically
diverse neighborhoods tended to have lower levels of trust, friendships, and community
cooperation (Putnam, 2007). However, he argued that the successful immigrant societies
have overcome fragmentation and developed solidarity encompassing all identities (Putnam,
2007). When a diverse community can come together, the community rewards are greater
for the community (Putnam, 2000; Warren et al, 1999; Narayan, 1999; Gittell and Videl,
1998; Johnson and Farrell, 1997; Flora et al, 1997; Wilson, 1996; Wilson, 1987).

Social capital and the community

Putnam (2000) argued that acting with a community orientation led to greater benefits
at the community level and the individual level. Communities with higher levels of social
capital have increased neighborhood stability (Temkin and Rohe, 1998), higher levels of
volunteerism (Wilson and Musick, 1997), higher levels of elderly participation in community
improvement projects (Liu and Besser, 2003), more effective governments (Knack, 2002;
Rice, 2001; Putnam, 2000; Putnam, 1993), and lower levels of crime (Sampson, 2001;
Sampson, Raudenbush, and Earls, 1997) compared with communities with lower levels of
social capital. Social capital is also related to community economic benefits. Regions with
higher levels of social capital tend to have greater economic prosperity (Tiepoh, Nah, and

Reimer, 2004; Putnam, 2000; Narayan, 1999; Putnam, 1993; Stiglitz, 1996), more economic

equality and stability (Casey and Christ, 2005), successful businesses (Besser, 1999;

Kilkenny, Nalbarte, and Besser, 1998) as well as more socially responsible businesses

(Besser, 1998).

The connections between social capital and community benefits are plentiful, though

differences in measurement have led to different empirical conclusions (Liu and Besser,

2003). For example Putnam (1995) concluded that social capital was declining in America

whereas Paxton (1999) concluded the opposite, that social capital was actually rising. The

measurement of social capital is important. Portes (1998) raised criticism over Putnam's

(1993) tautological measurement of social capital. Portes states:

> "as a property of communities and nations, social capital is
> simultaneously a cause and effect. It leads to positive
> outcomes such as economic development and less crime. And
> its existence is inferred from the same outcomes. Cities that
> are well governed and moving ahead economically do so
> because they have high social capital; poorer cities lack this
> civic virtue" (Portes, 1998: 19).

Portes (1998) concedes that there is "nothing intrinsically wrong with defining social capital

as a structural property of large aggregates" (21) however Putnam (1993) fails to differentiate

components of social capital from the effects of social capital.

More recent studies have addressed the tautology concern. Paxton (1999) suggested a

definition of social capital with two components. First, an "objective association between

individuals" (Paxton, 1999: 93). In other words, a network that links individuals together.

Second, a subjective type (e.g. trusting and reciprocal) (Paxton, 1999). By doing this she

helps refine the sources of social capital. Paxton (1999), Stolle and Rochon (1998), and

Knack and Keefer (1997) disaggregated social capital empirically and conceptually. This

helped correct the use of "overly aggregated heterogeneous indexes" (Knack, 2002: 772).

Drawing off Newton (1997) and Paxton (1999) who note distinctions between social capital

and its products, Stone (2001) distinguished between proximal and distal outcomes.

Proximal indicators of social capital are directly related to its core components of networks,

trust, and norms of reciprocity. Distal indicators are related to the products of social capital

(Stone, 2001). Therefore, when Putnam (2000) used voting patterns to connote social

capital, he was using a distal indicator. Additionally, early social capital research often used

secondary analysis employing indicators not designed to measure social capital (Stone,

2001). Later studies utilized instruments created specifically for measuring the dimensions

of social capital. Using primary data collection with specific social capital indicators adds

sophistication and precision to data collection (Stone, 2001).

Social capital and resilience

Although social capital is related to many positive community attributes, does it help

create more resilient communities? Several authors have recognized the relationship

between social capital and community resilience (Murphy, 2007; Tomkins, 2005; Colletta

and Cullen, 2002). Just as it is important to differentiate effects of social capital from its

sources (Portes, 1998), it is also important to recognize that social capital and community

resilience are not synonymous. Resilient communities rely on all forms of social capital

(Colletta and Cullen, 2002). Bonding social capital protects and serves in times of crisis and

bridging social capital brings diverse groups together and leads to united action (Colletta and

Cullen, 2002). While examining towns that experienced power blackouts and water borne e.

coli outbreaks, Murphy (2007) found that social capital improved a community's resilience to risks and hazards.

Researchers generally agree that having elements of both bonding and bridging social capital is optimal for the community (Stone and Hughes, 2002; Saegart, Thompson, and Warren, 2001; Warren et al, 2001; Woolcock, 1998; Flora, 1998). Past research on small towns demonstrated that communities with higher levels of bonding and bridging social capital have higher levels of community action compared to other towns high in only one type of social capital or low in both (Agnitsch, Flora, and Ryan, 2006; Flora 1998) as well as increased economic development (Flora, 1998; Woolcock, 1998). Additionally, households in communities with high levels of social capital are better able to endure economic shocks (Carter and Maluccio, 2003). For Carter economic shocks included individual level events such as: death or injury of a family member, loss of job, crop failures, and loss of property. Positive shocks included getting a new job and gaining inheritances. My study is different than Carter and Maluccio's (2003) because of its context and level of analysis. I focus on small Iowa communities rather than South African households.

Previous studies have established that economic shocks impact community social capital and quality of life (Besser, Recker, and Agnitsch, 2008). This dissertation expands on that research by focusing in on the relationship between social capital and two specific types of economic shocks (negative and externally generated as well as positive and internally generated) and their relationship with quality of life. I focus on these two types of shocks because of their potentially differing consensus building or corrosive effects on the community. In addition, this analysis focuses on how social capital is related with quality of life and changes in quality of life.

Summary of my argument

Economic shocks impact communities differently. Some economic shocks create corrosive communities (Freudenburg, 1997). Other economic shocks are consensus crises which strengthen the community (Drabeck, 1986). Simply because a shock creates positive economic benefits does not mean that the community be strengthened. This is evident through the boomtown research (Brown et al, 2005; Smith, Krannich, and Hunter, 2001; Greider, Krannich and Berry, 1991; England and Albrecht, 1984).

Drabeck argued that the reasons why natural disasters tend to bring the community together are sevenfold. Essentially the community comes together, levels distinctions and fights an external threat. When this is done, the community comes out of the shock stronger than before. However, Dach-Gruschow and Hong, 2006 and Miller and Rivera (2007) point to Hurricane Katrina as an example of how preexisting social rifts intensified the disaster and further divided the community.

Examining the social capital in a community adds a predictive element to how communities will respond to an economic shock. I examine the role of social capital in creating resilient communities. Bonding social capital may help enclaves survive an economic shock by utilizing close knit relationships within a community (Portes and Sensenbrenner, 1993). Though, bonding social capital may also exacerbate economic shocks by increasing out–group antagonism (Fafchamps, 2006). This may be manifest by blaming other groups for the shock (Dudley, 1994). Bridging social capital reduces the propensity for negative corrosive outcomes by bringing the community together before the shock occurs (Putnam, 2000; Paxton 1999). Communities with higher levels of bridging social capital will be more able to come together and collectively act to fight the negative consequences of an

economic shock (Flora, 1998). Furthermore, the inclusive nature of bridging social capital

suggests that even if the shock is negative, the community will not become more corrosive by

fighting over community resources or blaming other groups within the community.

<u>HYPOTHESES</u>

The overarching goal of this study is to examine what makes a community resilient. In doing so, I examine social capital as a component of community resilience. Social capital has been shown to be a useful concept when clearly defined and measured. Although most studies use the term bonding and bridging social capital, Paxton (1999) used the terms within group social capital to connote bonding social capital and between group social capital to connote bridging social capital. For my analysis, I will use Paxton's terms. I believe that within and between group social capital are conceptually more clear for practitioners, individuals outside the disciple of sociology, and others outside of academia in general. Thus, I believe that employing theses terms will allow for easier understanding and adaptation of my findings. Readers should understand that I am using within group and between group social capital interchangeably with bonding and bridging social capital (respectively). I examine two specific types of economic shocks, externally generated and negative as well as internally generated and positive. I selected to examine these types of economic shocks because of their differing impacts on community quality of life. I argue that negative and external economic shocks will have a corrosive effect on communities decreasing quality of life. Conversely, I argue that positive and internal economic shocks will have a consensus building effect. Based on the literature, I hypothesize:

1. Within and between group social capital will be positively related to quality of life in small Iowa communities.
2. Positive and internal economic shocks will be positively related to quality of life in small Iowa communities.
3. Negative and external economic shocks will be negatively related to quality of life in small Iowa communities.
4. Between group social capital will be more strongly related to quality of life in small Iowa communities compared to economic shocks.

Figure 1: Social capital and community resilience.
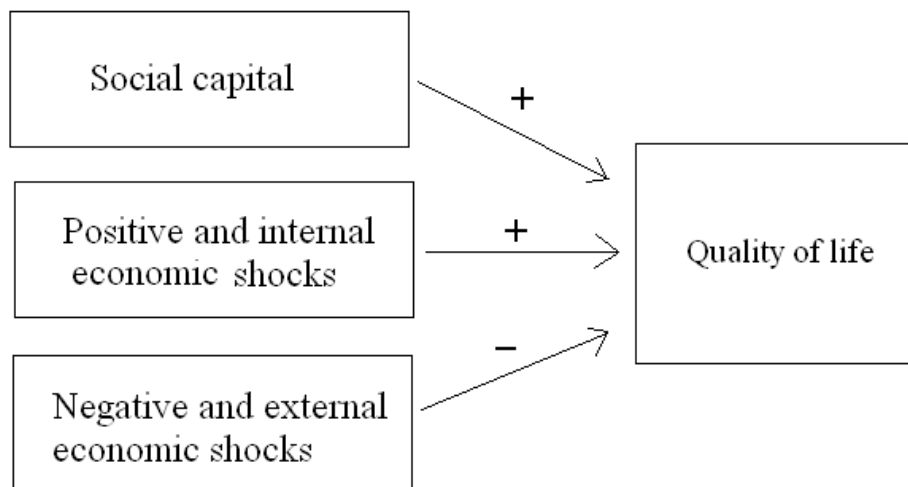
Second, I ask what is social capital's role in mediating between negative and externally generated economic shocks and quality of life? Based on past findings which linked negative economic shocks within declines in social capital and community quality of life (Besser, Recker, and Agnitsch, 2008; Miller and Rivera, 2007; Broadway and Stull, 2006; Knapp and Harms, 2002; Dudley, 1994) and social capital's positive effect on community resilience (Murphy, 2007; Tomkins, 2005; Colletta and Cullen, 2002) I hypothesize:

5. Negative and external economic shocks will have a negative relationship on community within and between group social capital.
6. Between group social capital will mediate the relationship between negative economic shocks and quality of life in small Iowa communities.

Figure 2: Social capital, negative and external economic shocks, and quality of life.
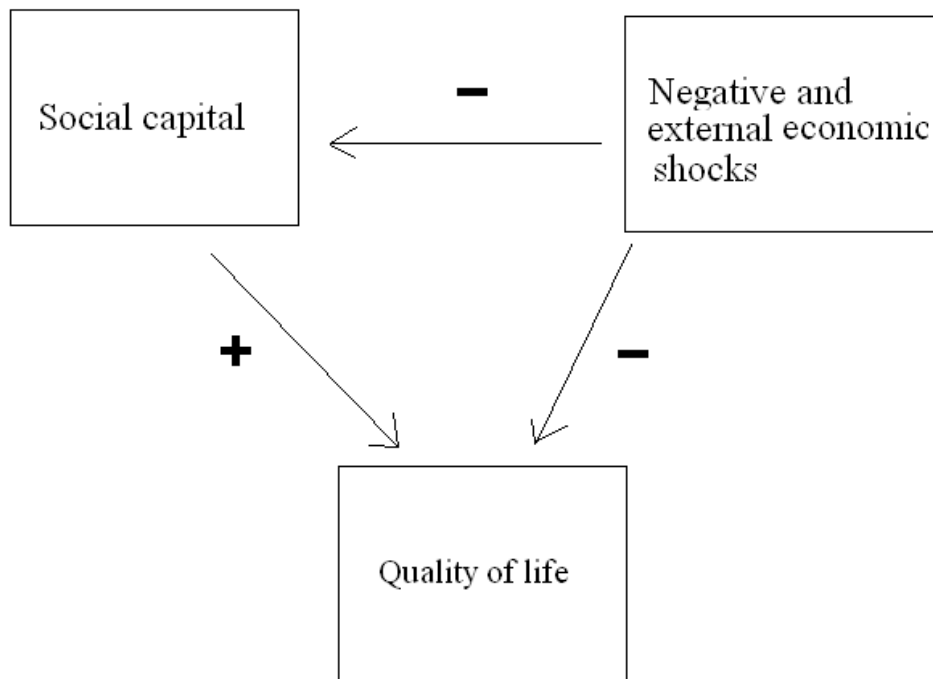
Third, I ask to what extent is social capital related to the formation of internally generated

and positive economic shocks and to what extent do internally generated and positive

economic shocks related to community quality of life in small Iowa communities? Based on

past findings which linked social capital with economic development (Putnam, 2000;

Fedderke et al, 1999; Putnam, 1993) and social capital's relationship with community

resilience (Murphy, 2007; Tomkins, 2005; Colletta and Cullen, 2002). I hypothesize:

7. Between group social capital will be positively related with positive and internal economic shocks.
8. Positive and internal economic shocks will mediate the relationship between social capital and quality of life in small Iowa communities.

Figure 3: Social capital, positive and internal economic shocks, and quality of life.
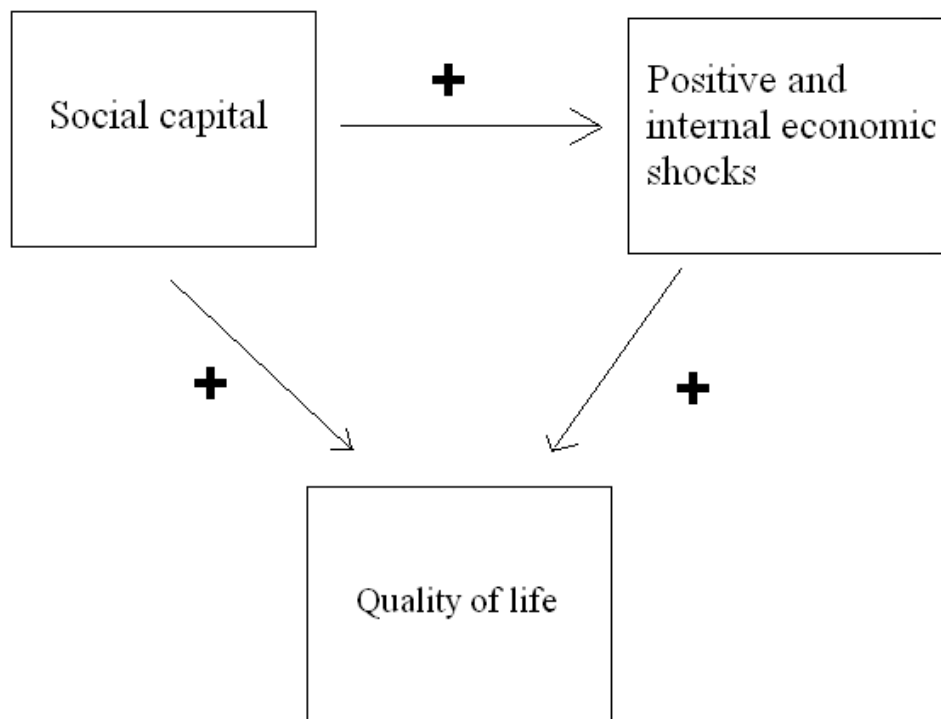
RESEARCH DESIGN

This chapter describes the sources of data, the selection of communities and individual respondents, and the operationalization of variables used in this analysis.

Community selection

This data resulted from a project initiated in 1994 called the Rural Development Initiative. The purpose of that study was to analyze small Iowa communities looking specifically at social capital and quality of life issues. In 2004 the study was replicated using the same communities to examine community change between 1994 and 2004. In 1994 one small town was selected randomly from each of Iowa's 99 counties. A community was operationally defined as those households listed in the telephone exchange area of an incorporated municipality. This definition is appropriate because it recognized that community membership is not confined to city limits and community members do reside in non-incorporated areas surrounding the town. Thus, this operational definition better captures the true community field (Wilkinson, 1991). Since the focus of this study pertains to small Iowa towns, a small town was defined as having a total population between 500 and 10,000 people as of 1994[4] and not contiguous with a metropolitan area (50,000 people or larger). Those towns with populations below 500 people were eliminated in order to comply with Wilkinson's (1991) definition. It was assumed that these communities with populations under 500 people would lack basic services and facilities beyond those directly provided by local government. Those communities with populations above 10,000 people were omitted because the focus of this study was on small communities.

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[4] 1994 is the year when the first leg of the longitudinal data collection was completed.

Data sources

Data used in this analysis came from two primary sources; longitudinal survey data and key informant interviews. I will discuss each source in turn.

Survey

In order to collect social capital and quality of life measures, a survey component was employed. Surveys of individual residents are often used to collect community level data (Stone, 2001). Community level social capital is calculated by aggregating the data collected by individual survey responses to the community level (Stone, 2001). In order to select the individual households within each community, a random number designated the starting point in the telephone listings and then a systematic random sample was employed to select 165 households (150 respondent households and 15 replacements). Survey distribution utilized a modified version of the Dillman total design method (Dillman, 1978). This method included sending out the original survey, reminder post cards asking non-respondents to complete their surveys, and a duplicate survey for those people who had not already returned their survey and may have discarded the original. For this analysis, a total of 14,850 surveys were sent out to residents in 99 small Iowa communities. The process resulted in a cooperation rate of 67% in 2004 and 73% in 1994.

Table 3: Response rates for survey component.

	1994	**2004**
Number of towns	99	99
Number of respondents	10,798	9,962
Response rate[5]	72%	67%
Range of town responses[6]	62% – 83%	47% - 81%

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[5] Numbers are rounded to the nearest percent.
[6] Numbers are rounded to the nearest percent.

Key informant interviews

In order to collect the economic shock data, key informant interviews were conducted in 2005. The local county extension education director or city clerk identified local residents with knowledge of the local economy. Five to eight of these individuals in each community were interviewed by telephone. In total, 636 interviews were conducted for a cooperation rate of 90.86%. Key informants identified economic shocks which occurred between 1990 and 2004, provided the month and year when the shocks occurred, indicated whether the shocks originated inside the community or outside of it, explained whether the shock had a positive or negative effect on the community's economy, and assigned a significance rating to the economic shock on a scale of 1 thru 5 (1 = least severe and 5 = most severe).

Operationalization of variables

Individual responses to survey questions were reverse coded where needed and then factor scaled to create multi-dimensional measures. The factor scores for each individual component are listed in Table 4 in the findings section. The Cronbach's alpha and the percent variance explained for each factored variable is listed in this section as well as displayed in Table 4.

Quality of life

In this analysis, community quality of life in 2004 and the percent change in quality of life from 1994 - 2004 are the dependent variables. In this analysis community resilience is operationalized as quality of life in 2004 and percent change in quality of life from 1994 – 2004. Past research has relied on two types of measures to determine a community's quality of life, objective and subjective measures. Research using objective indicators has relied on

measures such as a community's educational assets, health assets, recreation facilities, economic assets, and demographic data (Lieske, 1990; Berger et al, 1987; Flax, 1976). Subjective indicators focus on attitudes or feelings towards the community (e.g. levels of satisfactions with the community). Quality of life can be divided into two important dimensions: 1.) the level of satisfaction for community resources and 2.) the distribution of this satisfaction across community residents (Shin, 1980).

For purposes of this analysis, I used the subjective quality of life measures. Subjective indicators for quality of life are commonly used in social science research (Sirgy and Cornwell 2001; Sirgy et al. 2000; Argyle 1996; Andrews and Withey 1976). Respondents rated the overall services/facilities provided by local government in their community after they rated specific local government services (fire protection, police protection, emergency services, and the condition of parks and streets). Individual responses ranged from very good, good, neutral, fair, and poor for the above questions. In a similar manner, respondents then provided an overall rating of non-governmental services in their community. Again respondent's ratings for the overall non-governmental services/facilities followed their rating specific non-governmental services (shopping, employment opportunities, medical services, child care, and youth and senior programs). The third and final measure for community quality of life asked respondents to rate the extent they agreed with the following statement: "Overall, <<Community>> has more things going for it than other communities of similar size." The individual response categories ranged from strongly agree, agree, neutral, disagree, and strongly disagree. Please see Table 4 for each question's factor loading. Quality of life in 2004 featured a Cronbach's alpha of .84 and explained 79% of the variance. Both the Cronbach's alpha and the percent variance explained for quality of

life in 2004 are at acceptable levels (Kim and Mueller, 1978). The percent change in quality

of life from 1994 – 2004 was calculated by subtracting the sum of 1994 quality of life

measure from the sum of 2004 quality of life measures then dividing that value by the sum of

1994 quality of life measures.

Within group social capital

For this analysis, I used the 1994 levels of social capital. Social capital in 1994 was

used because it was the social structure before the shock which influenced quality of life. I

examined two types of social capital – within group and between group. Both within and

between group social capital have structural and subjective elements. Structural elements of

social capital refer to relationships within the community. Subjective elements of social

capital refer to the attitudes of trust and norms of reciprocity within the community. In order

to decide which items to include in the indices measuring each construct of social capital and

I relied on face validity and factor loadings. Questions that were not theoretically consistent

with each construct or did not have high factor loadings (above .5) were excluded from

further analysis. A detailed factor analysis examining several questions from the survey

instrument can be viewed in the appendix (using principal component analysis as the

extraction method). In order to operationalize structural within group social capital three

items were used to create and index: 1.) About what proportion of adults living in

<<community>> would you say you know by name? Response categories ranged from none

or very few, less than half, about half of them, most of them. 2.) About what proportion of

your close personal adult friends live in <<community>>? Response categories ranged from

I have no close personal friends, none of them live here, less than one-half live here, about

one-half of them live here, most of them live here. 3.) About what proportion of adult

relatives and in-laws live in <<community>>? Response categories ranged from I have no

living relatives or in-laws, none of them live here, less than one-half live here, about one-half

of them live here, most of them live here. The scaled variable for structural within group

social capital had a Cronbach's alpha of .75 and explained 69.1% of the variance. Both the

Cronbach's alpha and the percent variance explained by these variables are at acceptable

levels (Kim and Mueller, 1978).

The subjective within group social capital questions were selected to assess the

cohesion within homogeneous groups in each community. Three indicators comprised the

factored scaled variable for within-group subjective social capital. 1.) respondents rated their

community as friendly or not friendly on a semantic differential scale from 1 -7 where 1 =

friendly and 7 = unfriendly. 2.) Agree or disagree with the following statement: "Being a

resident of Community is like living with close friends". Response categories appeared on a

five point Likert scale where 1 = strongly agree and 5 = strongly disagree. 3.) Agree or

disagree with the following statement: "Our neighborhood is closely knit". Response

categories appeared on a five point Likert scale where 1 = strongly agree and 5 = strongly

disagree. The factor scaled variable for subjective within group social capital had a

Cronbach's alpha of .84 and explained 78.99% of the variance. The Cronbach's alpha and

the percent variance explained by structural and subjective Within-group social capital

variables are at acceptable levels (Kim and Mueller, 1978).

Between group social capital

In order to operationalize the structural between group social capital I used a stand

alone indicator which asked respondents how many local groups they belong to. The

community mean for local organization membership was used as the community level

indicator. As the mean number of local group/organization membership rises, it is assumed

that there is increased overlap between the groups and thus, more connections to various

groups within the community.

The subjective between group social capital items were selected to assess the extent

of generalized trust and generalized norms of reciprocity that support a community outlook

instead of an individual self-interested outlook. The subjective between group social capital

variable was created by factoring four individual measures together. They include: 1.) a

semantic differential scale where respondents were asked to rate <<community>> on a scale

from 1 -7 where: 1 = trusting and 7 = not trusting. For the three remaining questions

respondents were asked to agree or disagree with the following statements: 2.) "Clubs and

organizations are interested in what is best for all residents."

3.) "Residents in <<community>> are receptive to new residents taking leadership

positions." And 4.) "I think every person for themselves is a good description of how people

in <<community>> act" (reverse coded). For each of the previous three indicators, response

categories appeared as a five point Likert scale where 1 = strongly agree and 5 = strongly

disagree. The factor scaled variable for subjective between group social capital had a

Cronbach's alpha of .75 and explained 69.1% of the variance. Both the Cronbach's alpha

and the percent variance explained by the subjective between group social capital variable

are acceptable (Kim and Mueller, 1978).

Economic shocks

The key informants from each community identified events that fit into the definition

of an economic shock. They did not pick events from a previously generated list or have

access to events identified by other key informants. In order to be retained for further study, the event must have been nominated by at least two key informants and had an average significant rating of at least two (on a scale between one and five).[7] For purposes of this analysis two specific types of economic shock variables were examined: 1.) internally generated and positive shocks and 2.) externally generated and negative shocks. To create community level economic shock variables, the sum of average significances of positive and internally generated shocks and negative and externally generated shocks were used.

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[7] Therefore if five key informants were interviewed in a community and two gave the economic shock a significance rating of five while the remaining three key informants did not mention the event, the economic shock received a total significance of 2 (10/5).

FINDINGS

The descriptive findings are displayed in the charts below. This research was conducted at the community level of analysis, therefore, the descriptive statistics are displayed at the community level (N = 99 communities). The population of the communities ranged from 506 people to 8,539 people with a mean population of 1,803 people in 1994. Their distances from a metropolitan area ranged from 8 miles to 131 miles with a mean distance of 57.7 miles. Each multiple regression model and path analysis controlled for the log of 1990 population. In the log of population was used to create a normal distribution. The multiple regression models also controlled for the distance to a metropolitan area.

Table 5 lists the minimum value, maximum value, average value, standard deviation for the economic shock variables. In total, 2,333 different events were identified by key informants. From those nominations 152 events in 74 of the 99 communities met the criteria to be considered an economic shock. 25 communities in this analysis did not experience an economic shock. Furthermore, 41 of the 99 communities had multiple economic shocks between 1990 and 2003. The communities in this analysis experienced 0 to 5 economic shocks. In order to gain a better understanding of the total magnitude of the economic shocks, the average significances for each type of shock were summed together. Communities experienced 0 to 4 positive and internally generated economic shocks with sum of the average significances ratings ranging from 0 to 13.5. The number of external and negative economic shocks ranged from 0 to 2 with sum of the average significances ranging from 0 to 6.5.

Table 4: Descriptive findings for quality of life and social capital (N=99)

Control variables	Minimum	Maximum	Mean	Std. Deviation	Factor Component Scores (when applicable)
1990 population	506	8539	1803.27	1852.39	
Miles to a metropolitan area	8	131	57.7	28.61	
Structural within group social capital - 1994					Cronbach's alpha =.75 % Variance explained = 69.1
About what proportion of…					
Adults do you know by name in <<community>> where 1 = very few and 4 = most of them.	1.6	3.6	2.72	.39	.74
Your close personal friends live in <<community>> where 1 = very few and 4 = most of them.	2.8	4.3	3.67	.34	.87
Adult relatives and in-laws live in <<community>> where 1 = very few and 4 = most of them.	2.1	3.5	2.97	.26	. 88
Subjective within group social capital - 1994					Cronbach's alpha =.84 % Variance explained = 79
Rate <<community>> on a scale from 1 -7 where 1 = friendly and = unfriendly	1.8	3.0	2.43	.25	.93
Being in <<community>> is like living with a group of close friends where 1 = strongly agree and 5 = strongly disagree.	2.0	3.1	2.47	.24	.90
Our neighborhood is close knit where 1 = strongly agree and 5 = strongly disagree	2.3	3.1	2.69	.18	.87
Subjective between group social capital - 1994					Cronbach's alpha =.82 % Variance explained = 66.4
Rate <<community>> on a scale from 1 -7 where: 1 = trusting and 7 = not trusting	2.0	3.5	2.84	.30	.88

Table 4: (Continued)

Clubs and organizations are interested in what is best for all residents where 1 = strongly agree and 5 = strongly disagree.	1.9	2.6	2.27	.17	.85
Residents in <<community>> are receptive to new residents taking leadership positions where 1 = strongly agree and 5 = strongly disagree.	2.3	3.1	2.72	.17	.74
I think every person for themselves is a good description of how people in <<community>> act where 1 = strongly agree and 5 = strongly disagree (reverse coded).	2.1	2.9	2.44	.18	.77
Quality of life measures in 2004					Cronbach's alpha =.84 % Variance explained = 79
Overall, <<Community>> has more things going for it than other communities of similar size where 1 = strongly agree and 5 = strongly disagree	2.01	3.83	2.93	.34	.76
Please rate the overall quality of local services/facilities available in <<Community>> where 1 = very good and 4 = poor.	2.04	3.5	2.7	.31	.83
Please rate the overall quality of government services available in <<Community>> where 1 = very good and 4 = poor.	1.72	2.86	2.19	.21	.79
Percent change in quality of life from 1994 – 2004.	-1.03	-.87	-.99	.02	

Table 5: Descriptive findings for economic shocks (N =99)

Economic shocks	Minimum	Maximum	Mean	Std. Deviation
Total number of shocks per community	0	5	1.72	1.39
The number of positive and internally generated economic shocks	0	4	1.58	.97
The number of negative and externally generated economic shocks	0	2	1.13	.43
The sum of significances of positive and internally generated economic shocks	0	13.8	4.29	3.07
The sum of significances of negative and externally generated economic shocks	0	6.5	3.18	1.44

The correlation matrix displayed in Table 6 shows the direction and strength of the relationships between the variables in this analysis. I indicate correlations which were significant at the .1 level of significance given the relatively small N. Structural within group social capital is significantly correlated with the dependent variables quality of life in 2004 and percent change in quality of life. Structural and subjective measures of between group social capital are both significantly correlated with quality of life in 2004 and the percent change in quality of life from 1994 - 2004. Positive and internally generated economic shocks are negatively correlated with quality of life in 2004 and percent change in quality of life. Population is positively correlated with the dependent variables quality of life in 2004 and the percent change in quality of life from 1994 - 2004. There is a significant negative correlation between population and subjective within group social capital, subjective between group social capital, and positive and internally generated economic shocks. Miles to a metropolitan area is significantly related with structural between group social capital. The initial correlations lend support

to my hypothesis the economic shocks and social capital are significantly related to quality of life in 2004 and percent change in quality of life from 1994 - 2004. However, the direction of the relationship between positive and internal economic shocks and the dependent variables is negative, contrary to my hypothesis. This is contrary to the assumption that positive economic growth intrinsically leads to an increase in quality of life. Additionally, the correlation matrix provides a good initial assessment of potential multicollinearity issues. Prima face there does not appear to be multicollinearity issues in the correlation matrix, though to be certain I ran multicollinearity diagnostics in SPSS. Multicollinearity is evident when VIF statistics are above 10 and/or tolerance statistics are below .1 (DeMaris, 2004; Myers 1986). Based on these values, multicollinearity is not problematic in this analysis. Please see the correlation matrix below (Table 6).

Table 6: Correlation matrix for quality of life, social capital, economic shocks, and control variables.

(N = 99)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Population (log) 1990	1									
2. Miles to a metro area	.026	1								
3. Subjective within group social capital in 1994	-.526**	.111	1							
4. Structural within group social capital in 1994	.033	.401	.427**	1						
5. Subjective between group social capital in 1994	-.326**	.029	.758**	.227*	1					
6. Structural between group social capital in 1994	.403**	.430**	.165	.657**	.213*	1				
7. Sum of significances for positive and internal economic shocks	-212*	-.035	.076	.136	-.017	-.013	1			
8. Sum of significances for negative and external economic shocks	.140	-.040	-.118	.011	-.143	.050	-.011	1		
9. Quality of life in 2004	.500**	.100	.056	.179^	.349**	.463**	-.239*	-.026	1	
10. Percent change in quality of life from 1994 – 2004	.455**	.114	.126	.221*	.382**	.478**	-.244*	-.058	.913**	1

** = significant at the .01 level
* = significant at the .05 level
^ = significant at the .1 level

Social capital in 1994 and percent change in quality of life from 1994-2004

I employ a hierarchical regression model (ordinary least squares regression) to gain a better understanding of the relationships between the multiple independent variables and quality of life in 2004 and the percent change in quality of life from 1994 - 2004 (with population and miles to metropolitan areas controlled for). As shown in Table 7, each form of social capital is significantly related to percent change in quality of life between 1994 and 2004 in models one through four. In Model 5, subjective and structural between group social capital and population is significantly related to percent change in quality of life. Structural between group social capital is related to percent change in quality of life. Structural and subjective within group social capital are no longer significantly related to the percent change in quality of life when placed into a combined model (Model 5). In Model 5, the adjusted R^2 is .41. This means that 41% of the variance in the percent change in quality of life is explained by variables in this model.

Table 7: Social capital and the percent change in quality of life from 1994 – 2004.

| Dependent variable: Percent change in quality of life from 1994 - 2004 | | | | | N=99 |
| Standardized Coefficients (t-values) | | | | Ordinary Least Squares Regression | |
Model (M)	M1	M2	M3	M4	M5
Population (log) 1990	.55(5.45)**	.39(4.21)**	.51(6.14)**	.28(2.55)**	.35(3.46)**
Miles to metro	.12(1.33)	.05(.52)	.14(1.77)	.05(-.53)	.03(.28)
Subjective within group in 1994	.37(3.66)**				.17(1.16)
Structural within group in 1994		.23(2.33)*			.00(.03)
Subjective between group in 1994			.51(6.18)**		.54(4.21)**
Structural between group in 1994				.43(4.22)**	.28(2.12)*
Adjusted R^2	.24	.17	.38	.27	.41
F-score	11.03**	7.87*	20.79**	12.76**	12.5**

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

As subjective between group social capital, structural between group social capital, and population increases so does the percent change in quality of life. This finding is consistent with my hypothesis that social capital will be positively related to quality of life in small Iowa communities. Additionally, these variables explain a considerable percent of the variance in percent change in quality of life (41%). The trend has been that small towns have experienced a decline in quality of life between 1994 and 2004. However, Table 7 indicates that quality of life in small Iowa towns has declined less in certain communities. Larger towns and towns with more structural and subjective between group social capital had smaller declines in their quality of life between 1994 – 2004 compared to communities that lacked those types of social capital. It is noteworthy to mention that I also ran models which

included a lag variable for 1994 quality of life. In those models the 1994 quality of life offered the greatest explanation of percent change in quality of life and quality of life in 2004. Social capital variables and economic shock variables were no longer significant. This relationship was expected. Towns that had high levels of quality of life in 1994 experienced less of a decline in quality of life from 1994 – 2004 and higher quality of life in 2004 compared with towns that had lower quality of life in 1994.

Social capital in 1994 and quality of life in 2004

A community may have experienced a decline in quality of life over the 10 year period, but still has a higher quality of life compared with other communities. Additionally, a community may have had high quality of life in 1994 but had little or no change over the ten year period. Therefore I examined the impact of the independent variables on the level quality of life in 2004. Table 8 demonstrates that subjective between group social capital, subjective within group social capital and structural between group social capital are positively related to levels of quality of life in 2004 (see Table 8). Population is also positively related to the quality of life in 2004. Structural within group social capital changed from being significant in Model 2 to not significant in the combined model (Model 5). Thus, subjective and structural between group social capital, subjective within group social capital, and population offer a greater ability to predict town quality of life in 2004 than does structural within group social capital. The adjusted R^2 for Model 5 is .46 meaning that 46% of the variance in 2004 quality of life is explained by variables in this model.

Table 8: Social capital and quality of life in 2004.

Dependent variable: Quality of life in 2004					N=99
Standardized Coefficients (t-values)			Ordinary Least Squares Regression		
Model (M)	M1	M2	M3	M4	M5
Population (log) 1990	.61(6.22)**	.47(5.21)**	.59(7.38)**	.33(3.66)**	.43(4.41)**
Miles to metro	.11(1.32)	.06(.62)	.13(1.75)	-.04(-4)	.04(.48)
Subjective within group in 1994	.33(3.34)**				.24(1.7)^
Structural within group in 1994		.20(2.0)*			.01(.12)
Subjective between group in 1994			.50(6.3)**		.60(4.77)**
Structural between group in 1994				.39(3.84)**	.23(1.82)^
Adjusted R^2	.28	.25	.43	.3	.46
F-score	13.46**	10.44**	25.61**	15.01**	14.96**

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

Larger communities, communities with higher within and between group norms of reciprocity and trust, and communities whose residents belonged to more local organizations had higher quality of life in 2004 compared to communities that lacked those characteristics. This finding is consistent with my hypothesis that social capital will be positively related to quality of life in small Iowa communities. Additionally, these variables explain a considerable percent of the variance for quality of life in 2004 (46%).

Economic shocks and percent change in quality of life from 1994-2004

Table 9 shows that positive and internally generated economic shocks are significantly related to the percent change in quality of life. Population is also significantly related to the percent change in quality of life from 1994 - 2004. The percent variance explained (adjusted R^2) in Model 3 is significantly lower than the combined models examining the relationship between social capital and quality of life in 2004 and the percent change in quality of life from 1994 – 2004 (Models 5 in Tables 7 and 8).

Table 9: Economic shocks and the percent change in quality of life from 1994 – 2004.

Dependent variable: Percent change in quality of life from 1994 - 2004			N=99
Standardized Coefficients (t-values)		Ordinary Least Squares Regression	
Model (M)	M1	M2	M3
Population (log) 1990	.34(3.65)**	.39(4.08)**	.36(3.74)**
Miles to metro	.14(1.47)	.14(1.51)	.13(1.44)
Sum of positive and internal economic shocks	-.18(-1.92)^		-.18(-1.91)^
Sum of negative and external economic shocks		-.1(1.02)	-.1(-1.01)
Adjusted R^2	.16	.14	.16
F-score	7.19**	6.15**	5.65**

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

As population increases so does the percent change in quality of life within small Iowa communities. Surprisingly it also suggests that smaller communities experiencing the most sum of positive and internally generated economic shocks had greater declines in

quality of life compared with other communities. The latter finding is not consistent with my hypothesis since it suggests that positive economic shocks which were generated within the communities are related with a greater decline in quality of life between 1994 – 2004. There will be more said about this anomalous finding in the conclusion section.

Economic shocks and quality of life in 2004

Table 10 contains the relationships between economic shocks and quality of life in 2004. Positive and internal economic shocks are negatively related to quality of life in 2004. Population is also positively related to 2004 quality of life. The adjusted R^2 in Model 3 is .22 meaning that 22% of the variance in the level of 2004 quality of life is explained by variables in this model.

Table 10: Economic shocks and quality of life in 2004.

Dependent variable: Quality of life in 2004 Standardized Coefficients (t-values)		N=99 Ordinary Least Squares Regression	
Model (M)	M1	M2	M3
Population (log) 1990	.43(4.7)**	.46(5.07)**	.44(4.74)**
Miles to metro	.13(1.45)	.14(1.5)	.13(1.42)
Sum of positive and internal economic shocks	-.16(-1.78)^		-.16(-1.77)^
Sum of negative and external economic shocks		-.07(.8)	-.07(.8)
Adjusted R^2	.22	.20	.22
F-score	10.08**	9.0**	7.7**

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

As the sum of positive and internally generated economic shocks increase, the percent change in quality of life in small Iowa communities decreases. Larger communities had higher levels of quality of life in 2004. Therefore, smaller communities and communities which experienced more significant positive and internally generated economic shocks had lower perceptions of quality of life in 2004. This finding does not support my hypothesis that positive and internal economic shocks would be positively related to quality of life in small Iowa communities. This finding suggests that positive economic shocks which were generated within the communities are related with a greater decline in quality of life between 1994 – 2004.

Combined model: Social capital in 1994, economic shocks, and percent change in quality of life between 1994-2004

Table 11 displays the relationships between social capital variables, economic shock variables, and control variables with the percent change in quality of life between 1994 and 2004. By combining these variables into one model, we gain a more comprehensive understanding of the relationship between social capital, economic shocks, and percent change in quality of life. In Table 11, between group social capital and population are positively related to the percent change in quality of life. The structural between group social capital, structural and subjective within group social capital, and economic shocks are not significantly related in this combined model. The adjusted R^2 is .50 meaning that 50% of the variance in percent change in quality of life is explained by variables within this model.

Table 11: Social capital, economic shocks, and the percent change in quality of life from 1994 – 2004.

Dependent variable: Percent change in quality of life from 1994 - 2004 Ordinary Least Squares Regression Standardized Coefficients (t-values)	N=99
Model (M)	M1
Population (log) 1990	.53(4.85)**
Miles to metro	.02(.18)
Subjective within group in 1994	.02(.12)
Structural within group in 1994	.00(-.02)
Subjective between group in 1994	.52(4.37)**
Structural between group in 1994	.15(1.19)
Sum of positive and internal economic shocks	-.12(-1.6)
Sum of negative and external economic shocks	-.07(-.94)
Adjusted R²	.50
F-score	13.21**

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

As subjective between group social capital and population increases so does the percent change in quality of life in small Iowa communities. This finding is consistent with my hypothesis. Residents of larger communities and communities with more subjective between group social capital experienced smaller declines in their quality of life

between1994 and 2004 compared to other communities. Additionally, these variables

explain a substantial percent of the variance in percent change in quality of life (50%). I

chose to examine two specific types of economic shock variables given their differing

hypothesized impact on quality of life. In doing so, I omitted other types of economic

shocks. I ran a series of models which looked at the other types of economic shocks,

specifically negative and internal and positive and external. Controlling for those types of

shocks did not change the relationships between the independent and dependent variables in

tables 11 and 12.

Combined model: Social capital in 1994, economic shocks, and quality of life in 2004

        Table 12 displays the relationships between social capital variables, economic shock

variables, and control variables with quality of life in 2004. Subjective between group social

capital in 1994 and 1990 population are both significantly related to quality of life in 2004.

Similar to the previous model structural between group social capital, structural and

subjective within group social capital, and economic shocks are not significant in the

combined model.   The adjusted R^2 in this model is .53 meaning that 53% of the variance of

quality of life in 2004 is explained by variables within this model.

Table 12: Social capital, economic shocks, and quality of life in 2004.

Dependent variable: Quality of life in 2004	
Ordinary Least Squares Regression	
Standardized Coefficients (t-values)	N=99
Model (M)	M1
Population (log) 1990	.58(5.41)**
Miles to metro	.03(.32)
Subjective within group in 1994	.1(.69)
Structural within group in 1994	.01(.05)
Subjective between group in 1994	.59(4.95)**
Structural between group in 1994	.12(.96)
Sum of positive and internal economic shocks	.1(-1.33)
Sum of negative and external economic shocks	-.04(-.6)
Adjusted R^2	.53
F-score	14.54**

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

As subjective between group social capital and population increases so does the

percent change in quality of life in small Iowa communities. Residents of larger

communities and communities with more between group social capital had higher

perceptions of quality of life in 2004 compared to other communities. This finding is

consistent with my hypothesis. The adjusted R^2 is large meaning that variables in this model explain a substantial percent of the variance in percent change in quality of life in small Iowa communities. The subjective between group social capital standardized co-efficient and t-value is slightly larger than the population co-efficient and t-value in this model suggesting that population may explain more of the quality of life in 2004 within small Iowa communities. This is contrary to the previous model where the opposite was true.

Social capital, economic shocks, and percent change in quality of life from 1994 – 2004

For my final analysis, I employed structural equation modeling software (AMOS) to conduct a path analysis. The path analysis examines the relationships between population, economic shocks, and subjective measures of between group social capital, with 2004 quality of life and percent change in quality of life from 1994 – 2004 in small Iowa communities. A path analysis is useful to determine mediating effects between variable in my analysis. Path analysis adds conceptual clarity to the causal logic I use in my analysis. Although there I rely on causal logic, the path analysis does not indicate causation.

I included subjective between group social capital because it provided the greatest explanatory power for quality of life in 2004 and percent change in quality of life from the social capital variables in the ordinary least squares regression models. It is also theoretically interesting to look at between group social capital because the literature suggests that it is the form of social capital which will have the most positive impact on the community (Putnam, 2000; Narayan, 1999). I use population because it offered the greatest explanation of 2004 quality of life and percent change in quality of life in small Iowa communities within the

control variables. Both types of economic shocks were included in this path analysis because of their different hypothesized relationships with social capital and quality of life.

Figure 4 illustrates that between group subjective social capital is positively related to percent change in quality of life from 1994 – 2004 in small Iowa communities. Additionally, between group subjective social capital is negatively related with positive and internal economic shocks. Negative and external economic shocks are related to percent change in quality of life. Population is negatively related with positive and internal economic shocks as well as subjective between group social capital. Population is positively related with negative and external economic shocks and percent change in quality of life. Please see Figure 4 below.

Figure 4: Subjective between group social capital, economic shocks, and percent change in quality of life from 1994 – 2004.
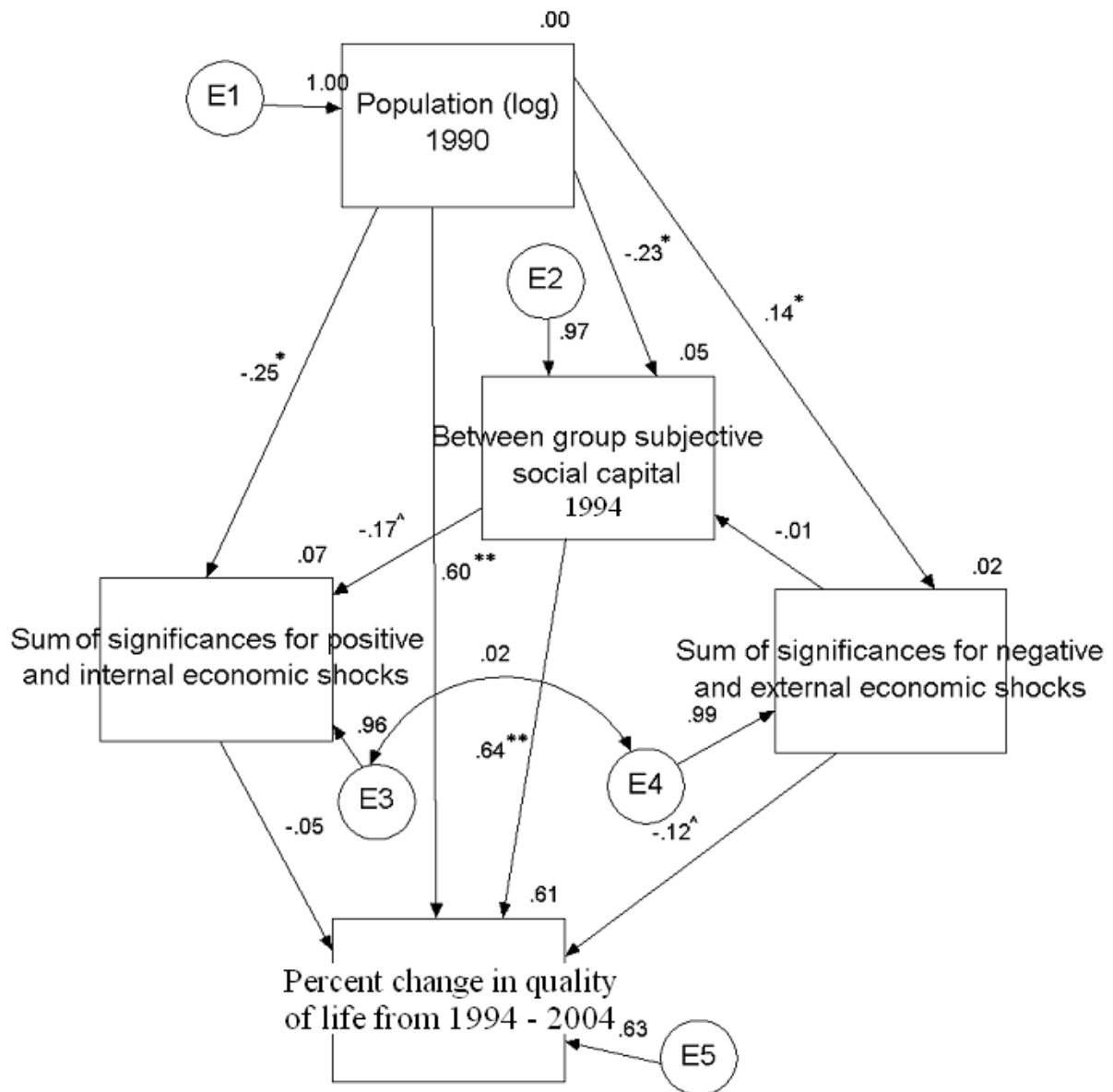
** = significant at the .01 level
 * = significant at the .05 level
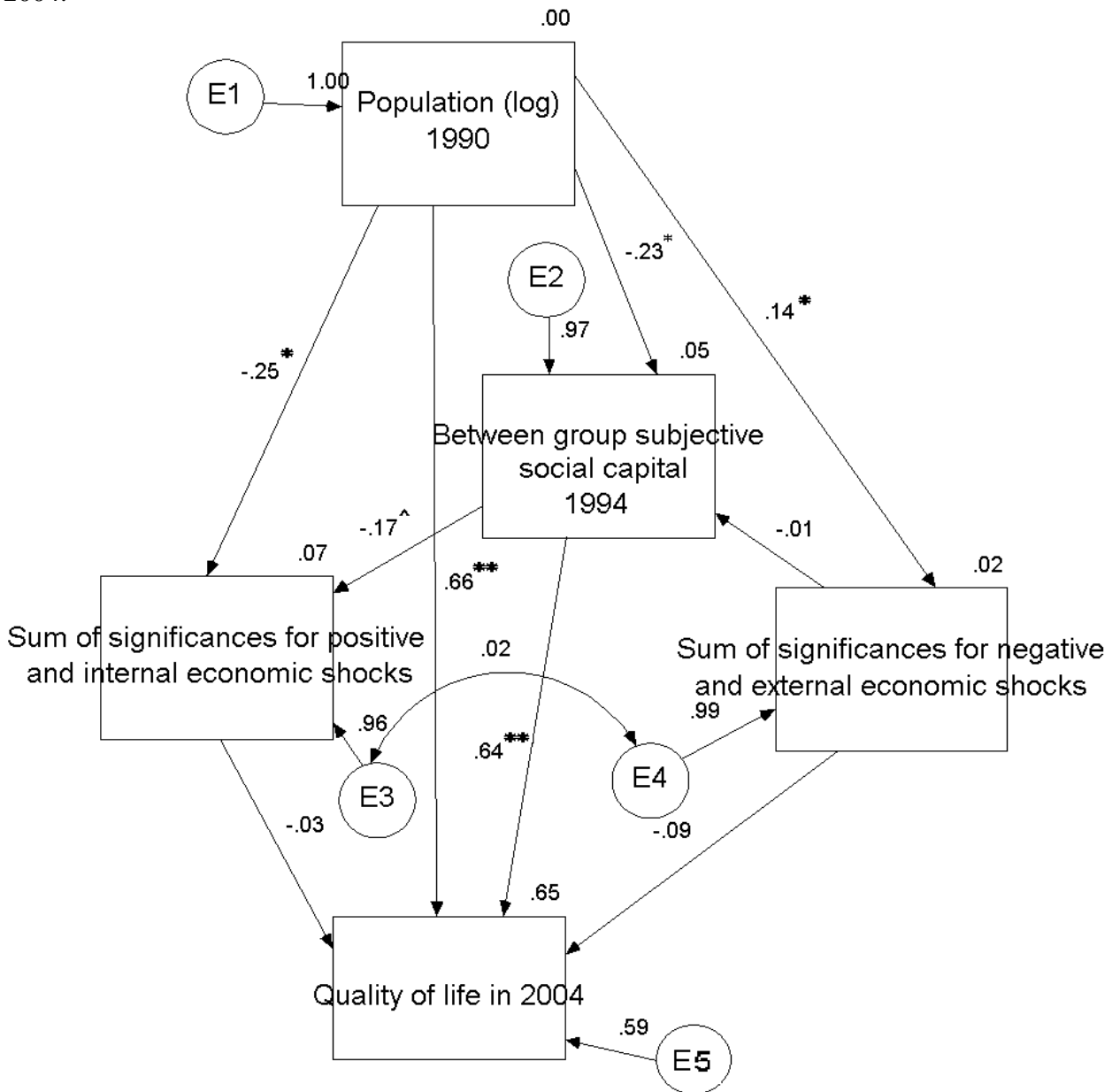 ^ = significant at the .1 level

The path analysis displayed in Figure 4 reveals mixed support for my hypotheses. As

I hypothesized, an increase in between group subjective social capital is related to an

increased percent change of quality of life. Additionally, negative and external economic shocks are related to a decrease in percent change in quality of life. However, between group social capital was negatively related with positive and internal economic shocks. The opposite was hypothesized. Also, larger communities were less likely to have higher sum of positive and internally generated economic shocks or greater amounts of between group subjective social capital. Larger communities had greater sums of negative and external economic shocks. Towns with greater amounts of subjective between group social capital had smaller declines in perceptions of quality of life from 1994 – 2004. In this path analysis I am reporting only the standardized regression estimates. Often scholars using path analysis report the Root Mean Square Error of Approximation (RMSEA). This statistic indicates the goodness of fit for the model. In this case, both path analyses are saturated, meaning that each variable in the analyses is connected by a path to each other. Thus, RMSEA and other goodness of fit statistics are not applicable.

Social capital, economic shocks, and 2004 quality of life

In Figure 5 subjective between group social capital is shown to be positively related to quality of life in 2004. Neither sum of positive and internal economic shocks nor negative and external economic shocks are significantly related to quality of life in 2004 in this model. Population is positively related to quality of life in 2004. Furthermore, population is negatively related with between group subjective social capital and positive and internally generated economic shocks. Population is positively related with sum of negative and external economic shocks.

Figure 5: Subjective between group social capital, economic shocks, and quality of life in 2004.

** = significant at the .01 level
 * = significant at the .05 level
 ^ = significant at the .1 level

Figure 5 displays mixed results for my hypothesis as well. As hypothesized, an

increase in between group subjective social capital is related to an increase in quality of life

in 2004. Negative and external economic shocks and positive and internal economic shocks have no relationship with quality of life in 2004 within this model. Again, between group social capital was negatively related with the sum of positive and internal economic shocks contradicting my hypothesis. Similar to Figure 4, large towns had lower sums of positive and internally generated economic shocks, less between group subjective social capital and greater sums of negative and external economic shocks. Larger communities and those with greater amounts of subjective between group social capital did have higher levels of quality of life in 2004.

Miles to a metropolitan area was not controlled for in the path analysis because it was not significantly related in the multiple regression models. In addition, preliminary path analyses were run which included miles to a metropolitan area. In the preliminary path analyses miles to a metropolitan area as not significantly related to other variables, thus it was excluded.

DISCUSSION, POLICY IMPLICATIONS, AND CONCLUSIONS

In this chapter, I revisit my research questions and discuss the implications of each question in turn. Following the discussion of my findings, I will discuss the policy implications and limitations of this research before offering some concluding remarks.

Research questions:

To what extent are negative and externally generated economic shocks related to community resilience in small Iowa communities?

To what extent are internally generated and positive economic shocks related to community resilience in small Iowa communities?

I argued that the economic shocks will have differing effects on communities. The sum of internal and positive economic shocks will be related with increased quality of life in small Iowa towns and the sums of negative and external economic shocks will be related with decreased quality of life in small Iowa towns. I argued that social capital will be related impact the effect of the economic shocks on community quality of life. Although Drabeck (1986) points out that shocks such as natural disasters generally bring a community together, there are notable exceptions which are explained by underlying social rifts in the community (Miller and Rivera, 2007; Dach-Gruschow and Hong, 2006). Thus, I hypothesized that social capital (particularly between group) will offer the most explanation for community resilience. In this analysis community resilience was operationalized as quality of life after a shock(s) in 2004 and percent change in quality of life from 1994 – 2004.

In the combined ordinary least squares regression models (Tables 11 and 12), the sum of negative and external economic shocks were not significantly related with overall quality of life in 2004 and the percent change in quality of life between 1994 and 2004 in small Iowa

communities. However, the path analysis revealed that the sum of negative and external

economic shocks were negatively related with the percent change in quality of life (Figure 4).

This supports my hypothesis that the sum of negative and external economic shocks is

negatively related with the percent change in quality of life for small Iowa communities.

Residents in communities which experienced negative and external economic shocks saw

greater declines in perceptions of quality of life compared with other communities. The sum

of positive and internal economic shocks was negatively related to quality of life in 2004 and

the percent change in quality of life in Tables 9 and 10 also. This suggests that even if an

economic shock is perceived to be economically positive and created within the community

it does not translate into higher perceptions of quality of life for community residents.

However, the positive and internally generated economic shocks are not related to the

dependent variables when the social capital variables are controlled for (Tables 11 and 12).

Thus, it is the 1994 level of social capital which is providing a greater explanation of quality

of life in 2004 and the percent change in quality of life from 1994 – 2004 than whether or not

the community was shocked.

To what extent is social capital related to community resilience in small Iowa communities?

What is evident from this analysis is the strong relationship between social capital and

quality of life in 2004 and changes in quality of life between 1994 and 2004. In the

combined ordinary least squares regression models (Tables 11 and 12), subjective between

group social capital is related with quality of life in 2004 and percent change in quality of life

from 1994 and 2004. It was hypothesized that both within and between group social capital

would be positively related to quality of life in 2004 and percent change in quality of life from 1994 – 2004. Subjective within group social capital and structural between group social capital are positively related with quality of life in 2004 (Table 7) and subjective and structural between group social capital are significantly related with percent change in quality of life (Table 8). However, in the combined ordinary least squares regression models (Tables 11 and 12) subjective between group social capital was the only social capital variable related with quality of life in 2004 and percent change in quality of life from 1994 – 2004. Thus, residents in larger communities and communities with more between group trust and norms of reciprocity had higher perceptions of quality of life in 2004 and less of a decline in the percent of quality of life between 1994 and 2004 compared with other communities.

For the sake of parsimony I carried subjective between group social capital over to the path analyses from the ordinary least squares regression models. Subjective between group social capital was selected because it offered the greatest explanation of quality of life in 2004 and changes in quality of life from 1994 – 2004 of all the social capital variables. The path analyses confirmed the relationship with subjective between group social capital and quality of life in 2004 and percent change in quality of life. Each path analysis found a positive relationship among between group social capital and quality of life in 2004 and percent change in quality of life from 1994 – 2004 (Figures 4 and 5). The hypothesis that social capital would offer a greater explanation in terms of community resilience compared to economic shocks was also affirmed in this analysis. These findings demonstrate that community social capital is important, even more so than positive and internal and negative and external economic shocks when explaining quality of life in 2004 and the percent change

in quality of life from 1994 - 2004. This is evident in the combined model ordinary least squares regressions (Tables 11 and 12) and the path analyses (Figures 4 and 5).

These findings advance social capital theory in several ways. This analysis found evidence that between group social capital offered more of an explanation of quality of life in 2004 and percent change in quality of life from 1994 - 2004 compared to within social capital. Moreover, this analysis found that it was the subjective measures (norms of reciprocity and trust) that explained more variation in quality of life in 2004 and percent change in quality of life from 1994 – 2004 than structural measures (networks). Additionally, this analysis affirms previous findings which connected social capital with community resilience (Murphy, 2007; Tomkins, 2005; Colletta and Cullen, 2002).

To what extent does social capital mediate the relationship between negative and externally generated economic shocks and community resilience in small Iowa communities?

It was hypothesized that negative and external economic shocks would have a negative effect on quality of life in 2004 and the percent change in quality of life between 1994 and 2004 in small Iowa communities. Figure 4 indicates that there is a negative relationship between negative and external economic shocks and percent change in quality of life. However, there is no relationship between negative and external economic shocks and subjective between group social capital. Increases in the sum of negative and external economic shocks correspond with larger decreases in the percent change in quality of life between 1994 – 2004. However, communities with subjective between group social capital had smaller declines in the percent change in quality of life between 1994 – 2004. This

finding leads me to believe there is some mediation taking place. However, there is no relationship between the sum of negative and external economic shocks and between group subjective social capital. Thus, despite the negative affects of events such as firm closures (Broadway and Stull, 2006; Uchitelle, 2006; Knapp and Harms, 2002; Illes,1996; Dudley, 1994; Perucci, 1988; Bluestone and Harrison, 1982), social capital is shown to offer a greater explanation of quality of life in 2004 and percent change in quality of life from 1994 – 2004.

To what extent do positive and internal economic shocks mediate the relationship between social capital and community resilience?

It was hypothesized that positive and internal economic shocks would be positively related with community resilience. However, there is no relationship between positive and internal economic shocks and quality of life in 2004 or the percent change in quality of life (demonstrated in Figures 4 and 5). Additionally, social capital was thought to create positive and internal economic shocks. However, subjective between group social capital was negatively related with positive and internal economic shocks. Communities with more subjective between group social capital had fewer positive and internal economic shocks. This analysis revealed no evidence to support the notion that positive and internal economic shocks mediates the relationship between subjective between group social capital and quality of life in 2004 or percent change in quality of life from 1994 - 2004. Thus, this analysis failed to confirm pervious theoretical and empirical connections between economic growth ant social capital (Putnam, 2000; Fedderke et al, 1999; Putnam, 1993). The lack of a relationship between social capital and positive and internally generated economic shocks is consistent with the findings put forth by Casey and Christ (2005) who found no relationship

with social capital and economic growth. Casey and Christ (2005) did however find a relationship between social capital and economic equality, something beyond the scope of this analysis.

   Social capital was found to offer more of an explanation of quality of life in 2004 and percent change in quality of life from 1994 – 2004 than internally generated and positive economic shocks. This is interesting because many communities attempt to improve their quality of life by promoting internal growth such as creating or developing amenities (Eudes-Beuret and Kovacshazy, 2005; Marcouiller and Clendenning, 2005; Krannich and Petrzelka, 2003), however, this analysis suggests social capital provides a greater explanation for quality of life in 2004 and percent change in quality of life from 1994 - 2004.

Policy implications

        Several elements of this research have public policy implications. This analysis demonstrates the importance of social capital in a community. Though some policy makers may favor economic growth as a way to increase quality of life, this analysis demonstrates that the sum of internally generated and positive economic shocks had no relationship with quality of life in 2004 and the percent change in quality of life from 1994 - 2004. The path analysis demonstrates that external and negative economic shocks do have a negative impact on the percent change in quality of life, though between group social capital and population offers a greater explanation on the percent change in quality of life from 1994 – 2004.

        This research found a positive relationship between social capital and quality of life in 2004 and the percent change in quality of life from 1994 - 2004. Policy makers would be wise to notice that if the end goal of development is higher community quality of life,

pursuing economic growth (even positive and internally generated growth) may do less for the community than building and strengthening social capital. Specifically, this analysis found between group norms of reciprocity and trust offered the greatest explanation of quality of life in 2004 and percent change in quality of life. Based off this research, policy makers should adapt policies which include all factions of a community. In terms of quality of life, this finding is consistent with Putnam's (2000) observation that bridging social capital is better for getting ahead, rather than bonding social capital which is better for just getting by.

Scholars have demonstrated effective techniques pragmatically implementing inclusivity by building between group social capital within the community. Scholars such as Aigner, Raymond, and Smidt (2002) and Kretzmann and McKnight (1993) employ an asset based "whole community organizing" approach. Both of these studies offer lessons in the practical ways social capital can lead to sustainable development. The whole community organizing approach stresses grass roots participation from all elements of the community. It stresses real participation in community decision making (Aigner et al, 2002). Burby (2003) pointed out that the top down experts may not understand the local context as well as the local population. Aigner et (2002) argued that the inclusion of all residents builds the local capacity of the community. Recall that community capacity is a key source of resilience according to Beckley et al (2008).

Another interesting finding is the relationship between population and social capital. As population gets larger, there is a decrease in between group social capital. It may be logical to assume that as population grows, diversity will increase. If this is true, it lends support to the findings put forth by Coffe (2009) and Coffe and Geys (2006) that

heterogeneity is negatively related to the formulation of bridging social capital. Further support for this finding is supported by Putnam (2007) who observed that ethnically diverse neighborhoods tend to have lower levels of trust, friendships, and community cooperation (Putnam, 2007). However, Putnam (2007) argued that successful societies have overcome divisions and developed inclusivity. Consistent with that argument, the small Iowa communities with higher levels of subjective between group social capital enjoyed higher levels of quality of life and greater percent changes in quality of life from 1994 - 2004.

Limitations

There are limitations of this research. First, this analysis focuses on small Iowa communities, therefore the findings should only be generalized to communities with similar features as the ones in this analysis. Although this is a limitation, much of the social capital research is highly contextual. By focusing on small Iowa communities, I believe this analysis helps refine the concept of social capital and apply it to rural communities which are often under researched (Swanson, 2001). Thus, while I recognize the limitation, I believe there is a greater contribution being made here.

Second, this research analyzes economic shocks which occurred between 1990 and 2004. Brown et al (2005) concluded that time often heals the wounds created by an economic disruption. The time lag may downplay the relationships between economic shocks, social capital, and quality of life. While, this is a limitation I believe it is acceptable considering the broad scope of the study (examining the economic shocks occurring in 99 Iowa communities). I suggest future research which examines certain shocks qualitatively to ascertain the timeframe of social recovery in economically shocked Iowa communities.

Though outside the scope of this particular analysis, I believe a qualitative component would provide a more comprehensive understanding of the relationships between economic shocks, social capital, and quality of life in small Iowa communities.

Third, I use subjective indicators for quality of life. While subjective indicators are commonly used to assess community quality of life (Sirgy and Cornwell 2001; Sirgy et al. 2000; Argyle 1996; Andrews and Withey 1976), future research may wish to examine objective measures. It would be interesting to see how residents' attitudes towards quality of life relates to objective measures. However, for purposes of this study I believe residents have a better vantage point to assess the quality of life in their community than outside observers. Finally, this analysis does not examine the interaction effects between the independent variables. Future research could examine how the combination of certain independent variables is related to the dependent variables.

Conclusions

This research provides insight to the relationships between economic shocks, social capital, quality of life in 2004, and the percent change of quality of life from 1994 – 2004 in small Iowa communities. The conclusions provide partial support for theoretical expectations surrounding economic shocks and social capital. However, this analysis also raises several interesting questions which can be addressed by future research.

The rising tide of the rural rebound did not lift all boats and some communities were left out. However, communities in the Midwest and Great Plain states did not all devolve into hinterland. On the contrary, many small communities in the Midwest and Great Plain States with more subjective between group social capital saw smaller declines in their quality

of life compared with other communities. The overarching question put forth at the beginning of this dissertation is what makes communities resilient? The findings of this research suggest that social capital has much to do with the creation of resilient communities. Specifically, between group norms or reciprocity and trust provide a good explanation of what contributes to making a community resilient.

Social capital is a resource which promises great potential. Studies like this help to refine the concept and flesh out the underlying elements of social capital which can have positive community outcomes. It will be through the continued study of social capital – testing various forms across a multitude of contexts – which will help researchers discover more theoretical and practical benefits of the concept. This research suggests an increased understanding of social capital will help academics and practitioners gain a greater understanding of what contributes to community resilience in a time where many small communities are struggling to retain their quality of life.

APPENDIX

Table 13: Factor analysis of Subjective Social Capital

Question	Factor component scores
Most everyone in (Community) is allowed to contribute to local governmental affairs if they want to where 1 = strongly agree and 5 = strongly disagree.	.735
Being a resident of (Community) is like living with a group of close friends where 1 = strongly agree and 5 = strongly disagree.	.819
When something needs to get done in (Community), the whole community usually gets behind it where 1 = strongly agree and 5 = strongly disagree.	.785
If you do not look out for yourself, no one else in (Community) will where 1 = strongly agree and 5 = strongly disagree.	.830
I am trusted by the people in (Community) who know me where 1 = strongly agree and 5 = strongly disagree.	.550
Community clubs and organizations are interested in what is best for all residents where 1 = strongly agree and 5 = strongly disagree.	.674
Residents in (Community) are receptive to new residents taking leadership positions where 1 = strongly agree and 5 = strongly disagree.	.810
If I had an emergency, even people I don't know would help out where 1 = strongly agree and 5 = strongly disagree.	.715
People living in (Community) are willing to accept people from different racial and ethnic groups where 1 = strongly agree and 5 = strongly disagree.	.833
I think that "every person for themselves" is a good description of how people in (Community) act where 1 = strongly agree and 5 = strongly disagree.	.780
Differences of opinion on public issues are avoided at all costs in (Community) where 1 = strongly agree and 5 = strongly disagree.	.776
If I called a city office here with a complaint, I would likely get a quick response where 1 = strongly agree and 5 = strongly disagree.	.757
Overall, (Community) has more things going for it than other communities of similar size where 1 = strongly agree and 5 = strongly disagree.	.704

Table 13: (Continued)

Our neighborhood is close knit where 1 = strongly agree and 5 = strongly disagree	.754
About what proportion of the adults living in (Community) would you say you know by name where 1 = very few and 4 = most of them.?	.753
About what proportion of all your close personal adult friends live in (Community) where 1 = very few and 4 = most of them.?	.874
About what proportion of your adult relatives and in-laws (other than very distantly related persons) live in (Community) where 1 = very few and 4 = most of them.?	.777
Rate (Community) on a scale from 1 -7 where: 1 = friendly and 7 = unfriendly	.831
Rate (Community) on a scale from 1 -7 where: 1 = supportive and 7 = indifferent	.853
Rate (Community) on a scale from 1 -7 where: 1 = prejudges and 7 = tolerant	.894
Rate (Community) on a scale from 1 -7 where: 1 = rejecting of new ideas and 7 = accepting of new ideas	.738
Rate (Community) on a scale from 1 -7 where: 1 = trusting and 7 = not trusting	.722

WORK CITED

Adam, F. and B. Roncevic. 2003. "Social Capital: Recent Debates and Research Trends." *Social Science Information* 42 (2): 155-183.

Adger, W. N. 2000. "Social and Ecological Resilience: Are They Related?" *Progress in Human Geography* 24 (3): 347-364.

Adler, P. and S. Kwon. 2002. "Social Capital: Prospects for a New Concept." *The Academy of Management Review* 27 (1): 17 – 40.

Agnitsch, Kerry. 2003. *Locating Community Social Capital: A Study of Social Networks and Community Action*. (Doctoral Dissertation, Iowa State University).

Agnitsch, K.; J. Flora; and V. Ryan. 2006. "Bonding and Bridging Social Capital: The Interactive Effects on Community Action." *Journal of the Community Development Society* 37 (1): 36-51.

Aigner, S. M.; V. J. Raymond; and L. J. Smidt. 2002. "Whole Community Organizing for the 21st Century" *Journal of the Community Development Society* 33 (1): 86-106.

Albrect, S.; R. Amey; and S. Amir. 1996. "The Siting of Radioactive Waste Facilities: What are the Affects on Communities?" *Rural Sociology* 61 (4): 649 – 673.

Andrew, F. and S. Withey. 1976. *Social Indicators of Well Being: America's Perception of Life Quality*. New York: Plenum Press.

Argyle, M. 1996. "Subjective well-being." Pp. 18-45 in *In Pursuit of the Quality of Life,* Edited by A. Offer. Oxford: Oxford University Press.

Baron, J. N., and M. T. Hannan. 1994. "The Impact of Economics on Contemporary Sociology." *Journal of Economic Literature* 32 (3): 1111–1146.

Baum, F. 2000. "Social Capital, Economic Capital, and Power: Further Issues for a Public Health Agenda." *Journal of Epidemiological Community Health* 54: 409-410.

Berger, M.; G. Bloomquist; W. Waldner. 1987. "A Revealed-Preference Ranking of Quality of Life for Metropolitan Areas." *Social Science Quarterly* 68 (4): 761-778.

Berkes, F. 2007. "Understanding Uncertainty and Reducing Vulnerability: Lessons from Resilience Thinking." *Natural Hazards* 41 (2): 283 – 295.

Beale, C. and K. Johnson. 1998. "The Identification of Recreational Counties in Nonmetropolitan Areas of the USA." *Population Research and Policy Review* 17 (1): 37-53.

Beckley, T.; D. Marz; S. Nadeau; E. Wall; and B. Reimer. 2008. "Multiple Capacities, Multiple Outcomes: Delving Deeper into the Meaning of Community Capacity." *Journal of Rural and Community Development* 3 (3): 56 – 75.

Berkes, F. and C. Folke. 1998. *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge, UK: Cambridge University Press.

Berke, P. and T. Campanella. 2006. "Planning For Post Disaster Resiliency." *The Annals of the American Academy of Political and Social Science* 604 (1): 192-207.

Besser, T. 1998. "The Significance of Community to Business Social Responsibility." *Rural Sociology* 63 (3): 412-431.

Besser, T. 1999. "Community Involvement and Perceptions of Success Small Business Operators in Small Towns." *Journal of Small Business Management* 37 (4): 16-30.

Besser, T.; K. Agnitsch; and J. Friestad. 2005. "Economic Shocks and the Quality of Life in Small Iowa Towns. *Sociology Research Briefs*: Iowa State University. Available at: www.soc.iastate.edu/extension/publications.html

Besser, T.; N. Recker; and K Agnitch. 2008 "The Impact of Economic Shocks on Quality of Life and Social Capital in Small Towns." *Rural Sociology* 73 (4): 580-604.

Bluestone, B. and B. Harrison. 1982. *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry*. New York: Basic Books.

Bourdieu, P. 1986. "The Forms of Capital". Pp. 241-258 in *Handbook of Theory and Research For the Sociology of Education*, edited by J. Richardson. New York: Greenwood Press.

Briggs de Souza, X. 1998. "Brown Kids and White Suburbs: Housing Mobility and the Many Faces of Social Capital." *Housing Policy Debate* 9 (1): 177-221.

Broadway, M.; and D. Stull. 2006. "Meat Processing and Garden City, KS: Boom and Bust." *Journal of Rural Studies* 22 (1): 55-66.

Brown, R.; H. Geertsen; and R. Krannich. 1989. "Community Satisfaction and Social Integration in a Boomtown: A Longitudinal Analysis." *Rural Sociology* 54 (4): 568-586.

Brown, R.; S. Dorius; and R. Krannich. 2005. "The Boom-Bust Recovery Cycle: Dynamics of Change in Community Satisfaction and Social Integration in Delta, Utah." *Rural Sociology* 70 (1): 28-49.

Burby, R. 2003. "Making Plans That Matter: Citizen Involvement and Government Action." *Journal of the American Planning Association* 69 (1): 33-50.

Burt, R. 1992. *Structural Holes: The Social Structure of Competition.* Cambridge, MA: Harvard University Press.

Burt, R. 1997. "The Contingent Value of Social Capital". *Administrative Science Quarterly* 42 (2): 339-365.

Burt, R. 2004. "Structural Holes and Good Ideas." *American Journal of Sociology* 110 (2): 349 – 399.

Buss, T. and S. Redburn. 1983. *Shutdown at Youngstown.* Albany, NY: State University of New York Press.

Carter, M. and J. Maluccio. 2003. "Social Capital and Coping with Economic Shocks: An Analysis of Stunting of South African Children." *World Development* 31 (7): 1147-1163.

Casey T. and K. Christ. 2005. "Social Capital and Economic Performance in the American States." *Social Science Quarterly* 86 (4): 826-845.

Chevan, A. and R. Stokes. 2000. "Growth in Family Income Inequality 1970 – 1990: Industrial Restucturing and Demographic Change." *Demography* 37 (3): 365-380.

Coffe, H. 2009. "Social Capital and Community Heterogeneity" *Social Indicators Research* 91 (2): 155-170.

Coffe, H. and B. Geys. 2006. "Community Heterogeneity: A Burden for the Creation of Social Capital?" *Social Science Quarterly* 87 (5): 1053-1072.

Coleman, J. 1988. "Social Capital and the Creation of Human Capital." *The American Journal of Sociology* 94 (Supplement): S95-S120.

Coleman, J. 1990. *Foundations of Social Theory.* Cambridge, MA: Belknap Press.

Coleman, J. 1993. ''The Design of Organizations and the Right to Act.'' *Sociological Forum* 8 (3): 527–546.

Coleman, J. 1994. "A Rational Choice Perspective on Economic Sociology." Pp. 166-180 in *Handbook of Economic Sociology*, edited by N. Smelser and R. Swedberg. Princeton, NJ: Princeton University Press.

Colletta, N. and M. Cullen. 2002. "Resilient Communities: Building the Social Foundations of Human Security." Pp. 215 – 227 in *Social Capital and Economic Development,* edited by J. Isham, T. Kelly, and S. Ramaswamy. Cheltenham, UK: Edward Elgar Publishing.

Collins, J. and A. Quark. 2006. "Globalizing Firms and Small Communities: The Apparel Industries Changing Connection to Rural Labor Markets." *Rural Sociology*. 71 (2): 281-310.

Comfort, L. 2005. "Risk, Security, and Disaster Management." *Annual Review of Political Science* 8 (1): 335-356.

Comfort, L. 2006. "Cities at Risk: Hurricane Katrina and the Drowning of New Orleans." *Urban Affairs Review* 41 (4): 501-516.

Couch, S. and S. Kroll-Smith. 1994. "Environmental Controversies, Interfactional Resources, and Rural Communities: Siting Versus Exposure Disputes." *Rural Sociology* 59 (1): 25-44.

Dach-Gruschow, K. and Y. Hong. 2006. "The Racial Divide in Response to the Aftermath of Katrina: A Boundary Condition for Common In-group Identity model." *Analysis of Social Issues and Public Policy* 6 (1): 125-141.

Deller, S.; T. Tsung-Hsiu, D. Marcoullier, and D. English. 2001. "The Role of Amenities and Quality of Life in Rural Economic Growth." *American Journal of Agricultural Economics* 83 (2): 352-365.

DeMaris, A. 2004. *Regression with Social Data: Modeling Continuous and Limited Response Variables*. Hoboken, NJ: Wiley-Interscience.

Dillman, D. 1978. *Mail and Telephone Surveys: The Total Design Method*. New York: Wiley Interscience.

Donoghue, E. and V. Sturtevant 2007. "Social Science Constructs in Ecosystem Assessments: Revisiting Community Capacity and Community Resiliency." *Society and Natural Resources* 20 (10): 899-912.

Drabeck, T. 1986. *Human System Responses to Disaster*. New York: Springer-Verlag Publishing.

Dudley, K. 1994. *The End of the Line: Lost Jobs, New Lives in Post Industrial America*. Chicago, IL: University of Chicago Press.

Fafchamps, M. 2006. "Development and Social Capital." *Journal of Development Studies* 42 (7): 1180–1198.

England, J. L. and S. Albrecht. 1984. "Boomtowns and Social Disruptions." *Rural Sociology* 49 (2): 230-246.

English, D.; D. Marcouiller; and H. Cordell. 2000. "Linking Local Amenities with Rural Tourism Incidence: Estimates and Effects." *Society and Natural Resources* 13 (1): 185 – 202.

Erikson, K. 1976. *Everything in its Path: Destruction of Community in the Buffalo Creek Flood.* New York: Simon and Schuster.

Erickson, K. 1994. *A New Species of Trouble: The Human Experience of Modern Disasters*. New York: W.W. Norton and Company.

Eudes-Beuret, J. and M. Kovacshazy, 2005. "Rural Amenities Policies: Future States." Pp. 33 – 47 in *Amenities and Rural development: Theory, Methods, and Public Policy*, edited by G. Green, S. Deller, and D. Marcouiller. Northhampton, MA: Edward Elgar Publishing Limited.

Fedderke, J.; R. DeKadt; and J. Luiz. 1999. "Economic Growth and Social Capital: A Critical Reflection." *Theory and Society* 28 (5): 709-745.

Flax, M. 1976. "A Study in Comparison Urban Indicators: Conditions in 10 large Metropolitan Areas." Washington D.C.: The Urban Institute.

Flora, C. 2001. "Shifting Agrecosystems and Communities" Pp 5 – 12 in *Interactions between Agroecosystems and Rural Communities*, edited by C. Flora. Boca Raton, Florida: CRC Press.

Flora, C. and J. Flora. 1993. "Entrepreneurial Social Infrastructure: A Necessary Ingredient." *The Annals of the American Academy of Political and Social Science* 529 (1):48-58.

Flora, C. and J. Flora. 2008. *Rural Communities: Legacy and Change*. Boulder, CO: Westview Press.

Flora, J. L. 1998. "Social Capital and Communities of Place." *Rural Sociology* 63(4): 481-506.

Flora, J.; J. Sharp; C. Flora; and B. Newton. 1997. "Entrepreneurial Social Infrastructure and Locally Initiated Economic Development in the Non-Metropolitan United States." *Sociological Quarterly* 38 (4): 623-45.

Florida, R. 2002. *The Rise of the Creative Class: And How its Transforming Work, Leisure, Community, and Every Day Life.* New York: Basic Books.

Foley, M. and B. Edwards. 1999. "Is It Time To Disinvest Social Capital?" *Journal of Public Policy* 19 (2): 141 – 173.

Freudenburg, W. 1997. "Contamination, Corrosion, and Social Order: An Overview." *Current Sociology* 45 (3): 19-40.

Freudenburg, W. and T. Jones. 1991. "Attitudes and Stress in the Presence of a Technical Risk: A Test of the Supreme Court Hypothesis". *Social Forces* 69 (4): 1143-1169.

Freudenburg, W. and R. Gramling. 1992. "Community Impacts of Technological Change: Toward a Longitudinal Perspective." *Social Forces* 70 (4): 937-55.

Fukuyama, F. 1995. *Trust: The Social Virtues and the Creation of Prosperity*. New York: Free Press.

Gittell, R. and A. Videl. 1998. *Community Organizing: Building Social Capital as a Development Strategy*. Thousand Oaks, CA: Sage Books.

Goe, W. and Green, G. 2005. "Amenities and Change in the Wellbeing of Nonmetropolitan Localities." Pp. 95-112 in *Amenities and Rural Development: Theory, Methods, and Public Policy*, edited by G. Green, S. Deller, and D. Marcouiller. Northhampton, MA: Edward Elgar Publishing Limited.

Granovetter, Mark. 1973. "The Strength of Weak Ties". *The American Journal of Sociology* 76 (6): 1360 – 1386.

Granovetter, M. 1985. "Economic Action and Social Structure: The Problem of Embeddedness". *The American Journal of Sociology* 91 (3): 481-510.

Granovetter, M. 1995. *Getting a Job: A Study of Contacts and Careers*. Chicago, IL: University of Chicago Press.

Green, G. 2001. "Amenities and Community Economic Development: Strategies for Sustainability." The *Journal of Regional Analysis & Policy* 31 (2): 61-75.

Greider, T.; R.Krannich; and E. Berry. 1991. "Local Identity, Solidarity, and Trust in Changing Rural Communities." *Sociological Focus* 24 (4): 263 -282.

Grey, Mark. 1995. "Pork, Poultry, and Newcomers in Storm Lake Iowa." Pp. 109-128 in *Any Way You Cut It: Meat Processing in Small-Town America*, edited by D. Stull, M. Broadway, and D. Griffith. Lawrence, KS: University Press of Kansas.

Gunderson, L. and C. S. Holling. 2002. *Panarchy: Understanding Transformations in Human and Natural Systems*. Washington, D.C.: Island Press.

Gunter, V.; M. Aronoff; and S. Joel. 1999. "Toxic Contamination and Communities: Using an Ecological-Symbolic Perspective to Theorize Response Contingencies." *The Sociological Quarterly* 40 (4): 623-640.

Hanifan, L. 1916. The Rural School Community Center. *Annals of the American Academy of Political and Social Science* 67 (1): 130-138.

Hamilton, V.; C. Broman; W. Hoffman; and D. Renner. 1990. "Hard Times and Vulnerable People: Initial Effects of Plant Closing on Autoworkers' Mental Health." *Journal of Health and Social Behavior 31*(2): 123-140.

Holling, C.S. 1973. "Resilience and Stability of Ecological Systems." *Annual Review of Ecological systems* 4: 1-23.

Holling, C.; L. Gunderson; and D. Ludwig. 2002. "In Quest of a Theory of Adaptive Change. Pp. 3-24 in *Panarchy: Understanding Transformations in human and Natural Systems*, edited by L. Gunderson and C.S. Holling. Washington, D.C.: Island Press.

Hunter, L.; R. Krannich; and M. Smith, 2002. "Rural Migration, Rapid Growth, and Fear of Crime" *Rural Sociology* 67 (1): 71-89.

Illes, L. M. 1996. *Sizing Down: Chronicle of a Plant Closing*. Ithaca, NY: Cornell University Press.

Jacobs, J. 1961. *The Death and Life of Great American Cities*. New York: Random House.

Johnson, K. 2003. "Unpredictable Directions of Rural Populations Growth and Migration." Pp. 19-31 in *Challenges for Rural America in the Twenty-First Century*, edited by D. Brown and L. Swanson. University Park, PA: The Pennsylvania State University Press.

Johnson, K. and C. Beale. 1994. "The Recent Revival of Widespread Population Growth in Nonmetropolitan areas of the United States." *Rural Sociology* 59 (4): 655-667.

Johnson, K. and C. Beale. 1998. "The Rural Rebound." *Wilson Quarterly* 22 (2): 16-27.

Johnson, J. and W. Farrell. 1997. "Snapshots of Income Inequality Metropolitan Los Angeles." *Looking Ahead*: XIX: 34 – 40.

Jones, C. 2005. "Major Events, Networks, and Regional Development." *Regional Studies* 39: 185 – 195.

Kilkenny, M.; L. Nalbarte; and T. Besser. 1999. "Reciprocated Community Support and Small Town, Small Business Success." *Entrepreneurship and Regional Development* 11 (3): 231-246.

Kim, J. and C. Mueller. 1987. *Introduction to Factor Analysis: What It Is and How To Do It.* Beverly Hills: Sage Publications.

Kletzer, L. 1998. "Job Displacement". *Journal of Economic Perspectives* 12 (1): 115 – 136.

Knack, S. 2002. "Social Capital and Quality of Government: Evidence From the States." *American Journal of Political Science* 46 (4): 772-785.

Knack, S. and P. Keefer. 1997. "Does Social Capital Have an Economic Payoff?? A Cross-Country Investigation." *Quarterly Journal of Economics* 112 (4): 1251-1288.

Knapp, T. and J. Harms. 2002. "When the Screen Goes Blank: A Television Plant Closing and its Impact on Workers." *The Sociological Quarterly* 43 (4): 607-626.

Krannich, R.; E. H. Berry; and T. Greider. 1989. "Fear of Crime in Rapidly Changing Rural Communities: A Longitudinal Analysis." *Rural Sociology* 54 (2): 195 – 212.

Krannich, R. and P. Petrzelka. 2003. "Tourism and Natural Amenity Development: Real Opportunities?" Pp. 190-199. in *Challenges for Rural America in the Twenty-First Century*, edited by D. Brown and L. Swanson. University Park, PA: The Pennsylvania State University Press.

Kretzmann, J. and J. McKnight. 1993. "Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets." Evanston, IL: The Asset-Based Community Development Institute.

Kusel, J. and L. P. Fortmann. 1991. "What is Community Well-Being?" Pp. 1-45 in *Well Being in Forest Dependent Communities*, edited by J. Kusel and L. Fortmann. Berkley, CA: Forest and Rangeland Resource Assessment Program and California Department of Forestry and Fire Protection.

Lang, R. and S. Hornburg. 1998. ''What is Social Capital and Why is it Important for Social Policy?'' *Housing Policy Debate* 9 (1): 1–16.

Legerski, E.; M. Cornwall; and B. O'Neil. 2006. "Changing Locus of Control: Steelworkers Adjust to Forced Unemployment." *Social Forces* 84 (3): 1521 – 1537.

Lieske, J. 1990. "The Correlates of Quality of Life in U.S. Metropolitan Areas." *The Journal of Federalism* 20 (1): 43-54.

Lichter, D.; D. McLaughlin; and G. Cornwell. 1995. "Migration and the Loss of Human Resources in Rural America." Pp. 235 – 256. in *Investing in people: The Human Capital Needs of Rural America*, edited by L. Beaulieu and D. Mulkey. Boulder, CO: Westview Press.

Lin, Nan. 1999. "Building a Network Theory of Social Change." *Connections* 22 (1): 28-51.

Liu, A. and T. Besser. 2003. "Social Capital and Participation in Community Improvement Activities by Elderly Residents in Small Towns and Rural Communities". *Rural Sociology* 68 (3): 343-365.

Logan, J. and H. Molotch. 1987. *Urban Fortunes: The Political Economy of Place*. Berkley, CA: University of California Press.

Long, P. 1996. "Early Impacts of Limited Stakes Casino Gambling on Rural Community Life." *Tourism Management* 17 (5): 341-353.

Loury, G. 1977. "A Dynamic Theory of Racial Income Differences." Pp. 153 – 186 in *Women, Minorities, and Employment Discrimination*, edited by P. Wallace and A. LeMund. Lexington, MA: Lexington Books.

Machlis, G. and J. Force. 1990. "Community Stability and Timber-Dependent Communities". Pp. 259-276 in *Communities and Forestry: Continuities in the Sociology of Natural Resources*, edited by R. Lee, D. Field, and W. Burch. Boulder, CO: Westview Press.

Marcouiller, D. and G. Clendenning. 2005. "The Supply of Natural Amenities: Moving From the Empirical Anecdotes to a Theoretical Base." Pp. 6 – 32 in *Amenities and Rural Development: Theory, Methods, and Public Policy*, edited by G. Green, S. Deller, and D. Marcouiller. Northhampton, MA: Edward Elgar Publishing Limited.

McGranahan, D. 1999. "Natural Amenities Drive Rural Population Change." Food and Rural Economics Division of the Economic Research Service, U.S. Department of Agriculture. Agriculture Economic Report N. 781.

McGranahan D. and T. Wojan. 2007. "Recasting the Creative Class to Examine Growth Processes in Rural and Urban Counties." *Regional Studies* 41 (2): 197 – 216.

Marcouiller, D. and G. Clendenning. 2005. "The Supply of Natural Amenities: Moving From the Empirical Anecdotes to a Theoretical Base." Pp. 6 – 32 in *Amenities and Rural Development: Theory, Methods, and Public Policy*, edited by G. Green, S. Deller, and D. Marcouiller. Northhampton, MA: Edward Elgar Publishing Limited.

Marwell, G.; P. Oliver; and R. Prahl. 1988. "Social Networks and Collective Action: A Theory of Critical Mass III." *American Journal of Sociology* 94 (3): 502-534.

Messner, S.; E. Baumer; and R. Rosenfeld. 2004. "Dimensions of Social Capital and Rates of Criminal Homicide." *American Sociological Review* 69 (6): 882-903.

Miller, D. and J. Rivera. 2007. "Setting the State: Roots of Social Inequality and the Human Tragedy of Hurricane Katrina." Pp. 15 – 26 in *Through the Eye of Katrina*, edited by K. Bates and R. Swan. Durham, North Carolina: Carolina Academic Press .

Murphy, B. 2007. "Locating Social Capital in Resilient Community-Level Emergency Management." *Natural Hazards* 41 (2): 297-315.

Myers, R. 1986. *Classical and Modern Regression with Applications*. Boston: Duxbury.

Nadeau, S.; B. Shindler; and C. Kakoyannis. 1999. "Forest Communities: New Frameworks for Assessing Sustainability." *The Forest Chronicle* 75 (5): 747-754.

Narayan, D. 1999. "Bonds and Bridges: Social Capital and Poverty." The World Bank, Poverty Research Working Paper 2167, Washington D.C.

Newton, K. 1997. "Social Capital and Democracy". *American Behavioral Scientist* 40 (5): 575 – 586.

Newton, K. and J. Delhey. 2005. "Predicting Cross National Levels of Social Trust: Global Pattern or Nordic Exceptionalism?" *European Sociological Review* 21 (4): 311 – 327.

Nord, S. and Y. Ting. 1991. "The Impact of Advance Notice of Plant Closings on Earnings and the Probability of Unemployment." *Industrial and Labor Review* 44 (4): 681 – 691.

Page, S. 2007. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton, NJ: Princeton University Press.

Park, M. and P. Stokowski. 2009. "Social Disruption Theory and Crime in Rural Communities: Comparison Across Three Levels of Tourism Growth." *Tourism Management* 30 (6): 905 – 915.

Paxton, P. 1999. "Is Social Capital Declining in the United States? A Multiple Indicator Assessment." *American Journal of Sociology* 105 (1): 88-127.

Paxton, P. 2007. "Association Memberships and Generalized Trust: A Multilevel Model Across 31 Countries." *Social Forces* 86 (1): 47-76.

Perucci, C. 1994. "Economic Strain, Family Structure and Problems with Children Among Displaced Workers." *Journal of Sociology and Social Welfare*. 21 (3): 79-91.

Perucci, C.; R. Perucci; D. Targ; H. Targ. 1988. *Plant Closings: Internal Contexts and Social Costs*. Hawthorne, NY: Aldine and Gruyter.

Perdue, R.; P. Long; and Y. S. Kang. 1999. "Boomtown Tourism and Resident Quality of Life: The Marketing of Gaming to Host Community Residents." *Journal of Business Research* 44: 165 – 177.

Picou, J. S.; B. Marshall; and D. Gill. 2004. "Disaster, Litigation, and the Corrosive Community." *Social Forces* 82 (4): 1448-1482.

Pimm, S. 1991. *The Balance of Nature?* Chicago, IL: University of Chicago Press.

Portes, A. 1998. "Social Capital: Its Origins and Applications in Modern Society." *Annual Review of Sociology* 24 (1): 1-24.

Portes, A. 2000. "The Two Meanings of Social Capital." *Sociological Forum* 15 (1): 1-12.

Portes, A. and J. Sensenbrenner. 1993. "Embeddedness and Immigration: Notes on the Social Determinants of Economic Action." *American Journal of Sociology* 98 (6): 1320 - 1350.

Portes, A. and P. Landolt. 1996. "The Downside of Social Capital." *The American Prospect* 26: 18 - 22.

Putnam, R. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.

Putnam, R. 1995. "Turning In, Turning out: The Strange Disappearance of Social Capital in America." *PS: Political Science and Politics* 28 (4): 664-683.

Putnam, R. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.

Putnam, R. 2007. "E. Pluribus Unium: Diversity and Community in the Twenty First Century". *Scandinavian Political Studies* 30 (2): 137 – 174.

Rice, T. 2001. "Social Capital and Government performance in Iowa Communities." *Journal of Urban Affairs* 23 (3 &4): 375-390.

Robison, L.; A. Schmid; and M. Siles. 2002. "Is Social Capital Really a Capital?" *Review of Social Economy* 60 (1): 1-24.

Rosenfeld, R.; S. Messner, and E. Baumer. 2001. "Social Capital and Homicide." *Social Forces* 80 (1): 283 – 309.

Saegart, S.; J. Thompson; and M. Warren. 2001. *Social Capital and Poor Communities*. New York: Russell Sage Foundation.

Salamon, S. 2003. "From Hometown to Nontown: Rural Community Effects of Suburbanization." *Rural Sociology* 68 (1): 1-17.

Sampson, R. 2001. "Crime and Public Safety: Insights From Community Level Perspectives on Social Capital." Pp. 89 – 114 in *Social Capital and Poor Communities,* edited by S. Saegert, J. Thompson, and M. Warren. New York: Russell Sage.

Sampson, R. and W. Groves. 1989. "Community Structure and Crime: Testing Social Disorganization Theory." *American Journal of Sociology* 94 (4): 774-882.

Sampson, R.; S. Raudenbush; and F. Earls. 1997. "Neighborhoods and Violent Crime: A Multi Level Study of Collective Efficacy." *Science* 277 (5328): 918-924.

Seeley, J.; A. Sim, and E. Loosley. 1956. *Crestwood Heights: A Study of the Culture of Suburban Life*. New York: Basic Books.

Schulman, M. and C. Anderson. 1999. "The Dark Side of the Force: A Case Study of Restructuring and Social Capital." *Rural Sociology* 64 (3): 351–172.

Shin, D. 1980. "Subjective Indicators and the Comparative Evaluation of Quality of Community Life." *American Journal of Community Psychology* 8 (5): 523-535.

Schuessler, K. and G. Fisher. 1985. "Quality of life Research and Sociology." *Annual Review of Sociology* 11: 129-149.

Sirgy, M. J.; D. Rahtz; M. Cicic; R. Underwood. 2000. "A Method For Assessing Residents' Satisfaction with Community-Based Services: A Quality of Life Perspective." *Social Indicators Research* 49 (3): 279-316.

Sirgy, M. J. and T. Cornwell. 2001. "Further Validation of the Sirgy Et Al.'s Measure of Community Quality of Life." *Social Indicators Research* 56 (2): 125-143.

Smith M., R. Krannich, and L. Hunter. 2001. "Growth, Decline, Stability, and Disruption: A Longitudinal Analysis of Social Well Being In Four Western Rural Communities." *Rural Sociology* 66 (3): 425-450.

Stiglitz, J. 1996. "Some Lessons From the East Asia Miracle." *The World Bank Research Observer* 11 (2): 151-177.

Stitt, B. G.; M. Nichols; D. Giacopassi. 2005. "Perceptions of Casinos as Disruptive Influences in USA Communities." *International Journal of Tourism Research* 7 (4-5): 187 – 200.

Stolle, D. and T. Rochon. 1998. "Are All Associations Alike?" *American Behavioral Scientist* 42 (1): 47-65.

Stone, W. 2001. "Measuring Social Capital: Towards a Theoretically Informed Measurement Framework for Researching Social Capital in Family and Community Life." Australian Institute of Family Studies, Research Paper 24.

Stone, W. and J. Hughes. 2002. "Why Social Capital Matters." *Family Matters* 61 (4): 62-67.

Swanson, L. 2001. "Rural Policy and Direct Local Participation: Democracy, Inclusiveness, Collective Agency, and Locality Based Policy." *Rural Sociology* 66 (1): 1-21.

Temkin, K. and W. M. Rohe. 1998. "Social Capital and Neighborhood Stability: An Empirical Investigation." *Housing Policy Debate* 9 (1): 61 – 88.

Tiepoh, M.; G. Nah; and B. Reimer. 2004. "Social Capital, Information flows, and Income Creation in Rural Canada: A Cross Community Analysis". *The Journal of Socio-Economics* 33 (4): 427-428.

Tilly, C. 1973. "Do Communities Act?" *Sociological Inquiry* 43 (3-4): 209 – 240.

Tompkins, E. 2005. "Planning For Climate Change in Small Islands: Insights From National Hurricane Preparedness in the Cayman Islands." *Global Environmental Change* 15 (2)**:** 139–149.

Tompkins, E. and W. Adger 2004. "Does Adaptive Management of Natural Resources Enhance Resilience to Climate Change?" *Ecology and Society* 9 (2): 10-24**.**

Tonnies, F. 1957. *Community and Society,* edited by Charles Loomis. East Lansing: Michigan State University Press.

Uchitelle, L. 2006. *The Disposable American.* New York: Knopf Press.

Vale, L. and J. Campanella. 2005. *The Resilient Community: How Modern Cities Recover From Disaster.* Oxford: Oxford University Press.

Varghese, J.; N. Krogman; T. Beckley; and S. Nadeau. 2006. "Critical Analysis of the Relationship Between Local Ownership and Community Resiliency." *Rural Sociology* 71 (3): 505-527.

Veenhoven, R. 2002. "Why Social Policy Needs Subjective Indicators." *Social Indicators Research* 58 (1): 33-45.

Waldinger, R. 1995. "The 'Other Side' of Embeddedness: A Case Study of the Interplay Between Economy and Ethnicity." *Ethnic and Racial Studies* 18 (3): 555-580.

Wall, E.; G. Ferrazzi; and F. Schryer. 1998. "Getting the Goods on Social Capital." *Rural Sociology* 63 (2): 300-22.

Warren, M. R.; J. P. Thompson; and S. Saegert. 1999. *Social Capital and Poor Communities*: A Framework for analysis. (mimeo) Fordham University.

Warren, M.; J. P. Thompson; and Susan Saegart. 2001. "The Role of Social Capital in Combating Poverty". Pp. 1 – 28 in *Social Capital and Poor Communities,* edited by S. Saegart, J. Thompson, and M. Warren. New York: Russell Sage Foundation.

Webber, S. and L. Donahue. 2001. "Impact of Highly and Less Job Related Diversity on Work Group Cohesion and Performance: A Meta Analysis." *Journal of Management* 27 (2): 141-162.

Whitener, L. 2005. "Policy Options for a Changing Rural America." *Amber Waves*. (April). Available at: http://www.ers.usda.gov/Amberwaves/April05/Features/PolicyOptions.htm.

Wilkinson, K. 1991. *The Community in Rural America*. New York: Greenwood Press.

Wilkinson, K. P.; J. Thompson; R. Reynolds; and L. Ostresh. 1982. "Local Social Disruption and Western Energy Development: A Critical Review." *The Pacific Sociological Review* 25 (3): 275-296.

Wilson, W. J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago, IL: University of Chicago Press.

Wilson, W. J. 1996. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf.

Wilson, J. and M. Musick. 1997. "Who Cares? Toward and Integrated Theory of Volunteer Work". *American Sociological Review* 62 (5): 694-713.

Woolcock, M. 1998. "Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework." *Theory and Society* 27 (2): 151-208.

Yuki, M.; W. Maddux; M. Brewer; and K. Takemura. 2005. "Cross-Cultural Differences in Relationship - and Group - Based Trust." *Personality and Social Psychology Bulletin* 31 (1): 48 – 62.

<u>ACKNOWLEDGEMENTS</u>

There have been many people who have helped me throughout my academic journey. First and foremost, I wish to thank my major professor, Dr. Terry Besser. She has made graduate school a great experience for myself and countless others. I also with to thank my program of study committee: Dr. Stephen Aigner, Dr. Anastasia Prokos, Dr. Andrew Hochstetler, and Dr. Paul Coates. Additionally, I would like to thank Dr. Kathleen Waggoner for suggesting that I apply to the graduate program in sociology. I also wish to thank all of the amazing faculty and graduate students who I have had the pleasure to meet at Iowa State University. Finally, thank you to my family and friends, especially Thomas and Kathy Recker, Bradford and Sara Blickley, and Johnny Recker.