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Living better together: the relationship between social capital and quality of life in small towns

Monica Marlene Whitham
Iowa State University

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**Living better together: The relationship between
social capital and quality of life in small towns**

by

Monica Marlene Whitham

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Program of Study Committee:
Terry L. Besser, Major Professor
Frederick O. Lorenz
Carolyn E. Cutrona

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ABSTRACT

Using data from a study of community life in small Iowa towns, this analysis seeks to understand the relationship between social capital and quality of life at the community level. Social capital has been shown to be related to a variety of aspects of community life, such as crime (Sampson, Raudenbush, and Earls 1997) and local economy (Casey and Christ 2005; Flora, et al. 1997; Knack and Keefer 1997), but there is a lack of research on how social capital is related to quality of life. This study attempts to fill the gap by examining the relationship between social capital and community quality of life. Based on the relationship between social capital and various aspects of communities, it is hypothesized social capital will be positively related to quality of life. Multivariate regression models are used to determine the relation of social capital to quality of life. Findings support the hypotheses; community social capital and quality of life are significantly and positively related in Iowa's small towns.

CHAPTER 1

INTRODUCTION

In *Broken Heartland: The Rise of America's Rural Ghetto* (1990), Osha Gray Davidson argues that due to the farm crisis of the 1980s many rural Iowa communities have become ghettos. Davidson explains his use of the word "ghetto" to describe life in Iowa and other rural areas of the country in the 1990s: "["Ghetto"] speaks of the relentless deterioration of health-care systems, schools, roads, buildings, and of the emergence of homelessness, hunger, and poverty" (158). He notes that of all Midwestern states, Iowa was the hardest hit by the farm crisis and has suffered the most from the ghettoization of America's heartland.

Sixteen years after Davidson's vivid description of despair, Forbes magazine declared the state of Iowa number one in quality of life (QOL). In their 2006 rankings of the best states for business, the business magazine rated Iowa ahead of the other forty-nine states in life quality based on an index of schools, health, crime, cost of living, and poverty rates. The dramatic difference between Davidson's description and Forbes' rankings leaves one wondering how Iowa might have improved its QOL so substantially.

One potential resource that may be related to the improvement in Iowa's QOL is social capital. Social capital can be generally defined as a potential resource originating from network membership and the attributes of networks that can be used to achieve collective goals. The concept has received a great deal of attention in the field of sociology in recent years. It has been found to be linked to a variety of aspects of life. The purpose of this study is to determine whether social capital is related to QOL in Iowa.

The focus of this study is not on Iowa as a state, however. To examine the possible relationship between social capital and QOL, an in-depth look was taken at community life in small towns in Iowa. A considerable number of Iowans reside in small towns. At the time of the 2000 census, forty-two percent of Iowans resided in towns with fewer than 10,000 residents.[1] This study examines the relationship between social capital and QOL in Iowa's small towns.

Using data from a study of community life in small Iowa towns, this analysis seeks to understand the effects of social capital on QOL at the community level. Social capital has been shown to affect a variety of aspects of community life, such as crime (Sampson, Raudenbush, and Earls 1997), voluntary participation (Liu and Besser 2003; Ryan et al. 2005), and local economy (Casey and Christ 2005; Flora, et al. 1997; Knack and Keefer 1997), but there is a lack of research on how social capital affects QOL. In contrast to the current enthusiasm for social capital studies, QOL "seems very much outside the mainstream of sociology" (Markides 2000: 2306-2307). As such, social capital has not been studied in relation to QOL. This study fills that gap by examining the relationship between social capital and QOL at the community level.

Social capital theory predicts towns high in the components of social capital will be better equipped to accomplish community goals. While it makes intuitive sense that towns possessing greater potential to achieve desired outcomes should have a higher QOL than towns that do not, this analysis seeks to empirically test that logic. In an effort to bridge

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[1] Town is defined here as a US Census "place," which is "a concentration of population either legally bounded as an incorporated place, or identified as a Census Designated Place (CDP)… Incorporated places have legal descriptions of borough (except in Alaska and New York), city, town (except in New England, New York, and Wisconsin), or village" (US Census Bureau 2000). Such places include residents who live both inside and outside city limits.

QOL research and social capital research, this study examines the relationship between the

two concepts at the community level. Based upon past research regarding community QOL

and the consequences of social capital, the following research questions are considered:

1) For small Iowa communities, is social capital related to quality of life?

2) What is the direction of the relationship (positive or negative)?

3) Additionally, does the relationship vary depending on the form of social capital

(formal ties versus informal ties)?

CHAPTER 2

THEORETICAL FRAMEWORK AND CONCEPTUAL DEFINITIONS

Social Capital

The contemporary treatment of the concept 'social capital' originated in the political science and sociology literatures, most notably in the structural theories of Pierre Bourdieu (1986), the rational choice perspective of James S. Coleman (1988, 1990), and the political science research of Robert Putnam (1993, 1995, 2000). Since brought to the attention of the scholarly community twenty years ago, there has been much debate regarding the meaning of the theoretical concept. Although generally viewed as a potential resource originating from social networks, scholars have not yet reached agreement as to the precise definition of the term.

Within social capital literature, two divergent schools of thought have emerged. One is the rational choice view, which identifies social capital as a resource for individuals created by the rational actions of individuals. The other is the embeddedness perspective, which focuses on outcomes of social capital for collectivities and the creation of social capital by collectivities.

Rational Choice

Rational choice theorists assume reason guides human behavior. As such, all social action can be seen as rationally motivated (Scott 2000). The rational choice perspective emphasizes the individual and "sees the actor as having goals independently arrived at, as acting independently, and as wholly self-interested" (Coleman 1988: S95). Those taking a rational choice perspective consider the collectivity to be made up of an aggregate of

individuals, rather than existing as its own entity. "Basic to all forms of rational choice theory is the assumption that complex social phenomena can be explained in terms of the elementary individual actions of which they are composed" (Scott 2000: 233). Although the actions of individuals may be aggregated to larger units, rational choice theorists generally view social capital as a resource for individuals to employ in the pursuit of self-interested ends.

The rational choice perspective of social capital was developed by James S. Coleman (1988). He identifies both strengths and weaknesses in the seemingly opposed ideas of rational action and action governed by social structure. Coleman uses the concept social capital in an attempt to apply both streams of thought in an analysis of social systems. His aim is a rational choice theory that admits a social context.

Coleman (1988) conceptualizes social capital as an individual resource arising from social relationships. Although he considers social capital to be a resource for individuals, Coleman views it as independent of the individual. While other varieties of capital, such as human or economic, are "located" within the person who possesses them, social capital is a product of social relationships and is not located in any individual. Rather, it "inheres in the structure of relations between persons and among persons" (Coleman 1990: 302).

Although social capital is not located within an individual, an individual can access it in the production of individual or collective ends. Coleman's understanding of social capital centers on how the individual can utilize the social structure in rational pursuits. Highlighting the multidimensionality of the concept, Coleman identifies three aspects of social relations that enable individuals to use them as a resource: 1) information channels; 2) norms and effective sanctions; and 3) obligations, expectations, and trustworthiness of

structures. Coleman argues information channels are an important aspect of social relations because the flow of information facilitates action. To make rational decisions, actors must be aware of their alternatives and calculate which option will be best for them. However, the acquisition of information can be time consuming. Having a network of individuals who can provide information makes the acquisition of information less costly.

Obligations, expectations, and trust depend on two elements: the extent of obligations and expectations held by an individual, and the trustworthiness of others in the social environment within which the individual acts. Obligations and expectations are built through helpful acts. "If *A* does something for *B* and trusts *B* to reciprocate in the future, this establishes an expectation in *A* and an obligation on the part of *B*" (Coleman 1988: S102). Trust is an important part of establishing obligations and expectations. A trustworthy social structure means obligations will more likely be repaid because the structure (others) will help monitor compliance and sanction non-compliance.

Coleman identifies norms and effective sanctions as another aspect of social relations which qualifies them as a resource for individuals. Established norms within a social structure, in combination with the sanctions that follow breaches of norms, facilitate some (positive) actions while constraining other (negative) actions. Norms and sanctions can be internalized or "supported through external rewards for selfless actions and disapproval of selfish actions" (1988: S105). For example, an individual who fails to mow his yard on a regular basis may be criticized by his neighbors for detracting from the beauty of the neighborhood.

Such sanctions are most effective in social structures characterized by closure. Closure is a property of social systems with dense ties among members; in other words, a

closed system is one in which the people all know each other and depend exclusively on each other for social interaction and acceptance. Coleman identifies closure as a social context that can be useful in facilitating social capital. He argues closure of social networks is important for the establishment and enforcement of norms and trust, because such ties help to ensure the enforcement of established norms through collective sanctions.

Though praised by some as "perhaps the most influential formulation of the concept" (Foley and Edwards 1999), Coleman's work is not without its critics. Portes (1998) criticizes Coleman for lack of clarity, for equating social capital with its outcomes, and for ignoring the downside of social capital. Despite such criticisms, Coleman's work has been "both influential and significant" (Schuller, Baron, and Field 2000). Several social capital theorists (e.g., Burt 1992; Foley and Edwards 1999; Lin 1999; Lin, Cook, and Burt 2001) have built upon the rational choice perspective of social capital. Lin (1999; Lin, Cook, and Burt 2001) argues for limiting the concept of social capital to a focus on individual interactions and networking, and objects to applying the concept to the study of collective public goods. He considers social capital to be resources made available to individuals through networks. Burt (1992) has a similar conception of social capital. He argues that social capital is an individual's opportunity to access resources based on his or her location in a network. He expands this notion by developing the concept of "structural holes" in networks. An individual who spans a structural hole is a broker of resources (such as information) between parties who are not otherwise connected. Foley and Edwards agree with such a conceptualization of social capital. For Foley and Edwards, social capital is an individual's access to resources made possible through networks. "Thus, social capital = resources + access" (1999: 167).

Embeddedness

While rational choice theory argues the actions of individuals are based on reason, the embeddedness perspective allows for the effects of the social system on the actions of individuals in a reciprocal arrangement; the social system influences the actions of individuals and the actions of individuals also have an effect on the social system. The embeddedness perspective acknowledges a certain amount of agency, but considers the action of individuals to be "shaped or nudged in certain directions" (Flora 1998: 484) by the social environment. Granovetter (1985) argues the actions of individuals and institutions "are so constrained by ongoing social relations that to construe them as independent is a grievous misunderstanding" (482).

By expanding their focus to include the reciprocal relationship between the individual and society, those taking an embeddedness perspective are able to look beyond self-interested individual actions to mutually beneficial actions, such as "cooperation and coordination" (Putnam 1995: 67). Such a perspective enables social capital researchers to apply the concept of social capital to collectivities by identifying them as a unit of study separate from the individuals who compose them. It is the embeddedness perspective that provides the framework for the present study of social capital as a community level resource for the potential enhancement of quality of life.

The embeddedness view identifies social capital as a macro level resource potentially available to aggregates of individuals, such as groups, communities, and states. Not all social capital researchers who take an embeddedness perspective explicitly identify their work as such. However, conceptualizing social capital as a group level resource can be considered an

embedded perspective based on the consideration given to social networks beyond the individual.

Considering social capital in the context of social mobility and reproduction of class relations, Bourdieu conceptualizes it as group level (e.g., class or family) resource rooted in networks. He argues social capital "enables numerous, varied, scattered agents to act as one man" (1986: 251). As articulated by Bourdieu, social capital is "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 acquaintance and recognition" (1986: 248). He adds that the benefits of these relationships are based on subjectively felt obligations such as friendship, respect, and gratitude.

A major contribution of Bourdieu's work is his identification of social capital as a link to other forms of capital. By building social relationships, actors gain social capital, which they are able to use to access other forms of capital, such as economic or cultural.[2] Bourdieu is specifically interested in the way the different forms of capital shape the social world, especially the aspects of class struggle and the nature of social class.

Pierre Bourdieu is generally regarded to be the first contemporary scholar to systematically analyze the concept of social capital (Portes 1998), but the concept owes its recent attention and popularity to Robert Putnam. Putnam (1993, 1995, 2000) agrees with rational choice theorists that social capital can be a private good, but he contends it also can be a public good. Putnam conceptualizes social capital as a resource for larger aggregates of people, applying the term to communities, states, and even nations.

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[2] Cultural capital consists of forms of knowledge; credentials; cultural artifacts, such as scientific instruments, books, or art; and cultivated social behaviors (Bourdieu 1986).

Corresponding to Coleman's conceptualization, Putnam bases social capital on the value of social networks. Like Coleman, he also recognizes the multidimensionality of the concept. Putnam uses networks, norms, and trust as aspects of social capital. He defines it: "Social capital refers to features of social organizations such as networks, norms, and social trust that facilitate the coordination and cooperation for mutual benefit" (1995: 67). In other words, social capital is the networks, norms, and trust that pave the way for coordination and cooperation, which may be used to facilitate collective action.

The networks described in Putnam's definition of social capital are linkages between organizations provided by individuals with dual memberships. Putnam considers various types of organizations important for social capital, including associations of civic engagement, such as community clubs, as well as more informal associations, such as card clubs and bowling leagues. Although he considers networks to be the core of social capital, Putnam emphasizes trust and norms of reciprocity as essential components of the concept. Networks foster norms, including generalized reciprocity, or the notion of doing something good for someone now with the confident expectation of being rewarded by someone else in the future. Norms of reciprocity foster social trust, which "lubricates social life" (Putnam 2000: 21) and encourages coordination and cooperation.

Putnam's social capital research has been influential in the works of various other social capital researchers (e.g., Liu and Besser 2003; Paxton 1999, 2002; Schuller, Baron, and Field 2000), who have built upon Putnam's conceptualization of social capital as social connections having specific qualities, such as trust and norms of reciprocity. However, his work is not without its critics. Portes (2000) criticizes Putnam for some of the same reasons he criticizes Coleman. Portes and others (Foley and Edwards 1999; Woolcock 1998) fault

both Coleman and Putnam for not explicitly differentiating social capital from the resources it provides. Portes (1998, 2000; Portes and Landolt 1996; Portes and Sensennbrenner 1993) and others (e.g., Woolcock 1998) argue that the characteristics Putnam and Coleman include in their definitions of social capital, such as trust and norms, are outcomes of social capital rather than dimensions of it. As such, Portes contends the qualities of networks should be excluded from the conceptualization of social capital. Failing to do so can lead to conclusions such as: "if your town is 'civic' it does civic things; if it is 'uncivic,' it does not" (Portes 1998: 20).

Portes also criticizes Putnam for the "conceptual stretch" (1998: 3) of social capital from an individual level concept to a collectivity level concept. Although he agrees social capital can be applied to larger aggregates of people, Portes contends that Putnam did not explicitly theorize the transition of social capital from an individual resource to a collective resource. Portes argues a stronger theoretical backing is needed to make such a transition. Portes addresses this criticism in his own conceptualization of social capital. Portes' and Sensenbrenner (1993) present four dimensions of social capital, each corresponding to one of the major theoretical traditions. From Durkheim and "a certain interpretation of Weber" (1323), they take the idea of "value introjection." This is the notion of an underlying moral character, learned through socialization, which guides economic transactions. By discouraging greed, value introjection encourages fair and mutually beneficial economic operations. From Simmel comes the notion of "reciprocity transactions." These transactions are based on obligations in a social system accrued through good deeds, such as favors between neighbors. The repayment of such transactions is insured by the norm of reciprocity. "Enforceable trust," is based on the writings of Weber. Due to a desire to collect

rewards and avoid sanctions, group members will comply with group expectations. This dimension of social capital can have a variety of consequences for community quality of life, such as the discouragement of crime and the encouragement of helping others in need. "Bounded solidarity" stems from the work of Marx and Engels. This dimension of social capital is based on the idea that adversity can promote cohesion, which encourages group-oriented behavior. For example, when faced with discrimination and prejudice from White Americans, early Chinese immigrants in San Francisco and New York banded together to form tightly knit communities characterized by mutual support.

Portes views social capital as a resource, but also recognizes the downside of social capital (Portes 1998, 2000; Portes and Landolt 1996). It is possible to have too much social capital, which may exclude outsiders or limit actions and choices due to obligations and expectations in the network. For example, a strong network of family members may help in the establishment of a business, but when unqualified family members ask the proprietor for jobs or loans they may be a drain on the business, thus limiting prosperity and future growth.

To account for the potential negative effects of social capital identified by Portes and others (e.g., Schulman and Anderson 1999; Woolcock 1998), some social capital researchers (e.g., Flora and Flora 1993; Gitell and Vidal 1998; Grootaert and van Basetelaer 2002; Paxton 1999, 2002; Woolcock 1998) recognize various types of social capital, each with different outcomes. Paxton (1999, 2002) builds on the work of Putnam to formulate her conception of social capital, but also identifies two types of social capital. Like Putnam, Paxton argues social capital does not stem from all networks. To qualify as social capital, networks "must be of a particular type – reciprocal, trusting, and involving positive emotion" (1999: 92). She builds on this notion by distinguishing between two types of social capital:

within-group and between-group. Within-group social capital is the strong ties located within a particular group. This type of social capital is characterized by high levels of positive emotion and trust among group members. Between-group social capital is made up of weaker ties which connect different groups to one another. Between-group social capital draws on Granovetter's notion of "the strength of weak ties" and their importance to community organization (Granovetter 1973).

Paxton is not alone in her recognition of different types of social capital. There are other social capital researchers who also organize social capital into various types, most of which are comparable to within-group and between-group social capital. Woolcock (1998) organizes social capital into two types of resources: "embeddedness" ties, which are characterized by density and closure, and "autonomous" ties, which are outward looking links between groups. Flora and Flora (1993) and Grootaert and van Basetelaer (2002) identify horizontal social capital (social ties binding together those at similar levels in a social system) and hierarchical social capital (networks binding together those at differing levels of the social system).

Gitell and Vidal (1998) identify bonding social capital and bridging social capital as two distinct types of social capital. These are the types adopted by Putnam in his book *Bowling Alone: The Collapse and Revival of American Community* (2000). Similar to within-group social capital, bonding social capital is the strong ties within a network of homogenous individuals. This type of social capital binds together members of a network like "sociological superglue" (Putnam 2000: 23). Bridging social capital is similar to between-group social capital. It links together heterogeneous individuals or groups and serves as a sort of "sociological WD-40" (Putnam 2000: 23).

By accounting for different kinds of social capital, Putnam and others are able to explain potentially negative effects of social capital, such as exclusion due to too much bonding social capital and not enough bridging social capital. High bonding social capital, when not accompanied by bridging social capital, can have negative effects for the community. For example, high bonding social capital present in a White supremacy organization can diminish community level social capital by limiting ties to other organizations and reducing overall trust in the community. Social systems with both types are most able to take advantage of the benefits of social capital.

The trend for social capital research in sociology is to examine one or more of the different types of social capital in analyses of the concept and its outcomes. Such a method allows the researcher to conclude whether different forms of social capital have different consequences for the dependent variable in question. Social capital researchers have found that social capital has significant effects on various aspects of community life.[3] However, no study has yet analyzed its effects on the broad concept of quality of life. This study seeks to determine the relationship between community social capital and quality of life as well as whether or not the relationship varies by type of social capital.

Conceptual Definition of Social Capital

The focus of this study is on social capital as a potential community resource for quality of life. As such, an embeddedness perspective is used and social capital is conceptualized as a community level resource. Following Putnam's conception of the term, community social capital is defined here as social networks and the trust and norms of

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[3] Research findings regarding the effects of social capital are discussed in detail in Chapter 3.

reciprocity that characterize those networks. This definition recognizes the

multidimensionality of the concept. Also, by identifying social capital not as a resource in

and of itself but as networks and the attributes of those networks, it avoids conflating social

capital with its outcomes.

To address the criticism that earlier conceptualizations of social capital did not allow

for negative outcomes, social capital is organized into different types, allowing for different

expectations for each type. This is similar to several other contemporary social capital

studies, such as Flora and Flora (1993), Gitell and Vidal (1998), Grootaert and van

Basetelaer (2002), Paxton (1999, 2002) Putnam (2000), and Woolcock (1998). For the

present study, social capital is divided into four types based on the form of connection

(formal or informal) and along two dimensions (structural or normative). Social capital

consists of both formal and informal social ties. Putnam explains, "Some types of social

capital, like a Parent-Teacher Association, are formally organized, with incorporation papers,

regular meetings, a written constitution, and a connection to a national federation, whereas

others, like a pickup basketball game, are more informal" (2000: 22). Further, two

dimensions exist along which both formal and informal social capital can be divided. The

structural dimension consists of networks and interpersonal connections, while the normative

dimension consists of norms, trust, and other affective ties. Using this typology, four scales

were created to measure social capital: organizational density, "communityness," gathering

places density, and "neighborliness" (refer to Figure 1).

Quality of Life

Like social capital, the concept 'quality of life' (QOL) is used in a variety of social

science disciplines, including sociology, psychology, economics, and political science

Figure 4.1. Social Capital Typology Based on Form of Connection and Dimension

Form of Connection

	Formal	Informal
Structural	Organizational Density	Gathering Places Density
Normative	"Communityness"	"Neighborliness"

(Schuessler and Fisher 1985; Veenhoven 2006). As QOL scholar Ruut Veenhoven notes,

"all social science deals with 'quality-of-life' in some way" (2006: 325). Even so, the

concept is not widely studied in sociology (Ferriss 2004; Markides 2000; Schuessler and

Fisher 1985), although many of its components are. This is a likely explanation for the lack

of research concerning the relationship between social capital and QOL, despite the presence

of a wealth of studies concerning social capital and various aspects of QOL.

Although "concern about the good life is probably as old as civilization" (Schuessler

and Fisher 1985), QOL research is generally considered to have had its beginning in the

United States around 1960. Two reports are frequently credited as introducing the study of

QOL as a separate area of research (Schuessler and Fisher 1985): *The Report of the*

President's Commission on National Goals (1960) and *Social Indicators* (Bauer 1966).

After the publication of these works, the area of QOL research grew in the fields of

scholarship and government.

To define QOL, Schuessler and Fisher (1985) break it down into two parts: 'quality'

and 'life.' Quality is widely accepted to be a grade, which ranges from high to low. Life is

often narrowed to mental life, or feelings of satisfaction or dissatisfaction with particular

aspects of life or life in general. So, QOL is generally defined as the high to low grade of

feelings of satisfaction or dissatisfaction with life or its various facets. It has also been

defined using some of its components. Lauer (1978) uses such a definition: "quality of life is

a broad concept that includes such things as economic opportunity, health facilities, an

environment conducive to good health, access to recreational and cultural activities, and

minimal crime" (13).

Many QOL researchers distinguish between global QOL and domain-specific QOL

(Schuessler and Fisher 1985). Global QOL refers to general satisfaction, and domain-

specific QOL refers to satisfaction within a particular area of life. The trend is to limit the

study of QOL to particular domains, such as the quality of community life or the quality of

work life (Schuessler and Fisher 1985).

There are some QOL researchers who include both global and domain-specific QOL

in their analyses. For example, Andrews and Withey (1976), break down measures of well-

being into global indicators and indicators of more specific concerns. Using a global

measure along with concerns such as local government, national government, family

relations, accomplishment, and money, Andrews and Withey seek to get an accurate picture

of how Americans perceive their well-being. A global measure within a particular domain

can also be used to measure overall satisfaction with the concerns making up that domain

(Sirgy, et al. 2000).

It is theorized that global satisfaction is affected by satisfaction with domains, and

satisfaction with domains is affected by concerns within each domain (Andrews and Withey

1976; Campbell et al. 1976; Sirgy et al. 2000). This theory is called bottom-up spillover

theory. The idea is that each level of satisfaction is affected by the levels below it.

Satisfaction in the bottom levels "spillover" vertically into subsequent higher levels. Sirgy et

al. (2000) explain:

> Life satisfaction is thought to be on top of an attitude (or satisfaction) hierarchy.
> Thus life satisfaction is influenced by satisfaction with life domains (e.g., satisfaction
> with community, family, work, social life, health, and so on). Satisfaction with a
> particular domain (e.g., community satisfaction), in turn, is influenced by lower levels
> of life concerns within that domain (e.g., satisfaction with government, business, and
> nonprofit services) (287).

Thus, satisfaction with life in general is largely determined by satisfaction with important life

domains, such as family, community, work, and health. Though QOL research has been

criticized for lacking theory (Schuessler and Fisher 1985), bottom-up spillover theory is well-

established in QOL research (Andrews and Withey 1976; Campbell et al. 1976; Sirgy et al.

2000).

QOL can be measured using objective or subjective indicators (Schuessler and Fisher

1985). Objective indicators measure observable environmental conditions, such as income or

weather conditions. Objective indicators are often presumed causes of QOL (Schuessler and

Fisher 1985). Subjective indicators are designed to determine whether QOL is present or

absent in the population being studied. Subjective indicators are generally made up of

answers to survey questions that measure "feelings of satisfaction, happiness, or related attitudes" (Schuessler and Fisher 1985: 132).

Initially, QOL studies focused on objective indicators, such as poverty and suicide rates (Veenhoven 2006). During the 1970s, the emphasis switched to subjective indicators. Schuessler and Fisher (1985) note that in the ten years previous to 1985, subjective measures had "received relatively more attention" (132) than objective indicators. During this period, several landmark books using subjective indicators of QOL were published, including *Social Indicators of Well-Being: American's Perceptions of Life Quality* by Andrews and Withey (1976) and *The Quality of American Life: Perceptions, Evaluations and Satisfactions* by Campbell, Converse, and Rodgers (1976). The authors of these manuscripts designed subjective indicators to use in their measurement of QOL, setting the stage for numerous QOL researchers who followed them.

Subjective QOL continues to be an important area of research. "Perceived quality-of-life is now a central issue in social reports in most developed countries and items on that matter are standard in periodical social surveys" (Veenhoven 2006: 325). Although QOL literature has at times been dominated by methodological disputes concerning the merits of objective versus subjective assessments, the "American Quality of Life approach" emphasizes subjective evaluation (Walker and van der Maesen 2004).

Veenhoven (2002) contends both subjective and objective indicators are useful in QOL studies. However, he argues that while objective indicators are good for detail, "they are typically less helpful [than subjective indicators] in charting the whole" (43). Subjective indicators are better for aggregating to higher levels, such as community or state. "Aggregation is less problematic with subjective indicators, because we can simply ask

people about their overall judgment. Research has shown that people are quite able to strike a balance, both in life-domains such as housing and for their life-as-whole" (Veenhoven 2002: 43). Although well suited to overall judgments, subjective measures may also be used to indicate levels of domain-specific satisfaction. In some cases, QOL researchers will combine a series of domain-specific indicators to predict or create a global measurement of satisfaction (Schuessler and Fisher 1985).

Like social capital, QOL is multidimensional. Measures of QOL often reflect this by assessing different qualities of life, which are aggregated to create a QOL score (Veenhoven 2006). Most QOL researchers agree that a variety of elements should be included in QOL measures. However, precisely which measures should be included within particular domains is still a debated issue. Walker and van der Maesen (2004) observe: "The scope of quality of life is potentially vast, comprising a potentially endless list of domains and indictors." Numerous QOL domains have been studied, such as health, mental health, student well-being, government, housing, family, and community (Andrews and Withey 1976; Michalos 2003; Sirgy and Cornwell 2001; Sirgy et al. 2000; Veenhoven 2006). A variety of indicators have been used to examine the QOL within these assorted domains.

As with most QOL domains, community QOL has been studied using various indicators (Sirgy and Cornwell 2001; Sirgy, et al. 2000; Veenhoven 2006). The works of Widgery (1982), Shin (1980), and Sirgy et al. (2000) are several examples of studies of community QOL using subjective indicators. Using a predictive model of community, Widgery (1982) finds several significant predictors of community-wide satisfaction, including trust in government and the political system, satisfaction with family and friends in the community, aesthetic quality of the community, age and years in the community, and

optimism about the community. Shin (1980) argues that community QOL has two dimensions: (1) the level of citizen satisfaction with various community resources, including public schools, medical care, housing, government services, and neighborhood safety; and (2) the distribution of satisfaction throughout a community's members.

Sirgy et al. (2000) use bottom-up spillover theory to build a multi-level, multi-element model of community QOL. They find strong support that overall life satisfaction is a function of global community satisfaction in combination with global satisfaction in other domains, such as family, leisure, and finances. In turn, global community satisfaction is found to be a direct function of global government services satisfaction,[4] global business services satisfaction,[5] and global non-profit services satisfaction.[6] This research supports the theory that each level of life is affected by subsequent lower levels.

Despite being sometimes considered outside of mainstream sociology (Markides 2000), there is a substantial history of QOL literature. QOL studies have involved various units of analysis (e.g., individual, family, community, state), several levels of indicators (global, domain-specific, sub-domain, and various combinations), and subjective and/or objective indicators. Using community as the unit of analysis, this study seeks to examine the relationship between QOL and social capital using subjective, domain-specific indicators.

Conceptual Definition of Quality of Life

Adapting the definition of QOL proposed by Schuessler and Fisher (1985) to the community level, QOL is defined here as a grade of satisfaction or dissatisfaction with

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[4] Sirgy et al. (2000) determine global government services satisfaction using the average of satisfaction with various government services, such as fire protection, police protection, and emergency rescue services.
[5] Global business services satisfaction is determined by the average of satisfaction with various business services, such as banking, retailers, and restaurants.
[6] Global non-profit services satisfaction is determined by the average of satisfaction with various non-profit services, such as foster care/adoption services, crisis intervention, and counseling/support services.

community life. Subjective indicators are used in the analysis of community QOL. Building on the global community satisfaction model developed by Sirgy et al. (2000), a scale of community QOL was created using measures of satisfaction with government and non-government services in combination with a measure of overall satisfaction with the community.

CHAPTER 3

LITERATURE REVIEW

Both social capital and quality of life are concepts widely studied in a variety of fields – from sociology to political science to economics and others. They are broad, multidimensional concepts that have been applied to a range of different research questions at a range of levels of inquiry. This paper will look at social capital and quality of life at the community level, with an examination of social capital as a community resource with the potential to improve QOL in small towns in Iowa.

Before turning to the research findings of the present study, however, it is necessary to determine the state of knowledge regarding social capital and QOL. Although none of the studies reviewed here use the same operationalization of social capital as is used in the present study, the researchers have similar conceptualizations of social capital and have devised appropriate measures using the data available to them. Due to the limited number of studies that have examined social capital at the community level, the literature reviewed below includes research conducted at various levels of analysis. Although the results of studies at levels of analysis other than the community are not directly transferable to the community level, insight can still be gained from their conclusions. The findings of social capital studies at the individual, community of interest, and state level presented below suggest likely community level outcomes.

Consequences of Social Capital

Social capital has been found to be related to a variety of aspects of life. "With few exceptions, social capital is depicted as playing a functional and positive role in the outcome

of some other quality deemed important for individuals or social groups at various scales"

(Wall et al. 1998: 312). In his work *Bowling Alone: The Collapse and Revival of American*

Community (2000), Putnam identifies several general benefits of social capital. First, social

capital is useful in resolving dilemmas of collective action by helping to ensure coordination

and compliance to desired behavior. For example, in communities high in social capital,

residents are more likely to reduce their water usage during times of limited water supply

because of the norms of reciprocity present within the community and the networks

enforcing those norms. A second way social capital is beneficial is that it reduces the cost of

everyday business and social transactions. The trust aspect of social capital works to

guarantee both parties fulfill their part of the transaction, so there is no need to spend time

and money ensuring compliance or punishing noncompliance. Third, social capital makes

people more aware of "the many ways in which our fates are linked" (Putnam 2000: 288).

Such an awareness encourages behaviors and character traits that are beneficial to the rest of

society, such as tolerance and empathy. It also discourages behaviors harmful to society,

such as "random acts of violence." A fourth benefit of social capital is that it facilitates the

flow of information. By keeping citizens aware of the needs and goals of the community,

information helps to mobilize citizens to work toward community goals or deal with threats

to the community. Information also helps citizens to find problems and determine solutions.

A final way social capital is beneficial is its ability to improve the lives of individuals in

psychological and biological ways. "Mounting evidence suggests that people whose lives are

rich in social capital cope better with traumas and fight illness more effectively" (Putnam

2000: 289).

In addition to the general benefits of social capital, Putnam and others have used empirical research to identify specific consequences of social capital. "Community connectedness is not just about warm fuzzy tales of civic triumph. In measurable and well-documented ways, social capital makes an enormous difference to our lives" (Putnam 2000: 290). Social capital has been found to be related to various aspects of community life, including education, local economy, collective action, voluntary participation, government performance, crime, health, and happiness.

One of the earliest social capital studies was undertaken to gain an understanding of how social capital relates to education. Coleman's (1988) research indicated social capital within the family and social capital in the adult community surrounding the school reduce the probability of dropping out of high school. Putnam (2000) also found that social capital was an important predictor of standardized test scores and dropout rates. He noted that informal social capital (level of social trust and informal socializing) had a stronger relationship to student achievement than did formal social capital (i.e. church attendance). Putnam concludes, "Social capital at the neighborhood or community level clearly has an impact on child learning" (Putnam 2000: 305). Various other studies have found similar evidence of such a relationship. For example, Perreira, Harris, and Lee (2006) found that low levels of community social capital increase the risk of children of immigrants dropping out of school. Research by Israel, Beaulieu, and Hartless (2001) indicated community social capital structural attributes (which they defined as socioeconomic capacity, average years in current home, and voter percentage) as well as community social capital process attributes (including number of moves since first grade, and involvement in religious and nonreligious groups) have a significant impact on student achievement (test scores, grades, dropout rate).

Social capital has also been found to have an impact on the local economy. In a discussion of the social determinants of economic action for immigrants, Portes and Sensenbrenner (1993) suggested social capital has various positive effects on economic action in immigrant communities, including the altruistic support of community goals, access to economic resources within the community, and flexibility in economic transactions because formal contracts are not always necessary. Among the negative effects identified were the problem of free-riders and restrictions on the freedom of individual expression and contacts outside of the community. Knack and Keefer (1997) used measures of trust and civic norms to study the relationship between social capital and economic performance at the nation-state level. They found strong evidence that trust and norms do have a significant impact on aggregate economic activity. However, they found horizontal networks (membership in groups) were unrelated to economic performance. Casey and Christ (2005) reconstructed the measure of social capital designed by Putnam (2000) and used it to examine the relationship between social capital and economic performance in American states. They found no relationship between social capital and output or social capital and employment. However, they did find social capital to have a significant impact on economic equality and stability of employment. They conclude, "Social capital should be conceived of less as a form of capital, greater stocks of which improve economic efficiency, and more as an insurance program against instability and the vagaries of the business cycle" (Casey and Christ 2005: 843).

Greater collective action is another benefit of social capital. Flora et al. (1997) found that "entrepreneurial social infrastructure," which Flora (1998) describes as a form of social capital "closely related to horizontal social capital" (490), was related to successful

community-based economic action. Additionally, they found social capital to be an effective predictor of collective action in general. Their findings suggest "economic development is not something that happens as an isolated community activity, but is part of the larger community fabric – is indeed embedded in community norms and relationships" (636). Supporting the link between social capital and collective action is Sharp's (1998) study of social capital in three Iowa towns. One town had high social capital, one had moderate social capital, and one had low social capital. He found that high social capital had a positive influence on community action, moderate social capital limited action, and low social capital further limited community action.

Community members' voluntary participation in community improvement activities is one type of community action, and there is evidence that social capital has a positive effect on community involvement in voluntary projects. Suggesting community attachment as a possible dimension of social capital, Ryan at al. (2005) found that community attachment is positively related to voluntary participation in community activities and events. Liu and Besser (2003) reached a similar conclusion. For their study of social capital and voluntary participation in community activities by elderly residents of small towns, Liu and Besser organized social capital into four forms: informal social ties, formal social ties, trust in the community, and norms of collective action. They found that all forms of social capital had a significant relationship with voluntary participation by the elderly, although the strength of the relationship varied by form of social capital. Formal social ties had a strong relationship with voluntary participation, informal social ties and norms of collective action had a moderately strong relationship with voluntary participation, and trust in the community had a weak relationship with voluntary participation.

Social capital has been shown to be related to government performance as well.

Rice's (2001) research indicated that towns high in social capital tend to be towns where

citizens rate their government as more responsive and effective, compared to towns lower in

social capital. More specifically, Rice found a significant positive relationship between

social capital "values" (trust, political equality, and civic engagement) and government

responsiveness and effectiveness. However, when he measured social capital as networks, he

did not find a significant relationship between social capital and government responsiveness

and effectiveness.

Unlike the previously mentioned aspects of community, which have been shown to be

positively related to social capital, crime is one aspect of community life that has been found

to have a negative relationship with social capital. Putnam's research (2000) found violent

crime to be rarer in states high in social capital. Others have produced similar findings.

Although they did not use the term social capital, research by Sampson, Raudenbush, and

Earls (1997) suggested that informal social control (i.e., enforcement of norms), social

cohesion (i.e., shared norms, willingness to help, close-knit neighborhood), and trust are

linked to reduced crime. Beyerlein and Hipp (2005) found that the relationship between

social capital and crime may vary by type of social capital. Their findings suggest that the

bonding social capital promoted by evangelical Protestants is related to higher rates of crime,

while the bridging social capital cultivated by Catholics and mainline Protestants is related to

lower crime rates.

Another important consequence of social capital is its positive relation to physical

well-being. Putnam notes, "Social connectedness matters to our lives in the most profound

way" (2000: 326). He found that social capital is positively correlated to an index of public

health[7] and negatively correlated to all-cause mortality rates. Research by Lochner et al. (2003) produced similar findings. In a study of Chicago neighborhoods, they found social capital - which they measured as reciprocity, trust, and civic participation, to be associated with lower neighborhood death rates. The association held even after adjustment for material deprivation.

In addition to physical health benefits, social capital has been linked to improved mental health. Ziersch et al. (2005) found that social capital - operationalized as the extent of neighborhood connections - is related to mental health for neighborhood residents. Happiness is a particular aspect of mental health that has been found to be linked to social capital. Putnam found that social connectedness (volunteering, attending club meetings and/or church, and entertaining at home) is linked to happiness with life. Gundelach and Kreiner (2004) also found a link between social capital and happiness. In a study of happiness and life satisfaction in advanced European countries, they found that country-level social capital, which they operationalized as the density of social ties and membership in associations, was the most important predictor of happiness.

Implications for Quality of Life

As previously noted, there is a lack of research on the relationship between QOL and social capital. However, one study regarding the relationship between two concepts with similarities to social capital and QOL is worth noting. Tolbert et al. (2002) studied the influence of civic engagement on civic welfare. Civic engagement is often included as an outcome of social capital, and civic welfare, operationalized as higher income levels, less poverty, retention of residents, and lower unemployment, is essentially an objective measure

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[7] Morgan-Quitno Healthiest State Rankings

of community QOL. The researchers found civic engagement to have a positive influence on civic welfare. They reason, "Simply stated, civic welfare should increase where there are more organizations that encourage association and are oriented to the public good" (2002: 95).

Despite a lack of studies specifically regarding the relationship between community social capital and QOL, social capital has been found to be related to several aspects of community QOL. This relationship is evidenced by the studies outlined above regarding the consequences of social capital on various facets of the community, including education, local economy, collective action, voluntary participation, government performance, crime, health, and happiness. All of these aspects of community life can be considered either measures of QOL or activities that can result in an improvement in community QOL. Satisfaction with education, the local economy, government performance, crime (safety), health, and happiness have all been used in studies of QOL (Andrews and Withey 1976; Schuessler and Fisher 1985; Sirgy et al. 2000). Collective action enables people to improve their community or maintain a good QOL, and community improvement is a particular outcome of volunteering. The relationship between social capital and these elements of community life suggests social capital is also related to the broader concept of community QOL.

Hypotheses

Based on past research findings regarding the consequences of social capital on aspects of QOL, it is hypothesized that social capital will be positively related to QOL in Iowa's small towns. With the understanding that different types of social capital have been found to have different consequences on aspects of community life, social capital is organized into four forms: formal structural, formal normative, informal structural, and

informal normative, each of which is hypothesized to be positively related to social capital.

The following four hypotheses are proposed:

H1. Formal structural social capital is positively related to community QOL.

H2. Formal normative social capital is positively related to community QOL.

H3. Informal structural social capital is positively related to community QOL.

H4. Informal normative social capital is positively related to community QOL.

Additionally, several models analyzing how the types of social capital are related to one

another with QOL as the dependent variable will be considered.

CHAPTER 4

OPERATIONALIZATION

Data and Methods

Data and Sample

Data for this study are from a 2004 survey on community life in Iowa's small towns. The project was designed to measure quality of life, social capital, and other aspects of Iowa's small communities. For the purposes of this study, community is operationally defined as the residents listed in the telephone exchange area of an incorporated municipality. A multistage sampling procedure was used to first select communities, then households, and finally individual community residents to respond to the survey. One community from each of Iowa's 99 counties was selected for study from a sampling frame of incorporated municipalities that were not adjacent to a metropolitan area and had a population greater than 500 but less than 10,000 persons. Surveys were mailed to 150 households in each community. Households were selected from the telephone directories of the incorporated municipality using a systematic selection process. Heads or co-heads of household were randomly chosen by gender and asked in a letter accompanying the survey to complete the questionnaire, with instructions for another adult member of the household to complete the survey if the designated gender was not present. Replacement households were selected in the event of postal returns. Of the 14,850 selected households, 9,962 residents responded for an overall response rate of 67%, with community response rates ranging from 47% to 81%.

Measures

The questionnaire focused on three main topic areas: quality of life, local social environment, and community involvement. The measures of social capital for this study were constructed using data from the areas of local social environment and community involvement, including information on formal and informal ties. Organizing social capital into four types based on the form of the connection (formal or informal) and divided along two dimensions (structural and normative ties), four variables were created to measure social capital: organizational density, "communityness," gathering places density, and "neighborliness." A single variable was used to measure QOL.

Two types of procedures were used to create the variables for analysis: factor analysis and network analysis. The variables organizational density and gathering places density were created using social network analysis procedures. The communityness, neighborliness, and QOL variables were created as scales using factor analysis. Specifically, a type of exploratory factor analysis, called principal components analysis, was used to reduce the number of predictor variables and transform the original variables into new sets of linear combinations (Stevens 2002).

All factor scales were created at the individual level and then aggregated to the community level. For each community, the aggregated community level data is the average of individual level factor scales. While the normative social capital measures and the QOL measure are aggregated data, the structural measures of social capital are not. Aggregation of the structural measures was unnecessary, as these variables are measures of the density of connections within the community, and as such are inherently at the community level.

Validity and Reliability

Validity and reliability are important issues in all empirical analyses. Measurement validity refers to how well a construct of measurement fits with the reality of what is being measured, while measurement reliability refers to the consistency or dependability of the measurement (Neuman 2006). Measurement validity is addressed here in two ways. First, the selection of variables for analysis was based on theory and previous social capital and QOL literature. This helps to ensure face validity - or whether the measures are valid in the judgment of others, as well as content validity – or whether the measures capture the entire meaning of the concepts they are designed to gauge.

Second, construct validity is assessed using factor analysis. Construct validity is a concern for measures with multiple indicators (Neuman 2006), such as the measures of communityness, neighborliness, and QOL in this study. A measure has construct validity if the various indicators that make up the measure converge in an expected manner (Neuman 2006). Creating the measures of communityness, neighborliness, and QOL using factor analysis allowed for the assessment of the construct validity of the measures. Factor analysis involves calculating the extent of correlation between and among variables, and determining whether the extent of correlation justifies combining the variables into a single scale (Stevens 2002). This decision is based on the size of the factor loadings. The factor loadings for communityness, neighborliness, and QOL ranged from .685-.910, which exceed typical recommendations of .30 (Kim and Mueller 1978) or .40 (Stevens 2002). See Table 4.1 for descriptive statistics and factor loadings for all scales used in the analysis.

The internal reliability of the scales was assessed using Cronbach's alpha. Cronbach's alpha is a measure of internal consistency (Carmines and Zeller 1979, Nunnally

Table 4.1. Descriptive Statistics and Factor Loadings[1] for Indicators

Variables and Indicators	Range	Mean	S.D.	Factor Loading
Social Capital Formal Ties				
Organizational Density[2]	*.01 to .20*	*.12*	*.04*	
"Communityness"	*-.61 to .48*	*-.01*	*.24*	
Clubs and organizations in [town] are interested in what is best for all residents[3]	1 to 5	3.54	.91	.757
I think that "every person for themselves" is a good description of how people in [town] act	1 to 5	3.40	1.01	.685
Residents in [town] are receptive to new residents taking leadership positions	1 to 5	3.13	.97	.692
Not trusting/trusting	1 to 7	4.96	1.47	.692
Cronbach's Alpha = .65				
Social Capital Informal Ties				
Gathering Places Density	*.00 to .07*	*.04*	*.02*	
"Neighborliness"	*-.58 to .42*	*-.01*	*.22*	
Unfriendly/Friendly	1 to 7	5.49	1.41	.825
The immediate neighborhood I live in is closely knit	1 to 5	3.15	1.08	.685
Being a resident of [town] is like living with a group of close friends	1 to 5	3.49	.99	.864
Cronbach's Alpha = .69				
Quality of Life				
Community QOL	*-1.22 to .85*	*-.03*	*.40*	
Overall, [town] has more things going for it than other communities of similar size	1 to 5	3.16	1.05	.871
Overall quality of government services	1 to 4	2.82	.74	.888
Overall quality of local services/ facilities	1 to 4	2.32	.81	.910
Cronbach's Alpha = .66				

[1] Principal Components analysis with oblique rotation; pattern coefficients are reported; factor loadings reflect the analysis of only the variables in each scale

[2] Shaded cells and italics indicate community-level data (n = 99)

[3] Non-shaded cells without italics indicate individual-level data (n = 9,962)

and Bernstein 1994). It is determined using the average correlation among items within a scale. The coefficient alpha generally increases as the correlation between the items in the scale increases. Alpha also increases as the number of items in the scale increases (Carmines and Zeller 1979, Nunnally and Bernstein 1994). Although there is debate as to what level of alpha is acceptable, Nunnally and Bernstein (1994) consider an alpha of .70 to be modest. However, because the scales used in this study include relatively few items – just three for neighborliness and QOL and four for communityness, alphas of .65, .66, and .69 may be deemed acceptable.

Formal Social Capital

The formal structural social capital measure, organizational density, assesses the crosscutting ties of organizational membership within the community. The measure was taken from a series of questions assessing the extent of overlapping membership in different types of organizations and local institutions, including work, church, and various local community groups. Residents were asked how involved they were in "LOCAL groups and organizations, that is, those that hold meetings and activities in [town]." The six types of groups listed were political/civic groups, recreational groups, church-related organizations, job-related groups, and service and fraternal organizations. Respondents were asked whether or not they belong to each type of organization, and if they did belong, they were asked to report their level of attendance. Level of attendance was broken down into the following options: "Never," "1-5 Times a Year," "6-11 Times a Year," "Once a Month," and "Weekly or More." Local church membership was assessed with a question asking where the respondent attended church, with the options of "mostly in [town]," "mostly outside [town],"

or "do not use." Residents were also asked to name the community where they were

employed.

Social network analysis procedures were used to measure the extent of overlapping

membership in the different types of organizations and institutions. First, responses were

coded into a binary measurement of "belong" or "do not belong." Belonging was indicated

by a code of "1," while not belonging was assigned a code of "0." For each type of

organization, residents who reported attending at least once per year were assigned a code of

"1," and those who either did not belong or never attended were assigned a code of "0."

Those who reported attending church mostly in their community were assigned a code of

"1," and other responses were coded "0." Those who reported employment in the

community in which they lived were coded as "1," while those who reported either not

working or working outside of the community were coded as "0." The codes were then

placed into "n by 8" two-mode, case-by-affiliation matrices for each community, showing

which residents belonged to which type of groups. To assess crosscutting ties among groups,

the case-by-affiliation matrices were converted into one-mode, affiliation-by-affiliation

matrices using UCINET[8] software (refer to Figure 4.1 for an example). The diagonals of

each matrix were eliminated because they represent the number of individuals affiliated with

each type of institution rather than crosscutting memberships across institutions. The values

in the cells of the matrices were then divided by the sample size. The result was a calculation

of the proportion of respondents in each community who served as connectors between the

two organizations corresponding to the cell. A density score was then calculated for each

community by averaging the calculated proportions in each cell.

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[8] UCINET is a software package designed for social network analysis.

Figure 4.1. An Example One-Mode, Affiliation-by-Affiliation Matrix

	A	B	C	D	E	F	G	H
Service &Fraternal (A)	11							
Recreational (B)	10	6						
Political & Civic (C)	8	9	9					
Job-related (D)	8	10	12	8				
Church-Related (E)	13	12	9	8	12			
Other (F)	9	8	8	8	9	9		
Local Church (G)	13	14	10	11	9	10	9	
Local Job (H)	10	11	9	8	11	0	11	11

Possible density scores range from 1.0 to 0.0. A score of 1.0 would indicate that all respondents were affiliated with every type of organization, while a score of 0.0 would indicate that no respondents were affiliated with any type of organization. Higher density scores indicate a greater number of residents whose dual-membership created crosscutting ties within the community. Thus, higher scores indicate higher levels of formal structural social capital. The range of density scores for the 99 towns in the study was 0.01 to 0.20 (see Table 4.1).

"Communityness," the formal normative social capital measure, is a measure of the inclusiveness and level of generalized trust in the community. Communityness is a factor-scale combining four indicators assessing the extent of generalized trust and norms supporting a public good orientation. Using a five point scale ranging from strongly agree to strongly disagree, three questions asked respondents the degree to which they agree to several questions regarding community norms and trust. Residents were asked: if clubs and organizations in their town are interested in what is best for all residents, if they thought "every person for themselves" is a good description of how people in their town act, and if

they felt residents in their town are receptive to new residents taking leadership positions. The fourth component of the communityness measure is taken from a question asking residents the extent to which the community is best described as "trusting" or "not trusting" using a seven point semantic differential with not trusting on one side and trusting on the other. As indicated in Table 1, factor loadings are high (between .685 and .757) and Cronbach's alpha (.65) is acceptable for the components of communityness.

Informal Social Capital

Gathering places density is the informal structural measure of social capital. It is the extent of overlapping informal social connections established through reported socializing in various types of local public gathering places. To measure informal structural social capital, social network analysis procedures similar to those used for the formal structural measure of social capital were used. To assess the extent of socializing, residents were asked a series of questions regarding the frequency of socializing in a variety of types of local gathering places. Gathering places included food centers, bars/lounges, city parks, town square or downtown area, community centers, or golf and country clubs.[9] Respondents were asked whether they socialized or visited with others in each type of gathering place daily, weekly, monthly, or never. There was also an option of "no such place" if there were no gathering places of that type in the community. Responses were recoded into a binary measurement; Daily and weekly responses were assigned a value of "1" and all other responses were assigned a value of "0." Using the same procedure as was used for the organizational density measure, the case-by-affiliation matrices were transformed into affiliation-by-affiliation

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[9] Malls and bowling alleys were also included in the survey. However, because the majority of small towns do not have such places, these items were not included in the analysis here.

matrices,[10] which were then used to calculate density scores. Higher scores indicate more crosscutting ties in the informal arena of the community, and thus higher informal structural social capital. For the 99 communities, scores ranged from .00 to .07 (refer to Table 4.1).

The informal normative social capital measure, "neighborliness," is comparable to the notion of bonding social capital studied by Putnam and others. It consists of a factor scale of three questions aimed at assessing the extent of the strong ties within the community. Residents were asked to identify: 1) whether or not their town was friendly using a seven point semantic differential with "unfriendly" on one side and "friendly" on the other, 2) whether they agree or disagree that the immediate neighborhood they live in is closely knit, and 3) that being a resident of their town is like living with a group of close friends. A five point scale from strongly disagree to strongly agree was used for the last two questions. Ranging between .685 and .864, factor loadings indicate the presence of conceptual convergence between the terms (see Table 4.1). Cronbach's alpha is .69, which is also acceptable.

Quality of Life

Subjective measures of QOL were used to gain an understanding of the level of QOL perceived by community members. Three questions were included in the creation of the QOL scale. The first question captures an overall sense of how the respondents felt their town compared to other towns with similar populations: "Overall, [town] has more things going for it than other communities of similar size." Responses for this question ranged from strongly agree to strongly disagree. The second two questions were designed to assess

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[10] Values along the diagonal were excluded from the gathering places density item as well, because these elements were not a representation of overlapping informal social connections, but rather a representation of the number of individuals visiting each type of place.

satisfaction with local government services and local non-government services. Following a series of questions about specific government and non-government services, respondents were asked to rate the "overall quality of local services/facilities" and the "overall quality of government services." Ratings were on a four-point scale from very good to poor. For the 99 communities, ratings of QOL ranged from -1.22 to .85, with a mean of -.03 (see Table 1). As shown, factor loadings are high for the QOL scale, ranging between .756 and .805. Cronbach's alpha is acceptable at .66.

Control Variable

To statistically control for the effects of population size, population[11] was included in the regression analyses for this study. Population can potentially influence social capital in both positive and negative ways. A larger population may result in the presence of more organizations to join or gathering places to visit; that is, a larger population may lead to greater opportunities for formal and informal social capital connections. On the other hand, a smaller population may encourage higher levels of communityness or neighborliness, because residents in smaller towns are likely to know a greater proportion of their fellow community residents and be more trusting of other community members. Further, because the sample of towns is skewed toward the small end and does not meet the assumption of normality, the log of population was used in order to smooth out the distribution.

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[11] Population statistics are from the 2000 Census (U.S. Census Bureau).

CHAPTER 5

RESULTS

Descriptive Statistics

Before examining the results of the correlations and regression models, it is appropriate to provide a context regarding the communities and respondents included in the study. Univariate descriptive statistics are displayed in Table 5.1. The mean population of the selected communities is 1,879 persons (U.S. Census Bureau 2000). Slightly over half (56 percent) of the communities have a population of less than 1,200 persons, while only eight percent have more than 5,000 residents. Nearly half (49 percent) are located more than sixty miles from a metro area, with the farthest distance being 131 miles. Twenty-one of the selected communities are county seats.

Most respondents are homeowners (84 percent) living within city limits (70 percent). The mean age is nearly 57 years, and over half (53 percent) of respondents have lived in their community for thirty years or longer. There are slightly more female respondents (55 percent) than male respondents (45 percent). The majority (69 percent) are married. Nearly two-thirds (60 percent) of respondents are employed full-time or part-time, and of these almost half (47 percent) commute to another community to work. Only 2 percent report being unemployed. A vast majority have graduated from high school (90 percent) and a slight majority (52 percent) have at least some college education.

Correlations

There are significant correlations between most of the variables used in the analyses, as shown in Table 5.2. As expected, the QOL scale is significantly related to all other

Table 5.1. Univariate Descriptive Statistics			
	Percentage	Mean (S.D.)	Range
Community Level			
Population		1,878 (2,037)	500-10,345
Distance to metro area (in miles)		57.7 (28.6)	8-131
County seat	21%		
Individual Level			
Homeowners	84%		
Inside city limits	70%		
Length of residence (in years)		33.2 (22.5)	1-107
Age (in years)		56.7 (17.2)	17-107
Gender			
Male	45%		
Female	55%		
Marital status			
Never married	6%		
Married	69%		
Divorced/Separated	10%		
Widowed	16%		
Employment			
Full-time	50%		
Part-time	10%		
Retired	33%		
Unemployed	2%		
Other	5%		
Commute (if employed full- or part-time)	47%		
Education			
Less than high school	10%		
High school diploma	38%		
At least some college	52%		

Table 5.2. Correlations of All Variables

	Org. Density	Community-ness	Gathering Places Density	Neighbor-liness	Quality of Life	Log (base 10) 2000 Population
Org. Density	1					
Community-ness	.128	1				
Gathering Places Density	.658**	.235*	1			
Neighbor-liness	.086	.814**	.207*	1		
Quality of Life	.532**	.586**	.556**	.384**	1	
Log (base 10) 2000 Population	.598**	-.217*	.284**	-.350**	.353**	1

N = 99
* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

variables. There are also significant relationships between population and the other variables used in analysis. Interestingly, both normative measures of social capital – communityness and neighborliness - are negatively correlated with population. This may be because in towns with smaller populations people are more likely to know and trust each other.

The two structural measures of social capital – organizational density and gathering places density - are significantly correlated to one another, as are the two normative measures of social capital – communityness and neighborliness. Despite the high correlation between

communityness and neighborliness, the two are conceptually distinct. Though both represent

normative elements of the community, communityness is an assessment of the extent of

generalized trust and norms supporting a public good orientation in the community, while

neighborliness is an assessment of the extent of the strong bonding ties within the

community. Nevertheless, the high correlation between communityness and neighborliness

suggests a possible problem with collinearity.[12]

Regression Results

Formal Social Capital and Quality of Life

The regression coefficients from the OLS regression of social capital and QOL are

shown in Table 5.3. Three models are used to examine the relationship between formal

social capital and QOL. The first model analyzes the relationship between formal structural

social capital and QOL, the second analyzes the relationship between formal normative

social capital and QOL, and the final model analyzes the relationship between both types of

formal social capital and QOL. Population is included as a control variable in

each model. All models are significant and explain at least twenty-seven percent of the

variance in the level of QOL.

Model 1 is the regression of formal structural social capital and QOL, controlling for

population. A significant, positive relationship was found between organizational density

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[12] The analysis of collinearity statistics shows that multicollinearity is not a serious issue in any of the regression models. For each independent variable in each model, a variance-inflation factor (VIF) was calculated. A VIF indicates how much larger the variance of the estimated coefficient is than it would be if the variable were uncorrelated with the other independent variables in the model (Freund 2003). Although there is no universally accepted criterion as to what magnitude of VIF is indicative of a problem with multicollinearity, it has been proposed that VIF values exceeding 10 should be considered an indication of serious multicollinearity (Freund 2003). The variance-inflation factors range from 1.049 to 3.442, indicating multicollinearity is not a problem in any of the models.

Table 5.3. The Relationship between Quality of Life and Social Capital Controlling for Population (OLS Regression): Standardized Coefficient (t-statistic)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Population	.054 (.504)	.504 (7.495)***	.342 (4.030)***	.213 (2.479)*	.556 (6.692)***	.417 (5.029)***	.342 (3.928)***
Organizational Density	.500 (4.642)***		.247 (2.959)***				.067 (.672)
Communityness		.696 (10.342)***	.629 (9.172)***				.674 (6.461)***
GP Density				.495 (5.774)***		.342 (4.316)***	.278 (3.394)***
Neighborliness					.579 (6.968)***	.459 (5.655)***	-.108 (-.966)
F Statistic	19.159***	67.949***	51.877***	25.897***	34.582***	33.497***	36.966***
Adjusted R^2	.270	.577	.609	.337	.407	.499	.647

N = 99
* $p < .05$, ** $p < .01$, *** $p < .001$

and QOL, suggesting the greater the crosscutting ties of organizational membership within a community, the higher the level of QOL in the community. This finding supports Hypothesis 1, which predicted formal structural social capital is positively related to community QOL. Nearly thirty percent (Adjusted R^2 = .270) of the variation in the level of QOL is explained by the organizational density within a community.

Model 2 is the regression of formal normative social capital and QOL, controlling for population. Hypothesis 2, which predicted formal normative social capital is positively related to community QOL, is supported. Like the relationship between formal structural social capital and QOL, the relationship between communityness and QOL is both positive and significant. This finding indicates that QOL increases with the inclusiveness and level of trust in the community. Model 2 explains fifty-eight percent of the variance in QOL (Adjusted R^2 = .577).

Formal social capital as a whole is regressed with QOL in Model 3, controlling for population. QOL is positively and significantly related to all variables in the model, indicating formal social capital is an important predictor of QOL in small Iowa communities; the higher the level of formal social capital in a community, the better the QOL in the community. However, note that communityness is the stronger predictor of the two formal social capital measures – its strength is more than three times that of organizational density. Also, the strength of organizational density decreases by about half from Model 2 to Model 3, while the strength of communityness remains about the same from Model 1 to Model 3. This indicates that some of the organizational density within a community is explained by communityness. Perhaps a strong sentiment of inclusiveness and trust within a community

encourages more residents to join local clubs and organizations. Over sixty percent

(Adjusted R^2 = .609) of the variance in QOL is explained by Model 3.

Informal Social Capital and Quality of Life

Like the analysis of formal social capital and QOL, three models are used to examine

the relationship between informal social capital and QOL (see Table 5.2). The first model

analyzes the relationship between informal structural social capital and QOL, the second

analyzes the relationship between informal normative social capital and QOL, and the final

model analyzes the relationship between both types of informal social capital and QOL.

Population is controlled for in each model. All models are significant and explain at least

thirty-four percent of the variance in the level of QOL.

Model 4 is the regression of informal structural social capital and QOL, controlling

for population. Hypothesis 3 predicted informal structural social capital is positively related

to community QOL. This prediction is supported by Model 4. The relationship between

gathering places density and QOL is positive and significant, indicating the more community

residents socialize in local gathering places, the higher the level of QOL will be in a

community. Thirty-four percent (Adjusted R^2 = .337) of the variance in QOL is explained by

Model 4.

Informal normative social capital is regressed with QOL in Model 5. Population is

included as a control variable. Hypothesis 4 is supported; informal normative

social capital is positively related to community QOL. As with all other social capital

variables, neighborliness is significantly and positively related to QOL. This finding

suggests that the friendlier and more close-knit a community, the higher the QOL in that

community. This model explains forty-one percent (Adjusted R^2 = .407) of the variance in

QOL.

Model 6 is the regression of informal social capital as a whole and QOL, controlling

for population. QOL is positively and significantly related to all variables in the model,

indicating informal social capital is an important predictor of QOL in small Iowa

communities; the higher the level of informal social capital in a community, the higher the

level of QOL in the community. In this model, neighborliness is the slightly stronger

predictor of QOL. The standardized coefficients of both measures decrease slightly from the

first two models to the third, indicating some intersection between the two variables. Half of

the variance in QOL is explained by this model (Adjusted R^2 = .499).

Social Capital and Quality of Life

Model 7 is the regression of all four types of social capital and QOL, controlling for

population. Interestingly, although all types of social capital are found to be significantly and

positively related to QOL when regressed individually[13] as well as when regressed with their

structural or normative counterparts based on the form of connection (formal or informal),[14]

not all of these relationships hold when all types of social capital are included in the

regression equation. The formal normative measure and the informal structural measure are

both found to be significantly related to QOL in Model 7. However, neither the formal

structural measure nor the informal normative measure reaches the level of statistical

significance. This finding indicates when all other types of social capital are controlled for,

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[13] Refer to Models 1, 2, 4, and 5 in Table 5.3.
[14] Refer to Models 3 and 6 in Table 5.3.

organizational density and neighborliness are not important predictors of QOL in small towns in Iowa.

Communityness is shown to be the strongest predictor of QOL. Its standardized coefficient is nearly two-and-a-half times the standardized coefficient of gathering places density, the only other significant social capital variable in the equation. This indicates the other three types of social capital are to some extent explained by communityness. Perhaps people join more organizations, socialize in more gathering places, and are more friendly and close-knit in communities where there is a high level of generalized trust and norms supporting a public good orientation. Additionally, the significance of the informal structural measure indicates neighborliness and organizational density may also be partly explained by gathering places density. Perhaps the more people socialize in the gathering places within a community, the more friendly and more involved its citizens.

As shown, the model accounts for sixty-five percent of the variation in QOL (Adjusted R^2 = .647). This is not much higher than the percent of variation explained by the formal measures of social capital in Model 3 (Adjusted R^2 = .609). This is likely due to the presence of communityness in both equations, which has been found to be the strongest predictor of QOL.

CHAPTER 6

DISCUSSION AND CONCLUSION

This study sought to determine whether social capital is related to quality of life in Iowa's small communities. Previous research on social capital has found it to be related to various aspects of community life, such as education, the economy, collective action, voluntary participation, government performance, crime, health, and happiness, but no study had yet considered social capital in relation to QOL. Based on the findings of past studies, it was hypothesized that community social capital is positively related to QOL.

Using data from a study of community life in small Iowa towns, it was found that social capital is indeed related to QOL at the community level. Internally well-connected communities are able to mobilize resources in the pursuit of goals, and this is positively related to the community's QOL. A social environment of generalized trust and norms supporting a public good orientation was found to be the most important predictor of QOL within a community. The presence of gathering places within the community was also found to be an important predictor of QOL.

The findings of this study provide insight into the three research questions proposed in Chapter 1. First, for small Iowa communities, is social capital related to QOL? The answer is yes. All types of social capital were found to be significantly related to community QOL. Second, what is the direction of the relationship? The four types of social capital were all found to be positively related to QOL. This means that as social capital increases in a community, so does the QOL in the community. Third, is there variation depending on the form of social capital (formal ties versus informal ties)? The relationship does not vary by

form of social capital; the model analyzing the relationship between QOL and both types of

formal social capital[15] and the model analyzing the relationship between QOL and both types

of informal social capital[16] indicate that both forms of social capital are significantly and

positively related to QOL in Iowa's communities. However, when all types of social capital

are included in the regression analysis, the relationship between QOL and neighborliness and

organizational density lacks statistical significance.

The results of this study indicate social capital is indeed related to QOL at the

community level. This finding supports previous research findings that social capital has

important resource potential for communities. Communities with a high level of social

capital have the opportunity to use the networks within the community and the attributes

embedded in those networks (i.e., generalized trust and citizens' public good orientation) to

improve or maintain community QOL. The results of the model containing all types of social

capital indicate that the most important predictors of QOL in a community (in terms of social

capital) are communityness and gathering places density. This suggests communities should

foster an environment of generalized trust and norms supporting a public good orientation in

the community, as well as build and maintain local gathering places and encourage residents

to socialize with one another in these settings. It should be noted that social capital did not

explain all of the variance in QOL in the communities in this study. Nevertheless, the

explanatory power of social capital in predicting QOL is remarkably high.

A benefit of this study is the high response rate of survey participants. This helps to

ensure the generalizability of the findings to Iowa communities not involved in the study.

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[15] See Model 3 in Table 5.2.
[16] See Model 3 in Table 5.3.

Although Iowa may be unique, it may also be possible to generalize to small towns in other states with conditions similar to those found in Iowa. The well-conceived measures of social capital are another important benefit of this study. Based firmly on the theoretical foundations of social capital, the measures presented in this study have the potential to set a new standard in social capital research.

A limitation of this study is the high correlation found between communityness and neighborliness. Although the two are conceptually distinct, the high correlation suggests a great deal of overlap in their indicators. There are multiple standards regarding indications of serious multicollinearity, and the analyses in this study meet the most generous standard of having VIF values below 10. None of the VIF values for this study exceeded 3.442. However, a more rigorous defense of the findings would be possible if higher standards regarding multicollinearity indicators were met. Either the concepts are not as distinct as is argued or more refined indicators are necessary. This should be addressed in future research.

Although this study provides a measure of the level of social capital and QOL in Iowa's small communities, without comparison measures from the past or communities in other states it is difficult to assess whether Davidson's bleak description of rural Iowa or Forbes' ranking of Iowa as number one in QOL is more accurate. It is likely that the truth is somewhere between these two extreme positions. The findings of this study indicate that there is variation in the QOL of Iowa's communities. Davidson may have made a mistake in not taking social capital into account in his study of Iowa's rural communities. While it is true that some towns have become what some may consider "ghettos," some towns were able to overcome the farm crisis of the 1980s - perhaps due to social capital. These findings

indicate more research needs to be done on how to improve social capital – and therefore

QOL - in small towns.

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