

2015

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Crystal Elaine Peoples
Iowa State University

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**Bowling alone but eating together: Exploring the role of
gathering places as community social capital in small towns**

by

Crystal Elaine Peoples

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE

Major: Sociology

Program of Study Committee:
Terry L. Besser, Major Professor
Shawn F. Dorius
Derrick Stolee
Cindy Yu

Iowa State University

Ames, Iowa

2015

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ACKNOWLEDGEMENTS

I would like to express my sincerest thanks to my major professor, Dr. Terry Besser, for her guidance and insight not only through the duration of this thesis, but throughout my graduate career thus far. Her tremendous knowledge on social capital and communities have been invaluable. Without her patience and encouragement, this thesis would not be possible and for that I am truly grateful. It is an honor to have had the opportunity to learn and work alongside her and it is truly my privilege to be her last graduate student.

I would also like to thank my best friend and wife, Dr. Carl Riden, for all of her useful comments and suggestions; for her editing assistance; and, for her ability to motivate me to keep working and writing, even after the first draft of this thesis was lost. I thank her for her encouragement through her endless love and support.

ABSTRACT

According to Ray Oldenburg in *The Great Good Place* (1989), gathering places, or third places are a key component of a prosperous community. He argues that these places, e.g. coffee shops, bowling alleys, and parks, are essential for the health of both the people in communities and for the communities themselves. Connecting Oldenburg to Putnam (1993, 1995, 2000), these gathering places serve as a source of social capital for communities. Using data from a study of community life in 99 small Iowa towns, I explore the role that gathering places play in the social and economic well-being of small communities. Findings indicate that food centers, city parks, and the town square most often form the core of small towns' gathering places' networks. Weighted densities of gathering places' networks are significantly correlated to attitudinal measures of bridging and bonding social capital. However, the theory provided by Tolbert, Lyson, and Irwin (1998) that towns with richer gathering places' networks have better socioeconomic outcomes is not supported.

CHAPTER 1. INTRODUCTION

In *The Great Good Place: Cafés, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community* (1989), Ray Oldenburg argues that due to the lack of gathering places, or third places, there has been a loss of close community life. Gathering places are “a generic designation for a great variety of public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work,” (Oldenburg 1989:16). Oldenburg argues that the loss of these spaces has contributed to the loss of close community life, particularly for small towns. This has led to a number of undesirable outcomes for both communities and the people living in them. People no longer expect their communities to be safe and well-kept, and people no longer give their time and effort to help each other (Oldenburg 1989).

Following Oldenburg’s argument, Tolbert, Lyson, and Irwin (1998) state that local social structures, like gathering places, are key to increasing levels of community civic engagement. This civic engagement, in turn, is theorized to be positively associated with socioeconomic outcomes, specifically higher community income levels and lower levels of poverty and unemployment. Social capital theory states that these gathering places, as a network which can foster social trust between residents of a community, are a form of social capital at the community level.

Social capital, as used for this research, is defined as “features of social organization such as networks, norms, and social trust that [can] facilitate coordination and cooperation for mutual benefit,” (Putnam 1995:67). Some have argued further that social capital “represents an attempt to ‘quantify a sense of community spirit’...through assessing the ‘quantity and co-operative quality of a society’s social interactions’” (Gilchrist 2009:9). Gilchrist’s explanation of social

capital provides a strong link to Oldenburg's thesis on the role of gathering places in communities. That is, gathering places provide a sense of community, foster networks of social trust and norms of reciprocity, becoming community social capital.

Using data from a study of life in small Iowa towns, my research seeks to understand the role of gathering places in small communities. Specifically, I use gathering places networks as a measure of community social capital and look at their relationship to community socioeconomic outcomes. Social capital theory predicts a variety of effects on community life. Specifically, social capital is a resource that can be used to affect positive socioeconomic changes for small towns. Previous research has used social capital to study voluntary community participation (Liu and Besser 2003), crime (Sampson, Raudenbush, and Earls 1997), entrepreneurship (Kwon, Heflin, and Ruef 2013), and corporate social responsibility (Jha and Cox 2015) to name a few. While some studies have looked at gathering places as social capital (Besser, Recker, and Agnitch 2008; Whitham 2012), an empirical test of gathering places as social capital on socioeconomic outcomes at the community level has not been attempted. This research seeks to fill that gap.

The focus of this study is twofold. First, I examine the structure of small town's gathering places networks. Descriptions of the most important gathering places and the most important subgroups of gathering places will uncover hidden stratification of community social capital within small towns. Second, I examine the possible relationship between gathering places as community social capital and the socioeconomic outcomes identified by Tolbert et al. (1998): higher community household income; lower rates of poverty; and, higher rates of employment, which is equivalent to the theorized lower rates of unemployment. Based on previous research

regarding community, social capital, and gathering places, I use empirical analyses to answer the following research questions:

- 1) What are the characteristics of small towns' gathering places networks?
- 2) Is the structural measure of community social capital, as indicated by density of gathering places' networks, significantly correlated to residents' attitudinal measures of bridging and bonding social capital?
- 3) Is there evidence for a relationship between community social capital and lower poverty, higher median household income, and percent employed?

CHAPTER 2. LITERATURE REVIEW

This chapter begins with a concise review of community literature and is followed by a discussion of the role that gathering places play in small communities. Next, I give a systematic discussion of social capital, including critiques and attempts to address them. Further, I present arguments that gathering places are an indicator of social capital and I discuss how social network analysis exposes this relationship. The chapter concludes with the hypotheses of this research generated from the prior theoretical discussion.

Community

Sociologists have defined and studied *community* in a variety of ways. Depending on the area of research, a range of concepts may or may not be included in the community conceptualization. In 1955, Hillery compiled 94 different definitions of “community” and found the only commonality to all was people. Nevertheless, when students of rural communities were asked to define community, Hillery found general agreement that “community consists of persons in social interaction within a geographic area and having one or more additional common ties” (Hillery 1955:111). This was also consistent with the majority (69 out of 94) of the definitions he gathered. Still today, these three components are often cited when defining community in the literature.

However, sociologists often make additions to, and sometimes exclude, these components as a part of the conceptualization of community in their work. This is particularly apparent when definitions are sorted by different sociological traditions and theoretical perspectives. For conflict theorists, community is a location for resource competition (Warren and Lyon 1988). For symbolic interactionists, a community conceptualization without the social interaction component is not a community. Stating that “the local settlement itself is a product of

social interaction...that is to say that social interaction defines territory, and not the opposite,” (Wilkinson 1991:23), Wilkinson also argues that community necessarily includes a physical or geographical component. However, this inclusion has been highly contested amongst sociologists. Some argue that geographic area needs to be excluded from the definition so that groups of shared interests, i.e. an online gaming community, where geographic location is irrelevant, are considered communities (Ducheneaut, Moore, and Nickell 2007; Wellman and Haythornthwaite 2002). Still others contend that the Hillery conceptualization of community lacks other required elements. Some maintain that communities also include emotional attachment, a sense of belonging, or a commitment to a place or ideology and that these components require time to build (Bardo and Hartmann 1982).

Generally uncontested, however, is that social interaction is one of the key pieces that all definitions of community include. In 1887, Ferdinand Tönnies began to explore these interactions in an effort to describe and classify the types of social ties between people. Tönnies began by assuming that all social relationships are initially formed from human will or volition ([1887] 1957:33). Because social relationships are formed in a variety of settings, there are different types of human will: the natural will (*Wesenwille*) and the rational will (*Kurwille*). According to Tönnies, the natural will is impulsive and was more prevalent in pre-modern societies, while the rational will is deliberate and is more prevalent in modern societies. Thus, human social interaction coalesces into two (ideal) types of organizations, community (*Gemeinschaft*) and society (*Gesellschaft*).

In community (*Gemeinschaft*), social ties are multipurpose, non-goal oriented, lasting connections that develop through personal and shared aspirations or emotions. This kind of social interaction leads to a social order characterized by informal codes created by family and

rule by census. In contrast, social ties in society (*Gesellschaft*) serve a single purpose and are typically temporary, as they only exist long enough for the people involved to receive benefits from each other (Tönnies [1887] 1957). Here, social interaction leads to social order characterized by formal laws and artificial ties (bonds). While community and society represent two distinct organizations of social interaction, Tönnies argued that, in all observable relationships, both types of social interaction exist. For Tönnies, community and society exist simultaneously to create the social bonding that is found in rural and urban life.

This social bonding can, over time, develop into what Kaufman (1959) calls collective action, another integral part of the conceptualization of a community. As used here, collective action involves the mobilization and application of pooled resources toward common goals (Tilly 1973). This distinction of “common goals” is essential, especially when discussing development and economic prosperity for the whole of the community. Rather than allow the local “growth machine” or those business people who strive to develop community infrastructures that only benefit themselves (Molotch 1976), to take hold, a community with high levels of collective action is able to “influence those special interest fields and asserts the *community interest* in the various spheres of local social activity” (Wilkinson 1991:36). Thus, community collective action is also a method of marshalling the needed resources held separately by various people or groups within the community in order to effectively accomplish common goals. Although “many good intentions for community improvement never get beyond the ‘talk state,’” (Kaufman 1959:13), individuals and groups interacting for the betterment of the community, even without actual implementation, is an indicator of their solidarity and of their lasting social ties.

Here, I take an interactional approach to the definition of community. Social interaction is the key element that creates a community. Social interaction creates a geographic territory; it

can foster locally oriented collective action; it is the basis of a shared community identity; and, it provides associations which create a local society (Wilkinson 1991:13). This last component is what makes the community the smallest, complete unit of analysis that can explain the larger notion of society that we study. The local society is the economic, educational, political, etc. institutions and associations that cover shared interests of the local population. Its structure “must be generalized [from society] and nothing important about society must be missing from it,” (Wilkinson 1991:28). Thus, community is comprised of three key elements: a geographic territory; social organizations and institutions which provide the regular association between residents; and, a local society (Wilkinson 1991).

These definitions and conceptualizations highlight that the community is an important social structure that has influence on people’s interactions and local well-being. Despite the disagreement on components of a community, it remains a useful model that allows us to focus on groups of people to better understand certain aspects of the social world. The importance of studying community, as can be seen when Wilkinson (1991) states:

The community has not disappeared and has not ceased to be an important factor in individual and social well-being. People still live together in places, however fluid might be the boundaries of those places. They still encounter the larger society primarily through interactions in the local society. And, at crucial moments, they still can act together to express common interests in the place of residence. Local social life has become very complex in the typical case, but complexity and the turbulence associated with it do not in and of themselves rule out community (p. 6).

Small Towns

For this research, I look at a specific subset of communities: small towns. As used in this research, small towns are incorporated places with fewer than 10,000 persons. Small towns fit the definition of community used in the section above because they are geographically bound and because they are typically characterized as places where “everyone knows everyone else” and where “for better or worse, [people] monitor and sanction each other’s behavior to ensure

that trustworthiness and reciprocity are generally the norm” (Besser 2009:186). Additionally, small towns are fruitful locations to study aspects of community because they are typically homogeneous with respect to a variety of demographic characteristics including class, religion, and race and ethnicity, and residents are therefore more likely to have valid information on aspects of small town life I am interested in, gathering places.

Gathering Places

In his book, *The Great Good Place*, Oldenburg (1989) defines “third places” or gathering places as the spaces after home and work where people can relax and spend time purely for the fact of company and conversation (p. 16). These gathering places are composed of informal shops, recreational arenas, bars, and other public accommodations that allow people to get to know one another and engage in regular, informal socializing. Simply put, gathering places are public spaces that allow for sociability. More recent scholars have further specified structural features of some gathering places including seating and shelter provided by the spaces (Mehta and Bosson 2010). Additionally, places that Oldenburg did not mention, such as electronic arcades and libraries, have since been identified as gathering places in communities (Williams 2006; Lin, Pang, and Luyt 2015).

Largely due to suburbanization in the 1950s and 1960s, many traditional third places were removed from the infrastructures of some communities. As such, people began to socialize and interact with one another in public spaces less. As nothing replaced the lost soda fountains and malt shops which fostered informal social interaction between community members, locations without them experienced a decrease in community wellness (Frumkin 2003; Fitzpatrick and LaGory 2003).

For Oldenburg, the “third place” is the largely missing component of modern living that leads to people’s increased feelings of isolation. He argues that these spaces are neutral grounds that are needed for people to form friendships and other informal relationships. These spaces serve as a kind of equalizer, where people can get to know one another outside of their workplace and where existing class systems are not important. For Granovetter (1973), these spaces foster “weak tie” networks, where people make acquaintances with whom they don’t often come in contact, but they still have the potential to serve as an important source of information, particularly for worker’s job searches. Third places have also been hypothesized to increase civic engagement which, in turn, increases civic welfare in a community (Tolbert, Lyson, and Irwin 1998; Tolbert et al. 2002).

The reason for the decline of third places in America today, according to Oldenburg, is due to their lost importance in contemporary society. According to Boys (1984), in the mid-1900s, city planners began to assume that automobiles were largely available and that mobility was relatively easy; thus, they began to plan and create separate spaces for work, shopping, and family. Taking a more cynical approach, Oldenburg (1989) notes:

American planners and developers have shown a great disdain for those earlier arrangements in which there was life beyond home and work. They have condemned the neighborhood tavern and disallowed a suburban version... The planners and developers continue to add to the rows of regimented loneliness in neighborhoods so sterile as to cry out for something as modest as a central mail drop or a little coffee counter at which those in the area might discover one another (P. 18).

He further argues that with a new focus on consumerism and maximization of revenues, everything that is not monetarily profitable needs to be eliminated, or at least greatly reduced. As a result, places where people can be unique, express their opinions, and spend their leisure time are replaced with “nonplaces.” Recent research has highlighted how the use of information and communication technologies (ICTs) in public places increase people’s isolation, further

solidifying these nonplaces (Memarovic et al. 2014). Therefore, contemporary society is one where people's lives are "increasingly better organized but are also becoming tasteless and flavorless," (Oldenburg 1989:211).

According to Oldenburg, gathering places thrive the best in places where "community life is casual, [and] where walking takes people to more destinations" (1989:210), making small towns ideal locations for their study. In small towns, people can meet and interact more frequently. This frequency of interaction has important implications for both individuals and for communities themselves:

As surely as people develop a fondness for one another and meet regularly, they will give one another things, loan tools, books, and other objects, give of their time and labor on occasion, and tell one another about useful sources of goods and services (Oldenburg 1989:43).

However, people do much more than give their time and labor to one another, they also give it to the community as a whole. These relationships that are formed through gathering places are intimately connected to theories of social capital.

Social Capital

Social capital, as a theoretical construct, was first defined and used by Hanifan in 1916. He used social capital to look at rural schools' community centers in West Virginia and described it as

to that in life which tends to make these tangible substances count for most in the daily lives of a people, namely, goodwill, fellowship, mutual sympathy, and social intercourse among a group of individuals and families who make up a social unit, the rural community (Hanifan 1916:130).

Despite being the originator of this idea in academic literature, Hanifan's work has generally been missing in contemporary discussions of social capital. Once rediscovered by Jane Jacobs (1961), Glenn Loury (1977), and most prominently by Robert Putnam (1993), social capital stayed in the mainstream of sociology and became a major sociological theory. Today, social

capital theory has been extensively developed by numerous scholars, most notably Pierre Bourdieu (1986), James Coleman (1988), and Robert Putnam (1993). All three scholars argue that social capital exists in the structure of human relationships, i.e. through networks. They also all define social capital as a (potential) resource, and, while their applications vary, they also find social capital can be used in order to achieve some goal. However, their specific definitions of the concept and the ways in which they operationalize and measure it vary widely. While numerous scholars promote social capital theory, there have been several powerful criticisms against it (see Portes and Sensenbrenner 1993; Finsveen and Oorschot 2008; Johnston and Percy-Smith 2003). These criticisms focus on three major points of dispute. First, many scholars use social capital at various levels of analysis and it is often unclear whether social capital accumulates for an individual, for a community, for the society, to a combination of these, or for all three. Second, numerous authors conflate their definitions of social capital with outcomes of social capital, namely civic engagement. Third and finally, albeit related to the second point, is that social capital is often presented as an absolute “good.” Here I offer further explorations of Bourdieu’s, Coleman’s, and Putnam’s definitions of social capital; discuss the critiques of social capital theory; offer a clear separation of social capital and its outcomes; and, finally discuss how Putnam’s definition at the community level informs the hypotheses of the research in this thesis.

Bourdieu’s Social Capital

To understand Bourdieu’s theory of social capital, it must be placed in the context of two other forms of capital: economic and cultural. Economic capital is the main form of capital as it “is immediately and directly convertible into money” (Bourdieu [1983] 1986). Cultural and social capital are resources to first be converted to economic capital and second transformed into money. These processes of transformation are parallel to Marx’s theory of commodity

exchange, represented by the equations M-C-M and C-M-C (Marx and Engels [1867] 1978).

Thus, for Bourdieu, social capital is a part of a process that gets more wealth for an individual.

Formally, Bourdieu defines social capital as

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—or in other words, to membership in a group—which provides each of its members with the backing of the collectivity-owned capital ([1983] 1986:248-249).

Therefore, social capital is something an individual obtains (or has the potential to obtain) through his/her personal resources, as well as the resources he/she has access to through social ties to others. This definition also highlights the consequences and limitations of access to social capital through an individual's social ties. Thus, for Bourdieu, the amount of social capital an individual has is impacted by his/her power and position in social networks.

These power dynamics and differential access to resources are implicit in Bourdieu's definition of social capital. As Portes and Landolt (2000) note, some ties between people are because of similar backgrounds, cultures, religious affiliations, etc., a concept they call *bounded solidarity*. If an individual's social network is composed only of people similar to him/herself, then the variety of resources available to that person may be limited as their resources are likely to also be similar. That is, he or she will have a lower level of social capital. These ideas are echoed by Bourdieu, who concludes that "social capital was a source of privilege that benefited the upper echelons, but has little relevance for other sections of society except to exclude them from opportunities for advancement" (Gilchrist 2009:9).

Coleman's Social Capital

Coming from a rational choice perspective, Coleman similarly viewed social capital as a resource accessible to an individual in pursuit of certain interests or goals, though he added that "purposive organization" or "corporate actors" can also have access to and benefit from social

capital (Coleman 1988). He notes that social capital is not a physical object to possess nor is it a property of an individual, but is rather “in the structure of relations between actors and among actors” (Coleman 1988:S98) where “the achievement of certain ends, that, in its absence, would not be possible,” (Coleman 1988:S98). Further, social capital is a “public good,” and therefore, a community resource, where all members of this “closed network” benefit (Wall, Ferrazzi, and Schryer 1998:309).

For Coleman, closed networks can be understood as social ties and interactions between individuals with the additional “benefit of mutual monitoring and the capacity for sanctioning based on commonly held norms. This is especially the case in small communities” (Cook 2014:210). The added benefit of interacting with the same people in a relatively closed environment leads to increased trustworthiness and increases in norms of reciprocity, something Putnam further explored in his conceptualization of social capital. For Coleman, when individuals in closed networks interact in a variety of settings, like in church, a local coffee shop, in a bowling league, etc. over an extended period of time, the amount of resources available to them increase, making more social capital for future-use (Coleman 1988). This highlights the importance of emotionally intense, relatively permanent ties in networks. As small towns can be viewed as a closed network, these strong network ties can be particularly important, something I explore further in subsequent sections.

Putnam’s Social Capital

While Bourdieu did not discuss social capital as a resource of communities and Coleman did not place major emphasis on it in his work, Putnam’s major focus is on group-level social capital, specifically on how to create strong, responsive, civically engaged communities. According to Putnam, social capital is “features of social organization, such as networks, norms,

and social trust that facilitate coordination and cooperation for mutual benefit” (Putnam 1993:35-36). By taking into account the informal interactions and relationships, social capital again has a network component in its conceptualization. Putnam also argues, in a fashion similar to Coleman, that social capital is a community resource, like recreational facilities or unpolluted air, which cannot be the sole-property of an individual (Putnam 2001). As such, social capital can be considered at the community level; however, community social capital, like individual-level social capital, can increase or decrease depending on how it is used.

In his empirical work, Putnam shows that there are strong correlations between levels of social capital and economic prosperity and social cohesion in communities. In Italy, Putnam (1993) found that regions with more social capital, operationalized as more newspaper readerships and voter turnout, have more effective governments. In the United States, Putnam (1995, 1996) found that people are now “bowling alone,” that is engaging in solitary activities rather than in group ones. This decline, along with others, indicated that social capital is declining in America.

Today, many authors use Putnam’s definition of social capital with slight modifications. For example, Paxton (1999) defines social capital as composed of two components: objective associations between individuals, or network structures linking people; and, a subjective type of tie, like trust or norms of reciprocity (p. 93). These two elements can also be seen as the structural component of social capital (network ties) and the attitudinal component of social capital (the extent to which people *feel* trust). This two-component definition is strikingly similar to Putnam’s but lends itself better to operationalization. Additionally, Paxton’s conceptualization also operates at the community level; but when operationalized, she finds

mixed evidence for Putnam's claimed decline of social capital. Specifically, she finds that while trust in individuals is declining, trust in institutions and levels of association are not declining.

Additionally, there have been many studies that indicate that communities with higher social capital also have better health benefits for residents and residents report a higher quality of life (Gabriel and Bowling 2004; Helliwell and Putnam 2004; Searle 2008; Besser 2009).

Communities with higher social capital also tend to have lower crime rates in neighborhoods (Messner et al. 2004; Sampson et al. 1997). These benefits aid the community as a whole as better health can lead to longer life spans and higher population sizes, and lower crime rates could attract new people to move into an area to join the community.

Community Social Capital for Prosperity

Research has found social capital to be related to a variety of qualities for individuals and social groups at various levels, including education (Coleman 1988), voluntary participation (Liu and Besser 2003), entrepreneurship (Kwon, Heflin, and Ruef 2013), health (Folland 2007), quality of life (Whitham 2012), and obesity risk (Yoon and Brown 2011). Here, I review three pieces that highlight a consequence of community social capital that I am interested in for this research: community prosperity.

Freudenburg (1986) used economic prosperity and rapid population growth in rural boomtowns to look at changes in social cohesion within communities. He found that the rapid population growth of rural communities led to an overall decrease in the density of acquaintanceships between residents. He described this observed change as a type of "cell division" where dense clusters of subgroups appeared within the overall network structure. These changes were shown to have negative consequences including the decreased ability to regulate deviance, to informally socialize children, and to care for the elderly (Freudenburg 1986).

Though not his terms, Freudenburg was describing how decreases in structural community social capital (lower network density of acquaintanship) lead to decreases in community wellbeing.

Woolcock (1998) set out to create a coherent, internally-consistent framework which incorporated social capital theory and development theory and policy. He began by defining four dimensions of social capital: intra-community ties (integration) and extra-community ties (linkage) at the micro-level, and interactions between institutions and civil society (state-society relations) and intra-corporate relations (organizational integrity) at the macro-level. For Woolcock, the extent of development outcomes for a community was based on the levels of these dimensions of social capital that the community possessed. More specifically, he theorized that community social capital was low, and therefore economic prosperity was low, when any combination of seven conditions were present:

- (1) class, sex, and ethnic inequalities are widespread, increasing, and legitimated;
- (2) poverty is endemic, unchecked by social safety nets, and difficult to escape through stable employment;
- (3) uniform laws are weak, unjust, flaunted, or indiscriminately enforced;
- (4) polities are not freely and fairly elected or voters have few serious electoral choices;
- (5) dominant and subordinate groups have little shared stake in common outcomes;
- (6) war, famine, rampant inflation, disease, or chronic underemployment undermine a basic sense of order and predictability;
- and (7) minorities are overtly or covertly discriminated against (Woolcock 1998:182).

These conditions erode a community's ties between residents' and institutions. Without informal and formal ties, trust and norms of reciprocity are lowered. As economic prosperity outcomes can only be understood through study of the social relations at the micro and macro level (Woolcock 1998:183), Woolcock re-enforces the notion that changes in community social capital cause changes in community prosperity.

In a review of natural disaster research, Aldrich and Meyer (2015) show how community bonding social capital is positively related to community resilience. They report that

communities where residents' have stronger feelings of trust, widely shared norms of reciprocity, and more dense networks are able to recover more quickly from earthquakes (Nakagawa and Shaw 2004); recover more quickly from hurricanes (Chamlee-Wright and Storr 2009); have greater disaster preparedness (Hausman, Hanlon, and Seals 2007); and, have greater collective response and recovery (Brunie 2010). Aldrich and Meyer (2015) conclude with policy recommendations for strategies to strengthen the community social capital in towns, increasing their resiliency.

While Freudenburg (1986), Woolcock (1998), and Aldrich and Meyer (2015) use different terms and definitions, all of these authors' work offer support for the idea that community social capital is positively related to community prosperity.

Social Capital Criticism

While many authors agree that community social capital does exist and is useful for studying communities, the potential outcomes have been highly contested. The most notable critic has been Alejandro Portes. He argues that while social capital may have the potential to be considered a community property, how social capital has been operationalized often conflates social capital with its outcomes. He notes:

First there is a common tendency to confuse the *ability* to secure resources through networks with the resources themselves. This can easily lead to tautological statements, where a positive outcome necessarily indicates the presence of social capital, and a negative one its absence. (Portes and Landholt 2000:532).

This lack of conceptual clarity between social capital and its outcomes is common in social capital research (see Casey and Christ 2005; Knack and Keefer 1997; Wood and Warren 2002). In Putnam's first major book, *Making Democracy Work* (1993), his indicators of social capital: membership in voluntary organizations; the number of people who read the local newspapers; and, the amount of voter turnout, are critiqued to instead be indicators of civic

engagement. Civic engagement is understood as “the ways in which citizens participate in the life of a community in order to improve conditions for others or to help shape the community's future” (Adler and Goggin 2005: abstract), and is a consequence of social capital, not an indicator of it.

To help correct this flaw and disconnect social capital from its outcomes, Stone (2001) developed the distinction between proximal and distal outcomes of social capital. An example of a proximal outcome is civic engagement, like voting patterns for Putnam (1993). Proximal outcomes mediate between social capital and distal outcomes (Stone 2001). Distal outcomes result from the proximal outcomes and include lower crime rates, (un)employment rates, and household income (Stone 2001:5). One of the reasons that has been suggested for this conflation is that there is a lack of available data on social capital itself, i.e. the network of relationships of trust and norms of reciprocity (Besser 2009:186).

A second critique of Putnam's social capital, which is also a critique of social capital theory in general, is that networks are considered to be used only in positive ways, that there are only positive consequences of social capital (Portes and Landolt 2000). However, studies have found four consequences of social capital which are negative: the marginalization of outsiders, the formation of boundaries around in-group members, limitations on individual freedoms, and “downward leveling norms,” (Portes and Sensenbrenner 1993). These negative consequences largely center on networks of trust (social capital) being utilized by privileged groups to the detriment of others.

Researchers have responded to this critique by developing two types of social capital. Gitell and Vidal (1998) divide social capital into bridging and bonding. Bridging social capital can be thought of as connections between heterogeneous groups of people. Bridging social

capital “crosses group boundaries and brings together people from disparate groups within the community,” (Besser 2009:186). Alternatively, bonding social capital refers to the connections within groups of people. This type of social capital is characterized by strong ties within a network of similar (homogeneous) individuals and is the type of social capital where, in excess, can lead to negative effects as described by Portes and Sensenbrenner (1993). As described by Paxton (1999), “Not only can social capital within a single group [bonding social capital] potentially reduce social capital between groups [bridging social capital], but high within-group [bonding] social capital could have *negative* effects for members of the community as a whole” (p.96). In Putnam’s later work *Bowling Alone: The Collapse and Revival of America’s Civic Community* (2000), he adopts these types of social capital, describing bridging social capital as “sociological WD-40” (p. 23) and bonding social capital as “sociological superglue” (p. 23).

Social Capital: A Synthesis

Social capital is a concept that has been used to explain wellbeing in communities (Flora 1998); though, how social capital has been defined and operationalized to explain this wellbeing has differed. Most definitions of social capital are focused on social relations and the potential for generating resources. However, a major difference in definitions of social capital is the level at which social capital exists and is studied. While some definitions of social capital operate at the individual level, for purposes of community studies a group level definition is more appropriate. Thus for purposes of this research, Robert Putnam’s definition is used, i.e. “features of social organization such as networks, norms, and social trust that [can] facilitate coordination and cooperation for mutual benefit,” (Putnam 1995:67). This definition is best suited to community research as it is a group-level definition appropriate for group-level phenomenon. While there are a number of scholars who critique social capital (see Portes 1998; Stone 2001;

Wall et al. 1998), it is possible to meet their criticisms and disentangle social capital from its outcomes, while also acknowledging that social capital might not always be positive (for examples, see Kwon, Heflin, and Ruef 2013; Whitham 2012; Besser 2009; Agnitsch, Flora, and Ryan 2006).

Recalling that gathering places foster informal social interaction between residents' of a community, their significance in society mirrors what Putnam (1993, 1995, 2000) described as social capital. Both Oldenburg (1989) and Putnam argue there has been a decline of people's informal socializing with one another. For Oldenburg, this decline is due to a loss of gathering places, while for Putnam, this decline is because people now engage in solitary activities instead of in groups. Frequent interaction at gathering places leads residents' to develop a fondness for one another, and to create social ties (Oldenburg 1989). For Putnam (2000), "our lives are made more productive by social ties," (p. 19) because they foster trust and norms of reciprocity between residents, leading to greater community prosperity. Thus, I claim that gathering places are appropriately suited for building and maintaining community social capital. I next turn to a more thorough discussion of gathering places as such.

Gathering Places as Community Social Capital

Gathering places create informal social ties between individuals who frequent them. As theorized by Oldenburg (1989), these social ties strengthen over time leading to residents helping one another. As sites of informal gathering and conversation, gathering places have limited membership rules. This means that gathering places allow for residents of a town from various social groups to interact with one another, when they might not otherwise. Oldenburg (1989) argues "many who acquire a third place would not have believed, at the outset, that many of the others there would make good friends. They would never have chosen them individually...third

places thus counter the inbreeding of sociability along social class and occupational lines, which the family and workplace encourages,” (p. 63-64). The relationships formed through gathering places span residents’ in the town, becoming community social capital.

According to Ohlemacher (1996), churches and universities have served as important avenues of “social relays” in the past, specifically for the Western European peace movement and the women’s movement in the 1970s and 1980s. Social relays are “the context of face-to-face networks, generating and proliferating mobilization for new networks,” (Ohlemacher 1996:202). As Whitham (2012) found gathering places meet two of the primary functions of social relays, namely (1) they provide a neutral space where people have the ability to meet others and form connections and (2) they can serve as bridges between different types of groups. Thus, gathering places foster informal relationship ties *within a group* (a community). That is, the network of gathering places in a community form structural bonding social capital.

Researchers have operationalized community social capital with gathering places networks before (see Whitham 2012; Besser, Recker, and Agnitsch 2008), using the average number of ties between any two people via gathering places and the average number of ties between any two gathering places via people, respectively. In 2012, Whitham theorized that “informal socializing in gathering places may be appropriable to other, more goal-driven situations, thus facilitating cooperative collective action,” (2012:445). Indeed, her empirical analysis found that density, or average number of ties, of community members’ connections made through gathering places were significantly, positively associated with residents’ assessment of the community and ratings of local amenities in small towns. However, Whitham (2012) did not distinguish which type of social capital, bridging, bonding, or a combination, her indicator was measuring.

Besser et al. (2008) identify their gathering places' measure, the average number of people between any two gathering places¹, as within-group community-level social capital. Within-group and between-group social capital refer to bonding and bridging social capital, respectively, and is a differentiation Paxton (1999) made to prevent the conflation of bridging ties as Granovetter's (1973) weak ties. Using gathering places' network density, Besser et al. (2008) find that some positive types of economic shocks, like a new housing development or new businesses in town, have a significant, positive effects on gathering places' densities (structural bonding social capital).

While Whitman's measure of gathering places' density involved looking at connections between individuals through gathering places, Besser et al.'s measure of gathering places' density looks at connections between gathering places through individuals. This difference is important depending on the research question being asked. Whitham (2012) was primarily interested in resident relations, so focusing on individuals' connections through gathering places was appropriate. Contrarily, Besser et al. (2008) were interested in informal organizational relations in communities, so focusing on gathering places' connections through individuals was appropriate.

Using a raw count of gathering places, Tolbert et al. (1998) hypothesize that these spaces may serve as creators of "horizontal linkages" which increase civic engagement in communities. While this link is also predicted by Oldenburg (1989) and by social capital theory when operationalized at the network level, the authors take this connection a step further and claim that this increase in civic engagement increases community socioeconomic well-being. Using the theory of civil society, Tolbert et al. (1998) explain that local institutions, like gathering places,

¹ This is also known as gathering places' network density.

increase civic engagement, and “in doing so, they become buffers for communities that insulate them from global forces,” (Tolbert et al. 1998:407). These gathering places integrate economic growth with residents’ social interaction and local culture. The resultant “social economy” is what allows some communities to prosper. Thus, communities with more local institutions and higher civic engagement should have higher levels of socioeconomic well-being.

In their empirical work, Tolbert et al. (1998) only find support for this hypothesis when looking at unemployment rates. That is, an increase in gathering places was significantly associated with a decrease in unemployment. However, their data and measures are at the county level, which is problematic because information about actual communities is lost in aggregate. For example, Oldenburg (1989) and social capital theory predict a link between gathering places and civic engagement only if informal socialization between residents is occurring. Without this socialization, people do not form bonds or develop trust and norms of reciprocity and, thus, there is no increase in civic engagement. Since Tolbert et al. (1998) only have raw counts of (assumed) gathering places at the county level, they cannot be measuring the informal socialization that may (or may not) be taking place in communities. Thus, Tolbert et al. (1998) have committed an ecological fallacy. This error occurs when relationships between larger units of analysis, here counties, are used to infer relationships between smaller units of analysis, here communities, found within them (Singleton Jr. and Straits 2010:83).

Thus, researchers have considered gathering places as social capital before; however, this research is relatively new within community sociology. As such, there are still many opportunities to explore the implications of gathering places as social capital. In the case of Tolbert et al. (1998), I offer a potential “patch” to their theory connecting gathering places, civic engagement, and community socioeconomic wellbeing. Rather than rely on raw counts of

gathering places to assume civic engagement levels and predict certain socioeconomic outcomes, I suggest, instead, that gathering places *networks* increase civic engagement, which in turn, increases community socioeconomic wellbeing. That is, structural bonding social capital increases civic engagement and leads to better community socioeconomic outcomes. Further, to address their empirical fallacy, I use community-level data to test this idea. Before explicitly stating the hypotheses I will test, I first turn next to a discussion of network analysis and show how it can be used to quantify residents' frequenting community gathering places as an indicator of community social capital.

Network Analysis

Social network analysis provides techniques and tools for directly quantifying and analyzing patterns of relationships. Unfortunately, few scholars have used network analysis to study social capital and even fewer have used it to study community social capital (Agnitsch 2003), despite their clear connection. In an attempt to address this, Moody and Paxton (2009), a network analyst and social capital theorist respectively, came together to dedicate an entire issue of the *American Behavioral Scientist* to why social capital theory and network theory should be intimately connected. They say

Social capital and social networks, when combined, yield richer theory and better predictions (see Baker & Faulkner, 2009). Indeed, in both fields the complement is needed to clarify the mechanisms by which outcomes occur. As we will illustrate, full specification of theory in the social capital field requires attention to the *structure* of social networks. Simultaneously, full specification of theory in the social networks field requires attention to the *content* of social capital. (Moody and Paxton 2009:1496).

Thus, both fields benefit from serious integration of some of their core theories and concepts.

Network theory dates back to Georg Simmel who first drew this parallel between social interaction and mathematics. He “saw himself devising a geometry of social life” (Appelrouth and Edles 2008:238). However, with distinguished sociologists such as Karl Mannheim

specifically discounting the use of mathematics in social science research, there has been a subtle skepticism toward the use of formal mathematics (i.e. graph theory, differential equations, or Brownian motion) in the discipline (Edling 2002). Despite this, in the past 50-60 years an increasing number of social scientists have been using network analysis for its ability to explain social structures, trust dynamics, and network outcomes (Hansen 2002; Kogut 2000).

When working at the intersection of two disciplines such as mathematics and sociology, it is important to make sure that the terminology from each is clear and combined. In graph theory in mathematics, a graph is a set of vertices and the connections, called edges, between them. In sociology, a network is a diagram where the nodes (vertices) are the actors in the network, i.e. people, organizations, countries, and the social ties (edges) are the relationships they have with one another (Bonacich and Lu 2012:53). By viewing social structure as a network of social ties, network analysts are able to use mathematics to detect and interpret patterns of interaction between actors more freely.

As the definition of social capital used in this research is primarily concerned with structural relations that can foster trust or norms of reciprocity, network analysis is an obvious method to quantify those relations. Many indicators of social capital in prior research have been indirect measures of these relations. Some research contends that it is impossible to directly measure social capital (Grootaert and van Bastelaer 2001:9) and suggest that proxy measures, i.e. activities in public spaces and recreational participation (see Baum et al. 2000), are sufficient. However, these measures do not necessarily give actual relational information between nodes (i.e. people, gathering places, etc.) of interest and may lead to the tautological problems associated with measuring a phenomena by its outcomes.

This research is primarily concerned with measuring structural bonding community social capital in the form of residents' informal associations at gathering places in their communities. As such, I create a gathering places network by using gathering places as nodes with connections between them if residents' socialize at each.² To interpret the relationships among these gathering places, one important graph theory concept that has been mentioned previously is used: density. The density measure is useful for describing the level of overall cohesion in a network (Borgatti, Everett, and Johnson 2013). Density is a ratio of the number of existing ties to the number of potential ties. A network with a higher density has more within group cohesion. Similarly, a community with higher gathering places density has more within group social capital. Thus, network analysis is the best tool to provide insight to the structure of gathering places in communities.

Hypotheses

Based on the above discussion of gathering places networks and communities, I make a number of hypotheses. Following Besser et al. (2008), I operationalize structural bonding community social capital as the density of gathering places' networks. Following the theory suggested by Tolbert et al. (1998), with the necessary adjustments mentioned previously, I look at three indicators community economic wellbeing: employment rates, poverty rates, and median household income. Thus, I propose the following hypotheses:

Hypothesis 1: Structural bonding social capital is positively associated with community employment rates.

Hypothesis 2: Structural bonding social capital is negatively associated with community poverty rates.

² I explain this network creation further in a subsequent chapter.

Hypothesis 3: Structural bonding social capital is positively associated with community median household income.

CHAPTER 3. DATA AND METHODS

This chapter begins with a review of the population, sampling frame, and sample used for the analyses that follow. Next, I operationalize the concepts previously identified in the literature review with arguments for the appropriateness of the indicators selected to represent my conceptual definitions. I next discuss the creation of the gathering places' networks and the rationale for the core-periphery analysis used to describe them. Finally, I discuss the appropriateness of a gathering places' network's density as an indicator of bonding social capital.

Population, Sampling Frame, and Sample

The target population in this research is small Iowa towns. To address the links between gathering places, community social capital, and socioeconomic outcomes for small Iowa towns, I use information from the second wave of the 99 Iowa Communities Study (ICS). As discussed earlier, a community here is a geographically bound place, a local society, and has locally oriented collective action. For purposes of this research, a small town is defined as an incorporated municipality of 500 to 10,000 residents. For the first wave of the ICS in 1994, one such small town was randomly selected in each of Iowa's 99 counties. A sampling frame was then constructed from residents' addresses from telephone directories in these small towns. A systematic random sample of 150 residents in each community was selected. Additionally, the gender of the respondent asked to complete the survey was randomly assigned. If there was no head of household of the preferred gender, the next head of household was asked to fill out the survey (Dillman 1978). The intention of the project was to determine residents' perceptions of the quality of life in their communities.

Sampled residents were contacted following the total design method developed by Dillman (1978). An initial letter and questionnaire were mailed to residents, followed

approximately one week later by a post card to remind residents to return their surveys. Two weeks later a replacement survey was mailed to those who had not yet returned their initial survey. Altogether, 10,798 residents returned their completed surveys and, while each town's response rate ranged from 62 percent to 83 percent, an overall response rate of 73 percent was achieved.

Data from the second wave of the ICS were collected in 2004 using the same 99 small towns, sampling strategy, and contact methods. In 2004, however, some questions were reworded and new questions were added based on feedback from the previous wave. Overall the response rate for this wave of the study was 67 percent, with individual community rates ranging from 47 percent to 81 percent.

Indicator Selection

Dependent Variables

As previously mentioned, Tolbert et al.'s (1998) take on Oldenburg is that gathering places serve as "horizontal linkages in a community that increases civic engagement," (407). They go on to theorize that an increase in community civic engagement also leads to an increase in socioeconomic well-being, specifically median family income will increase and family income inequality, family poverty rate, and the mean unemployment rate will decrease. Using data from the 2013 American Community Survey (ACS) 5-year estimates, I obtained the community-level figures for three of the four outcomes predicted by Tolbert et al. (1998). That is, I obtained the median household income, percent of the population (16+) who are employed, and the percent of the population (over the last 12 months) living under the poverty line for each of the 99 small Iowa towns. The 2013 estimates from the ACS data are needed because socioeconomic well-

being, as a distal outcome of community social capital, must necessarily come sometime after the indicators of social capital (here from data from 2004).

Independent Variable

The majority of the questions asked in the survey involved resident's evaluating a variety of government and nongovernmental services available (or not) in the community and also asked residents of their perceptions of levels of community involvement, both for the community as a whole and for themselves. Some questions were open-ended, while others were closed-ended, and it is from the closed-ended questions that data on levels of socialization in gathering places were obtained.

In the community involvement section, residents were asked how frequently they socialize or visit with people at a list of gathering places. Eight gathering places were provided with the addition of a blank space where respondents could fill in a place not mentioned in the list. This question provides the basis for the creation of the networks of gathering places (See Table 3.1). Approximately 23.46 percent of the people who answered the gathering places question added an additional gathering place not on the original list. The most commonly mentioned additional gathering places were: church (14.2%), school (6.2%), gas station (3.0%), library (2.7%), and work (1.2%).³ However, within communities, these numbers are too small to get an accurate sense of the importance of the gathering place. Thus, they are removed for analysis.

³ Percentages calculated as the number of people who mentioned the gathering place divided by the number of people who added a gathering place in the "Other" line.

Table 3.1 Question Used for Network Creation					
Please indicate how frequently you socialize or visit with others at the following local gathering places. (Circle "5" if the gathering place does not exist in <Community>.)					
	<u>Daily</u>	<u>Weekly</u>	<u>Monthly or Less</u>	<u>Never</u>	<u>No Such Place</u>
Food centers (restaurants, coffee shops, snack bars, deli's, etc.)	1	2	3	4	5
Bar/lounge	1	2	3	4	5
City park	1	2	3	4	5
Bowling alley	1	2	3	4	5
Town square or downtown area	1	2	3	4	5
Mall	1	2	3	4	5
Community center	1	2	3	4	5
Golf or country club	1	2	3	4	5
Other: _____	1	2	3	4	5

Gathering Places' Network Creation

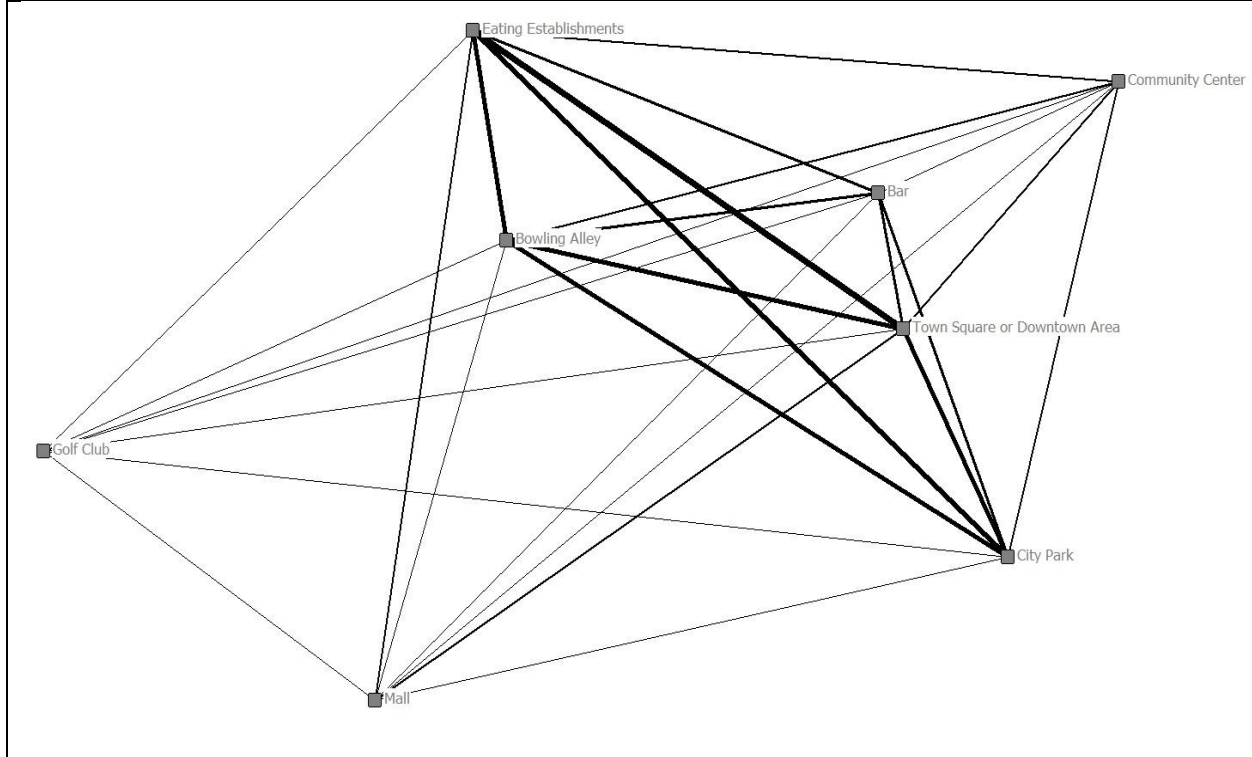
Data from the above question were dichotomized for each person, 1 if the person socialized at the gathering place with any frequency and 0 if the person never socialized there. This dichotomization yields an $n \times 8$ (two-mode) affiliation matrix, where participants are the rows and the gathering places are the columns, for each small town. This two-mode matrix corresponds to a network with two sets of nodes, one set of people and another set of gathering places, which are connected if a person socialized at the gathering place.

From here, I created networks of gathering places by transforming the two-mode affiliation data into one-mode, namely a matrix of gathering places by gathering places (see Table 3.2). Mathematically this is done by multiplying the two-mode matrix by its transpose (Borgatti, Everett, and Johnson 2013). This transformation is important for two reasons. First, the resultant matrix shows the patterns of residents' attendance at a variety of gathering places in their communities. Second, this transformation allows me construct and measure these relationship ties at the community level of analysis.

	Eating Establishments	Bar	Park	Bowling Alley	Town Square	Mall	Community Center	Golf Club
Eating Establishments	78	22	48	42	58	12	14	2
Bar	22	25	17	20	21	2	4	1
Park	48	17	54	35	40	6	15	2
Bowling Alley	42	20	35	45	37	5	10	2
Town Square	58	21	40	37	66	7	13	2
Mall	12	2	6	5	7	13	3	1
Community Center	14	4	15	10	13	3	16	2
Golf Club	2	1	2	2	2	1	2	2

The diagonal of this matrix gives the total number of people who said that they socialized at that particular gathering place. The off-diagonal entries give the total number of people who said they socialized at both the gathering place in row i and the gathering place in column j . For example, the number of people who socialize at both the community center and eating establishments is 14 and is located in the seventh row (“Community Center”) and the first column (“Eating Establishments”). We also note that this number is also located in the first row (“Eating Establishments”) and the seventh column (“Community Center”). This symmetry is found in all off-diagonal entries of the matrix since the number of shared people is the same regardless of which gathering place you identify in the matrix first. The resultant matrix presented above corresponds to a weighted network with undirected ties between one-set of nodes, the gathering places. I use UCINet *Version 6.549* for the network analyses presented in the next chapter in combination with NetDraw *Version 2.148* to produce the network visualizations like the one shown in Figure 3.1 below.

Figure 3.1 Gathering Places Network. Line thickness shows the weight of the edge.



Core-Periphery Models

Core-periphery models are common in social network studies and are used to understand the extent to which nodes belong to each other (Borgatti and Everett 1999). In an unweighted network or a binary matrix, core-periphery models expect that there is a 1-block in the upper, left corner of the matrix, where connections correspond to core node to core node interactions. These models also expect a 0-block in the lower, right corner of a matrix which indicates periphery-periphery connections. Finally, for the core-periphery connections, the models expect a mix of 0-1s (called an imperfect 1-block) in the off-diagonals. This matrix is called the ideal matrix and is a defining property of the core-periphery analysis that follows (Borgatti and Everett 1999).

For purposes of this research, core-periphery models quantify the notion that some gathering places are more densely connected to one another than to others. That is, if we were to rearrange the rows and columns of a gathering places' matrix, we could better see a pattern that some gathering places share a greater number of the same people while other gathering places do

not. However, our gathering places' matrix is valued and the ideal matrix used in the core-periphery models is binary. While this may seem like a mismatch, the algorithm can use valued data and determine a best fitting core-periphery structure. Here, the algorithm determines a *correlation* between our gathering place matrix and the ideal which “amounts to a test that the average value in the 1-blocks is higher than the average value in the 0-blocks, relative to the variation within blocks.” (Borgatti and Everett 1999:381).

Table 3.3 Core-Periphery Analysis Example																										
Before									After																	
	1	2	3	4	5	6	7	8		1	4	3	5	2	6	7	8									
1	78	22	48	42	58	12	14	2	1	78	42	48	58	22	12	14	2									
2	22	25	17	20	21	2	4	1	4	42	45	35	37	20	5	10	2									
3	48	17	54	35	40	6	15	2	3	48	35	54	40	17	6	15	2									
4	42	20	35	45	37	5	10	2	5	58	37	40	66	21	7	13	2									
5	58	21	40	37	66	7	13	2	2	22	20	17	21	25	2	4	1									
6	12	2	6	5	7	13	3	1	6	12	5	6	7	2	13	3	1									
7	14	4	15	10	13	3	16	2	7	14	10	15	13	4	3	16	2									
8	2	1	2	2	2	1	2	2	8	2	2	2	2	1	1	2	2									
Ideal Matrix:									Resulting Value:																	
$\left(\begin{array}{c c} 1 & 1 \\ \hline 1 & 0 \end{array} \right)$									<table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>44.333</td> <td>10.625</td> </tr> <tr> <td>2</td> <td>10.625</td> <td>2.167</td> </tr> </tbody> </table>										1	2	1	44.333	10.625	2	10.625	2.167
	1	2																								
1	44.333	10.625																								
2	10.625	2.167																								

One of the benefits of the algorithm which performs the core-periphery analysis is that it determines the number of gathering places in the core based on the best fit to the model. While in the example above (Table 3.3), this fit yielded a four core and four periphery gathering places structure, it is not the case that the gathering places must be split evenly among the two structures. Indeed, for some of the small Iowa towns the number of gathering places in the core

is two and three, while for others the number is five. The optimization algorithm finds the best fit of the data into a core-periphery structure and therefore helps us understand the differences in importance of gathering places in various small towns.

Network Density as Bonding Social Capital

Since I am interested in each town's network as a whole as an indicator of community bonding social capital, I need to use a measure from the network that captures the complexity of the entire network. As discussed earlier, network density is a measure of the cohesion of a network (Borgatti, Everett, and Johnson 2013). It is primarily a measure of the number of ties between gathering places divided by the number of possible ties. While calculated similarly, however, density in the gathering places' network is not interpreted in the quite same way, since these data are valued, i.e. the matrices are non-binary. Instead, a weighted density is interpreted as the average tie strength of the network. By keeping the data valued, I am able to better explore the degree of cohesion between gathering places in each community rather than the mere presence or absence of it (Borgatti, Everett, and Johnson 2013). Therefore, by measuring the average tie strength of the gathering places' network, I am measuring the average strength of the overlapping, informal ties of residents who function as bridges between any pair of gathering places. This measure is, therefore, a structural representation of bonding social capital, as it is primarily concerned with the ties between people of the same community. Thus, I compute a weighted density, given by the formula below, and divide by the sample size for each town to arrive at my measure of community bonding social capital, my primary independent variable.⁴ In

⁴ I did not divide the matrices for the core-periphery models by their sample size because core-periphery models are used to compare gathering places relationships to one another *within* communities. Normalizing the matrices here for density calculations allows for comparison *between* communities.

the formula below, x_{ij} is the element of the i th row and j th column of the gathering places matrix, and n is the number of gathering places.

$$D = \frac{\sum_{i>j, i \neq j} x_{ij}}{\binom{n}{2}}$$

As previously mentioned, gathering places have been used to measure community social capital before (Whitham 2012; Besser, Recker, and Agnitsch 2008); however, my operationalization varies slightly from those previous measures, and so, it is important that I meet requirements of validity. Face validity is concerned with whether the proposed measure is valid based on the judgement of the community of scholars. Construct validity is met if the proposed variable actually measures its intended concept, while criterion validity is measured by the predictive accuracy of the measure (Singleton Jr. and Straits 2010:141). Validity is first met here because the selection of the variables used in the analyses that follow are based on social capital theory, Oldenburg's theory on gathering places, and previous relevant research. By basing my measures on pertinent literature, I am assuring that my measures have both strong face validity and content validity.

To test the criterion validity of my measure of bonding social capital, I include correlation tests between previously determined attitudinal measures of bonding and bridging social capital with the 2004 wave of the ICS data. While structural and attitudinal measures of social capital are not the same, social capital theory predicts that they are related to one another. That is, the more people interact with one another (structural), the more likely they are to think they can work together for goal achievement (attitudinal). I predict that my structural measure of bonding social capital is significantly correlated with both attitudinal measures of social capital, though stronger for bonding social capital than for bridging. If they are, I will have provided evidence for the criterion validity of my proposed measure.

The attitudinal measures of social capital are taken from Besser (2013) and are displayed in Table 3.4 below. Using scales developed by Glynn (1981), attitudinal bonding social capital was operationalized as a factor scaled index comprised of three questions which were established to assess the extent to which residents feel close to others in their town. Similarly, attitudinal bridging social capital was developed as a factor scaled index composed of four questions used to assess the extent to which community norms support a public good orientation. All factor scales are above 0.70 indicating these items do form a single dimension, attitudinal bonding and bridging, respectively. Cronbach's alpha coefficients of 0.84 and 0.86 were established, indicating the items measuring attitudinal bonding and bridging social capital are both internally consistent and reliable.

Table 3.4 Attitudinal Measures of Social Capital			
	2004		
	Mean	SD	Factor Scale
<i>Bonding Social Capital</i>			
1. On a scale of 1-7 where 1=friendly and 7=unfriendly, rate (<u>town</u>)	2.52	0.30	0.91
2. Being a resident of <u>town</u> is like living with a group of close friends ^a	2.51	0.20	0.93
3. Our neighborhood is closely knit ^a	2.86	0.16	0.83
Cronbach's alpha, % variance explained		$\alpha = 0.84, 78.99$	
<i>Bridging Social Capital</i>			
1. On a scale of 1-7 where 7=not trusting and 1=trusting, rate <u>town</u>	3.05	0.29	0.91
2. Clubs and organizations are interested in what is best for all residents ^a	2.46	0.18	0.84
3. Residents of <u>town</u> are receptive to new residents in leadership positions ^a	2.87	0.18	0.79
4. I think that "every person for themselves" is a good description of how people in <u>town</u> act (reverse coded) ^a	3.40	0.21	0.85
Cronbach's alpha, % variance explained		$\alpha = 0.86, 72.16$	
^a Response categories 1=strongly disagree to 5=strongly agree			

Control Variables

Finally, I include two control variables in my regression models, population size and distance to a metropolitan area. Population data comes from the 2000 Census as it is the measurement of community population size closest to the point of time when the survey data was collected. Population size is included as a control variable because it has the potential to influence social capital. For example, a small town with 8,000 people may have more gathering places to attend than a small town with 800. Similarly, distance to a metropolitan area is also included since small towns closer to large cities may foster a different kind of local gathering places network than more isolated small towns. (See Appendix Table A for a full report of each town's controls).

CHAPTER 4. RESULTS

I begin with descriptive statistics on variables used in these analyses and the statistics on the residents who returned the survey. After offering further descriptive information on the gathering places networks, I next turn to the use of core/periphery analysis on the networks to quantify the differential importance of certain gathering places within the communities. Next, I relate the structural measure of community social capital, as indicated by density of gathering places' connections, to attitudinal measures of bonding and bridging social capital. I then run regression analysis to determine the relationship between my indicator of community social capital and the socio-economic outcomes theorized by Tolbert et al. (1998).

As reported in Table 4.1, the mean population of the 99 selected communities was 1889 people in 2000 (U.S. Census Bureau 2000).⁵ The total distance to a metropolitan area has a mean of 45.29 miles (median of 45 miles). The average median household income for these communities in 2013 was \$45407.46 with standard deviation \$9820.95. While the mean percent of the population employed in 2013 was 60.04% with standard deviation 7.17%, the mean percent of the population under the poverty line was 12.97% with standard deviation 6.47%.

An overwhelming majority of the survey respondents were white (97.92%), with American Indian having the second highest response rate (0.54%). Most survey respondents were women (55.44%), most were married (68.58%), and most were employed full-time (49.65%). The mean age is around 57 years old, and the average length of residence in a small town is a little over 33 years. Most of the survey respondents (52.65%) have at least some post-secondary education (See Figure 4.1).

⁵ Population figures were taken from 2000 Census because they are the figures with the closest time frame to the time the gathering places data was collected.

Table 4.1. Descriptive Statistics

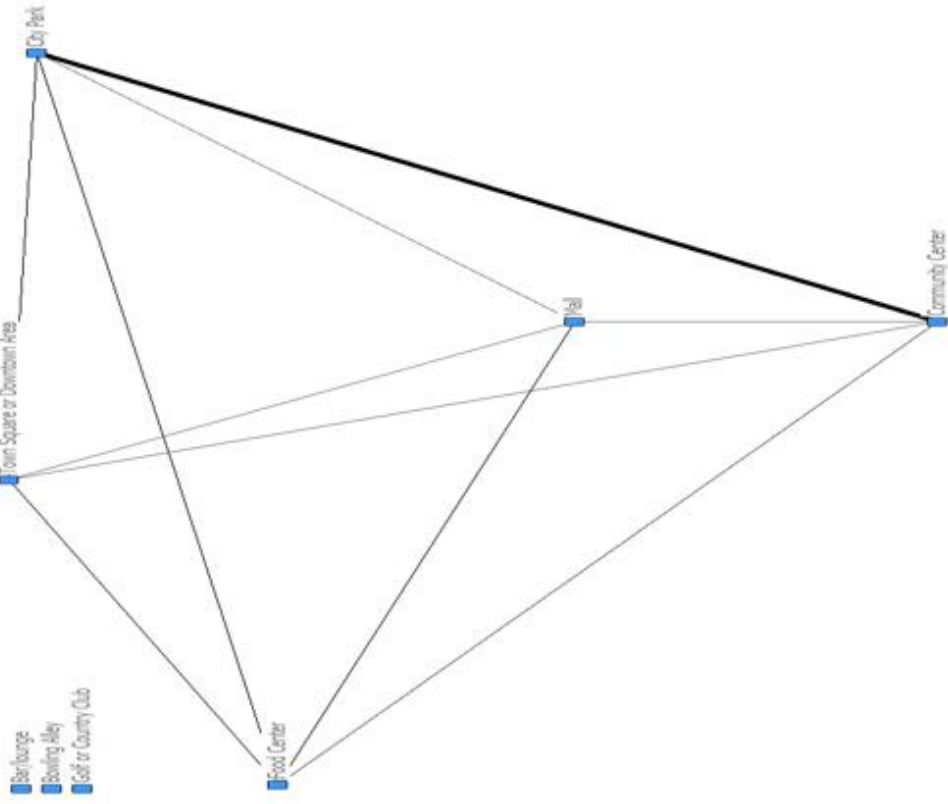
	Mean (S.D)	Min	Max
<i>Community Level</i>			
Population	1889.17 (2032.10)	500	10345
Distance to Metro Area (in miles)	45.29 (23.82)	3	102
Weighted Density	16.57 (6.27)	1.68	32
Median Household Income	45407.46 (9820.95)	26359	81525
Percent Population Employed	60.04 (7.17)	43.5	78.1
Percent Under Poverty Line	12.97 (6.47)	1.1	37.2
Length of Residence (in years)	33.04 (5.58)	14.31	46.06
Age (in years)	56.7 (2.92)	49	63

Figure 4.1. Demographic Characteristics

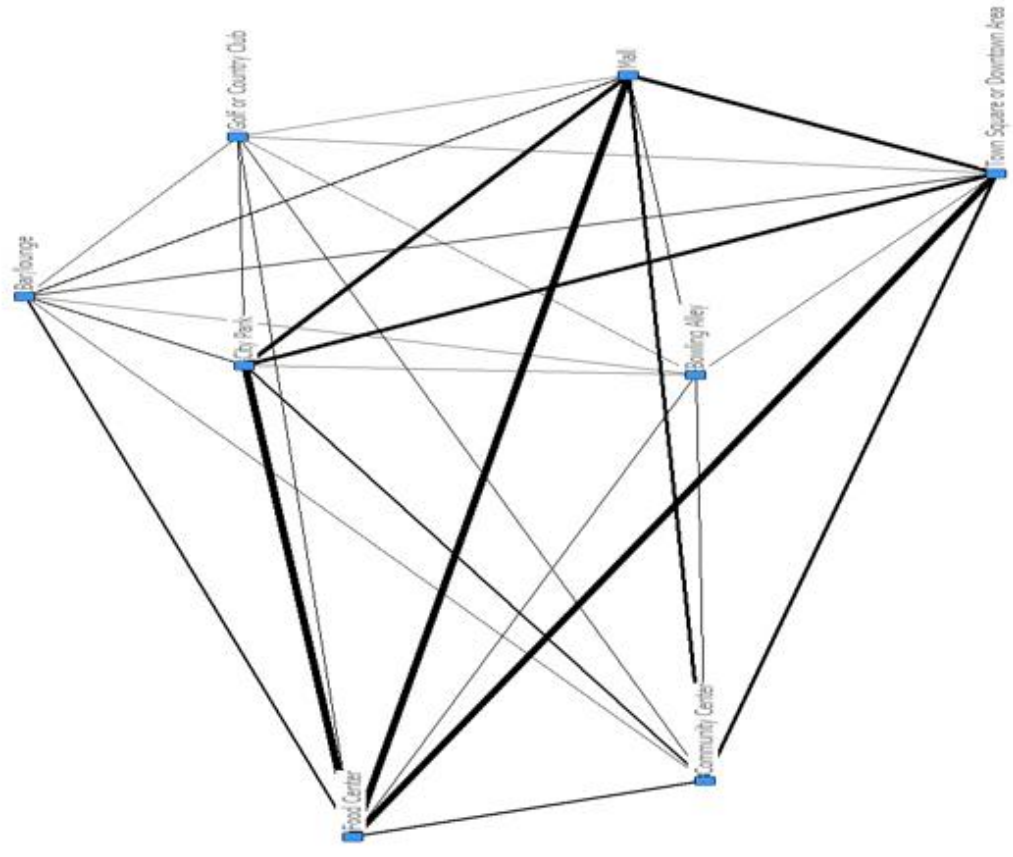
The gathering places' networks have a mean weighted density of 0.163 with a standard deviation of 0.057. Recall that the weighted density score indicates the average number of people who frequent any pair of gathering places in the community. After normalizing the weighted

Figure 4.2. Gathering Places' Networks with the Minimum and Maximum Ties

Smallest Gathering Places Network



Largest Gathering Places Network



densities by dividing by the sample size for each town, the normalized density score is the average proportion of residents' who frequent any pair of gathering places in the community. The minimum normalized weighted density for a town was 0.024, indicating an extremely sparse gathering places network, while the maximum weighted density was 0.301, indicating a relatively dense gathering places network. See Figure 4.2 above for the towns with the minimum and maximum number of ties and Appendix Table B for each town's weighted density scores.

Core-Periphery Analysis

Using the core-periphery algorithm set to 50 iterations in UCINet, the mean fitness of the resulting core-periphery break in the network is 0.956 with standard deviation 0.029. This indicates a very strong fit between the results of the algorithm and the ideal, a blocked matrix with 1s in the upper left corner, 0s in the lower right corner, and a mix of 0-1s in the off diagonals. (See Appendix Table C for a full report of each town's core-periphery gathering places network). Most of the towns (55 of them) have three gathering places in the core of their network. However, a substantial number of towns (35 of them) have four gathering places in their core. No town has one, six, seven, or eight gathering places in their core (See Table 4.2). For these small towns, this indicates that there are particular gathering places that share more of the same people between them than others. These gathering places sub-networks may, therefore, be better sources for fostering trust and norms of reciprocity between community members.

Looking more specifically, I find that all but two towns had eating establishments in their core, 85 of the towns had the city park, and 83 of the towns had the town square. (See Figure 4.3). The most common core structure, found in 38 of the towns, is the clique between eating establishments, parks, and the town square. The second most common core, found in 13 of the towns, is between the same three

Table 4.2. Gathering Places in the Core

Number of Gathering Places in the Core	Number of Communities
2	7
3	55
4	35
5	2
N=99	

Figure 4.3. Most Common Gathering Places Found in the Core

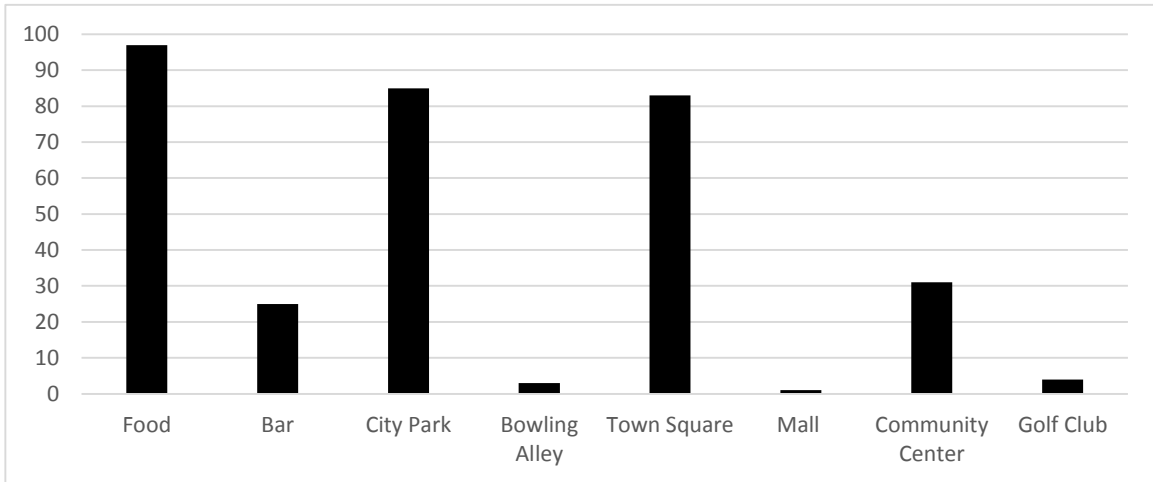
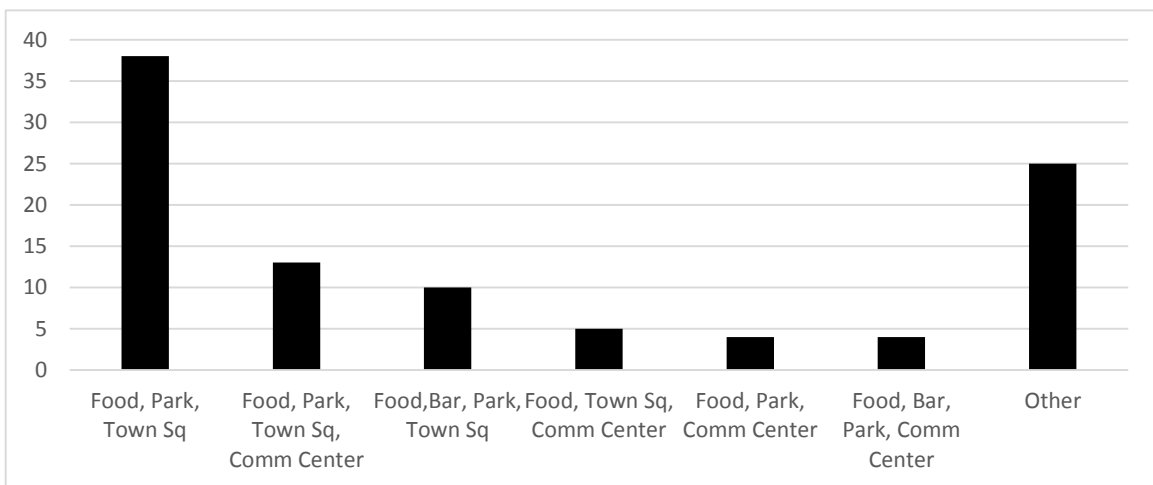


Figure 4.4. Most Common Core Subgraphs in the Gathering Places' Networks



previous gathering places, eating establishments, parks, and the town square, with the addition of the community center. (See Figure 4.4). Thus, the gathering places sub-networks indicated as “the core” of the overall network may have the greatest potential to foster trust and norms of reciprocity between people who frequent them for informal socializing.

Correlations of Variables

Table 4.3 below highlights correlations between all of the variables used in the regression analyses that follow. One notable set of correlations exists among all three dependent variables at the $p < 0.001$ level. Here, I find a positive correlation between median household income and percent population employed. I also see two negative correlations one between percent of the population under the poverty line and percent employed and, the other between percent of the population under the poverty line and median household income.

To answer my second research question, concerned with correlations between structural and attitudinal measures of social capital, I next turn to these variables in Table 4.3. As shown below, there are significant correlations between all of the social capital variables. As expected, gathering places density, as a structural indicator of bonding social capital, is significantly correlated with the attitudinal measure of bonding social capital at the 0.05 level. However, gathering places density is also significantly correlated with the attitudinal measure of bridging social capital, and at the 0.001 level. While I did expect a significant correlation between these measures as gathering places can also foster ties between heterogeneous groups of people, it is surprising to see that this relationship is stronger than the relationship between structural bonding social capital and attitudinal bonding social capital.

Table 4.3 Correlations of All Variables

	Population [in hundreds]	Distance to a Metropolitan Area	Attitudinal Bridging Social Capital	Attitudinal Bonding Social Capital	Gathering Places Density	Percent Population Employed	Percent Under Poverty Line	Median Household Income
Population [in hundreds]	1							
Distance to a Metropolitan Area	-0.03	1						
Attitudinal Bridging Social Capital	-0.15	0.10	1					
Attitudinal Bonding Social Capital	-0.35***	0.20*	0.7630***	1				
Gathering Places Density	0.25*	0.27**	0.33***	0.25*	1			
Percent Population Employed	0.10	-0.32**	0.06	-0.15	-0.10	1		
Percent Under Poverty Line	-0.06	0.19 ⁺	-0.25*	-0.11	-0.01	-0.45***	1	
Median Household Income	0.13	-0.48***	0.18 ⁺	-0.08	-0.12	0.70***	-0.59***	1

N=99

⁺p<0.10, *p<0.05, **p<0.01, ***p<0.001

Regression

As shown in Table 4.4, I calculated five OLS regression equations to examine the relationship between gathering places density as structural bonding community social capital and rate of employment in small towns. The first four models include only control variables to reduce the possibility of a confounding relationship between gathering places density and employment rate. The final includes the measure this research is most concerned with: structural bonding social capital.

Table 4.4. Employment Rate Regressed on Gathering Places Density with Controls: Unstandardized Coefficient (t-statistic)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Population [in hundreds]	0.04 (1.03)	0.03 (1.00)	0.03 (0.74)	0.01 (0.26)	0.02 (0.57)
Distance to a Metropolitan Area		-0.10** (-3.28)	-0.09** (-3.09)	-0.08** (-2.90)	-0.08* (-2.55)
Attitudinal Bonding Social Capital			-0.42 (-0.55)	-2.63* (-2.29)	-2.58* (-2.24)
Attitudinal Bridging Social Capital				2.69* (2.51)	2.87* (2.63)
Normalized Gathering Places Density					-11.81 (-0.85)
Constant	59.34*** (60.18)	63.71*** (39.13)	63.69*** (38.97)	63.68*** (40.04)	65.04*** (28.79)
F Statistic	1.07	5.97**	4.06**	4.79**	3.97**
Adjusted R ²	0.00	0.09	0.09	0.13	0.13

N=99

+p<0.10, *p<0.05, **p<0.01, ***p<0.001

The final model shows an insignificant relationship between my structural measure of bonding social capital and community employment rate. This finding does not support Hypothesis 1, which predicted a significant, positive relationship between the two variables.

Hypothesis 2 predicted a significant, negative relationship between structural bonding social capital and the percent of the population under the poverty line. That is, the higher the structural bonding social capital, the lower the poverty rate. Table 4.5 shows the results of the regression analysis. Five regression equations were again used: the first four including various controls and the fifth adding structural bonding social capital.

Table 4.5. Poverty Rate Regressed on Gathering Places Density with Controls: Unstandardized Coefficient (t-statistic)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Population [in hundreds]	-0.02 (-0.55)	-0.02 (-0.51)	-0.04 (-1.12)	-0.02 (-0.67)	-0.04 (-1.03)
Distance to a Metropolitan Area		0.05 ⁺ (1.88)	0.06* (2.24)	0.06* (2.04)	0.05 ⁺ (1.68)
Attitudinal Bonding Social Capital			-1.28 ⁺ (-1.83)	0.64 (0.60)	0.58 (0.54)
Attitudinal Bridging Social Capital				-2.32* (-2.35)	-2.53* (-2.51)
Normalized Gathering Places Density					13.36 (1.04)
Constant	13.30*** (14.88)	10.95*** (7.17)	10.89*** (7.21)	10.90*** (7.39)	9.36*** (4.47)
F Statistic	0.30	1.92	2.43 ⁺	3.29*	2.85*
Adjusted R ²	-0.01	0.02	0.04	0.09	0.09

N=99

⁺p<0.10, *p<0.05, **p<0.01, ***p<0.001

Here, we again see an insignificant relationship between my measure of community bonding social capital and the proposed dependent variable, in this case poverty rate. This finding runs contrary to Hypothesis 2.

Finally, I use the same five regression equations above on the town's median household income to test Hypothesis 3. This hypothesis predicted a significant, positive relationship between structural bonding social capital and median household income. As shown in Table 4.6 below, gathering places density is, again, not significantly associated with median household income. Therefore, there is not support for Hypothesis 3.

Table 4.6. Median Household Income Regressed on Gathering Places Density with Controls: Unstandardized Coefficient (t-statistic)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Population [in hundreds]	63.01 (1.30)	57.22 (1.33)	68.48 (1.49)	36.98 (0.84)	67.78 (1.43)
Distance to a Metropolitan Area		-195.71*** (-5.34)	-201.10*** (-5.36)	-187.74*** (-5.29)	-171.40*** (-4.69)
Attitudinal Bonding Social Capital			666.92 (0.70)	-3260.83* (-2.33)	-3142.36* (-2.26)
Attitudinal Bridging Social Capital				4771.74*** (3.66)	5191.52*** (3.94)
Normalized Gathering Places Density					-27589.72 (-1.65)
Constant	44217.02*** (32.85)	53190.83*** (25.84)	53222.17*** (25.78)	53212.24*** (27.41)	56397.04*** (20.66)
F Statistic	1.68	15.33***	10.33***	12.11***	10.40***
Adjusted R ²	0.01	0.23	0.22	0.31	0.32

N=99

+p<0.10, *p<0.05, **p<0.01, ***p<0.001

What role do gathering places play in small towns? Using network analyses, specifically core-periphery models, I found that eating establishments, parks, town squares, and, occasionally community centers account for the majority of informal socializing in these 99 small towns. These prevalent subnetworks within their larger gathering places networks highlights the uneven distribution of crosscutting ties in communities' informal arenas. That is, some subsets of gathering places connect more residents with one another, likely fostering greater trust and norms of reciprocity between residents than other gathering places.

Comparing my new measure of structural bonding social capital to established measures of attitudinal bonding and bridging social capital, I found significant correlations between all measures. While the correlations between structural bonding social capital and attitudinal bonding social capital is relatively high (0.2524), the correlation between structural bonding social capital and attitudinal bridging social capital is greater (0.3277). I discuss the implications this has for my proposed measures' validity in the next chapter.

Finally, connecting social capital theory, Oldenburg (1989), and Tolbert et al. (1998), I test the three hypotheses previously stated: structural bonding social capital predicts higher community employment rates, lower poverty rates, and higher median household incomes. After using OLS regression equations to examine these relationships, I did not find evidence to support any of the three hypotheses. Using normalized density of gathering places networks, I did not find any association between structural bonding social capital and theorized socioeconomic outcomes.

CHAPTER 5. DISCUSSION AND CONCLUSION

This research sought to understand the role of gathering places in small towns and to determine whether gathering places as social capital are related to positive community economic outcomes. In *The Great Good Place* (1989), Ray Oldenburg theorized that the lack of gathering places in towns has led to a loss of close community life, or a loss of bonding social capital. In 1998, Tolbert, Lyson, and Irwin further hypothesized that gathering places are key to increasing levels of community civic engagement, which lead to positive community outcomes. Prior studies on social capital have found relationships to a variety of community outcomes, such as voluntary community participation (Liu and Besser 2003), entrepreneurship (Kwon, Heflin, and Ruef 2013), and health (Folland 2007). Research on gathering places as community social capital has found relationships to quality of life (Whitham 2012; Jeffres et al. 2009). Based on these findings, I asked three main questions: What are the characteristics of gathering places networks in small towns? Are gathering places as a structural measure of social capital related to attitudinal measures of social capital? Is there evidence for a relationship between this structural measure and the economic outcomes theorized by Tolbert et al. in 1998?

To address these questions, I used data from the second wave of the ICS and created gathering places' networks based on information residents' gave on their socializing at 8 places within their towns. To address the first research question, I explored network subgroups within each town's gathering place network. Previous research has shown that different network positions signify diverse chances for accessing new knowledge and information (Weng and Daim 2012; Rank, Rank, and Wald 2006; Granovetter 1973). Thus, knowing gathering places' specific network positions has important implications for residents and small towns alike. Using core-periphery analyses, I found that 55.6% of communities have three gathering places at the

core of their network, e.g. they have more connections between each other than with any other places in their networks. Eating establishments were overwhelmingly located in most communities' core sub-networks, with the most common sub-network being composed of eating establishments, parks, and the town square. For small towns, this means that different gathering places sub-networks have more or less potential for building social capital, trust and norms of reciprocity, between residents. That is to say, for most of these towns, eating establishments, parks, and the town square have the greatest potential for facilitating coordination and cooperation between residents for mutual benefit.

Using gathering places networks as community social capital is not completely new (see Whitham 2012; Besser, Recker, and Agnitsch 2008). However, both of these papers operationalize the networks in different ways. While my operationalization is more closely aligned with that of Besser et al. 2008, it is still important that I check that my measure is similar existing measures of social capital. Using the attitudinal measures of social capital from Besser (2013) created from the same data and addressing my second research question, I found that my measure of structural bonding social capital was significantly, positively correlated to both attitudinal measures of bridging and bonding social capital. This partially validates that my measure is capturing what it is theorized to be capturing; however, the strength of the correlation is stronger in the bridging direction than the bonding direction. Since the measure is positive for both, this indicates that my measure of social capital is capturing features of both bridging and bonding social capital, rather than just bonding. While this finding was not expected, some research has found that towns high in both forms of social capital have significantly higher levels of community action (Agnitsch, Flora, and Ryan 2006).

Addressing the final research question, I used OLS regression to test a modified version of the theory provided by Tolbert et al. (1998) to see if structural bonding social capital is predictive of lower poverty rates, higher median household income, and higher employment rates. In all models tested, gathering places network density is not significantly associated with the three theorized economic outcomes, even after including attitudinal measures of social capital and controlling for population size and distance to a metropolitan area. Given that these findings are not what was expected, there are a few implications that must be explored.

Potential methodological limitations may account for the null findings presented here. One of the assumptions of network analysis using affiliation data is assumed relationships. That is, we assume, but do not *know*, that the people connecting the town square and the bowling alley, for example, actually interacted with one another at these locations. Without any social interaction, there would not likely be any trust or norms of reciprocity between residents' who frequent these locations to measure. In this way, the measure of bonding social capital may be an overestimate.

An additional methodological limitation is the aggregate nature of gathering places used. For the smallest of the towns in the sample, it may be true that there is only one eating establishment in town; however, for the larger towns there are likely multiple eating establishments that residents' frequent. So, there may be interaction between eating establishments that also foster trust that I am not able to account for in the networks presented here. In this sense, the measure of bonding social capital may be an underestimate.

A final methodological limitation is the assumed existence of the gathering places listed on the survey instrument. Many of the small towns in this sample likely do not have a mall, bowling alley, or golf course. Regardless, some residents report using these gathering places for

informal socialization in almost every town. These residents are likely thinking of a nearby mall or a county golf course and not a gathering place within their community. This irregularity may be biasing the results presented here.

However, there is also a potential theoretical explanation for the null results found in this research; namely, the theory is wrong. Here, I discuss two ways in which Oldenburg's theory on gathering places may not be reflective of what gathering places are and how they are utilized in small towns. Both of these shortcomings may lead to an overstatement of gathering places' importance in small towns and, therefore, to an overstatement of their relationship to the economic outcomes discussed by Tolbert et al. (1998).

A gathering place is loosely defined by Oldenburg and what distinguishes gathering places from other cafés, coffee shops, bookstores, bars, hair salons, and other hangouts is only briefly discussed. Mehta and Bosson (2010) hypothesize that there are four additional physical characteristics that are essential to gathering places if they are to foster trust and norms of reciprocity between residents' in communities. These physical aspects include: "(a) personalization of the street front by the business, (b) permeability of the business to the street, (c) seating provided by the business, and (d) shelter provided by the business on the street space," (Mehta and Bosson 2010:780). Using data collected in three Northeastern towns, Mehta and Bosson found that resident-identified gathering places had significantly more seating, shade, and shelter than their counterpart non-gathering places. This suggests that there are some built, physical features of establishments that distinguish gathering places from other spaces which may also "draw all kinds of people," be "very popular," and may also foster informally socialization with others (Mehta and Bosson 2010:789).

A second theoretical deficiency may be from something Oldenburg, writing in 1989, could not anticipate: the widespread development of the internet and other information and communication technologies (ICTs). Some initial research has been done on how using ICTs in public spaces increases social isolation (Memarovic et al. 2014). As many traditional gathering places have added free wi-fi and computers to their spaces, people can engage with others less, creating a “public privatism” (Hampton and Gupta 2008:835). While residents of communities may say they still frequent such places for informal socializing, their socialization may take different forms than it once did. Virtual socialization with old acquaintances and socialization that Goffman (1963) called simple civil inattention may be the new types of socialization that occur at gathering places, neither of which is likely to foster trust and norms of reciprocity between residents’ of a community.

Thus, not all spaces Oldenburg describes as gathering places may be so in practice. This implies that the theoretical link between gathering places and economic outcomes proposed by Tolbert et al. (1998) may not be an accurate reflection of the processes that actually form bonding social capital in communities and lead to better socioeconomic outcomes. Simply stated, there may be more to these gathering places that needs to be defined and measured to get a more accurate representation of what contributes to structural bonding social capital in communities.

Future research should address the potential theoretical gaps in Oldenburg’s theory addressed above. Using Mehta and Bosson (2010), research that implements stricter qualifications for a space to be considered a gathering place may result in different associations with the socioeconomic well-being indicators predicted by Tolbert et al. (1998). Additionally, research on the internet and the incorporation of wi-fi in public spaces in small towns would be a fruitful area of study, as small towns may not have the same extent of ICTs infrastructure as

larger cities. Tracking changes in the types of social interaction that happen in gathering places may shed new light on how trust and norms of reciprocity are developed in small towns.

Despite the methodological and theoretical limitations discussed above, this study does offer new methodological applications to enhance gathering places and social capital theory. Network analysis offers a unique set of tools to examine various characteristics of gathering places' network structure, allowing researchers to find meaning in the patterns of social relationships. To my knowledge, core-periphery models have not been used to evaluate gathering places networks before. Uncovering hidden stratification within small towns' informal socialization arena offers the potential to inform more developed theories on community bonding and social capital.

In conclusion, gathering places' networks are complex but important in communities. While I did not find supporting evidence that community social capital via gathering places networks predicts positive community economic outcomes, the methodological and theoretical explanations I provide should be a spring board for further research. In particular, developments in network analysis offer exciting new areas of research, extending our knowledge of the roles that gathering places play in small towns. Given the potential of gathering places to enhance aspects of community well-being and quality of life, a deeper understanding of their network structure can only provide insight into ways in which communities thrive in the face of contemporary challenges.

APPENDIX A. DESCRIPTIVE DATA FOR ALL 99 TOWNS

Table A. Descriptive Data for all 99 Small Towns		
Community	Population in 2000	Distance ^a to Nearest Metropolitan ^b Area
Afton	917	42
Agency	622	60
Ainsworth	524	26
Albert City	709	73
Albia	3706	51
Albion	592	36
Allerton	559	57
Altoona	10345	3
Anita	1049	54
Atkins	977	5
Audubon	2382	56
Bancroft	808	102
Batavia	500	56
Battle Creek	743	41
Bayard	536	44
Bedford	1620	68
Bloomfield	2601	80
Buffalo Center	963	95
Calmar	1058	51
Center Point	2007	12
Chariton	4573	39
Cherokee	5369	44
Clarence	1008	27
Clarinda	5690	53
Colo	868	29
Columbus Junction	1900	27
Corning	1783	48
Correctionville	851	28
Denison	7339	57
Donnellson	963	69
Dumont	676	29
Eagle Grove	3712	72
Elgin	676	45
Elk Horn	649	44
Elma	598	50
Epworth	1428	18
Estherville	6656	98
Everly	647	68
Farmington	756	72
Fontanelle	692	47

Fruitland	703	27
Garnavillo	754	36
George	1051	60
Gilbertville	767	3
Glidden	1253	57
Gowrie	1038	51
Graettinger	900	95
Grand Mound	676	17
Hamburg	1240	42
Hartford	759	11
Hartley	1733	63
Hills	679	6
Hopkinton	681	27
Hospers	672	44
Humboldt	4452	89
Jefferson	4626	42
Kanawha	739	72
Lake Park	1023	81
Lamoni	2444	65
Le Claire	2847	6
Le Mars	9237	20
Madrid	2264	15
Mapleton	1416	36
Mediapolis	1644	45
Missouri Valley	2992	20
Monroe	1808	24
Montezuma	1440	48
Moulton	658	75
Mount Ayr	1822	63
Murray	766	36
Nashua	1618	29
Neola	909	15
Nora Springs	1532	50
Northwood	2050	72
Olin	1487	24
Pacific Junction	716	12
Pleasantville	1539	18
Pocahontas	1970	87
Pomeroy	710	78
Quasqueton	574	29
Radcliffe	607	48
Sabula	670	38
Sac City	2368	72
Saint Ansgar	1031	63

Table A. continued		
Saint Charles	619	18
Sheffield	930	45
Sibley	2796	68
Traer	1594	18
University Park	536	53
Ventura	670	66
Villisca	1344	50
Waukon	4131	68
Waverly	8968	11
Webster City	8176	59
Wellsburg	716	23
What Cheer	678	44
Williamsburg	2622	21
Winfield	1131	36
Woodward	1200	17
^a Distance = air mileage between city limits		
^b Metropolitan = minimum of 50,000 residents		

APPENDIX B. GATHERING PLACES NETWORK DENSITY

Community	Normalized Weighted Density
Afton	.1261
Agency	.0773
Ainsworth	.0926
Albert City	.1362
Albia	.1648
Albion	.1080
Allerton	.1425
Altoona	.1483
Anita	.2316
Atkins	.1049
Audubon	.1565
Bancroft	.2857
Batavia	.0655
Battle Creek	.1332
Bayard	.1482
Bedford	.1407
Bloomfield	.2052
Buffalo Center	.2007
Calmar	.1940
Center Point	.0943
Chariton	.2047
Cherokee	.2556
Clarence	.0922
Clarinda	.1870
Colo	.1449
Columbus Junction	.1437
Corning	.2143
Correctionville	.2461
Denison	.1718
Donnellson	.1307
Dumont	.1493
Eagle Grove	.1778
Elgin	.1866
Elk Horn	.1286
Elma	.2308
Epworth	.1885
Estherville	.1711
Everly	.2117
Farmington	.1406
Fontanelle	.1470

Table B. continued	
Fruitland	.0611
Garnavillo	.1411
George	.2024
Gilbertville	.1051
Glidden	.1290
Gowrie	.2634
Graettinger	.1875
Grand Mound	.1325
Hamburg	.1250
Hartford	.0353
Hartley	.2224
Hills	.1617
Hopkinton	.1214
Hospers	.1506
Humboldt	.1546
Jefferson	.2262
Kanawha	.1460
Lake Park	.2847
Lamoni	.1790
Le Claire	.1243
Le Mars	.2646
Madrid	.1409
Mapleton	.1887
Mediapolis	.1033
Missouri Valley	.2135
Monroe	.1847
Montezuma	.1867
Moulton	.1075
Mount Ayr	.2239
Murray	.1258
Nashua	.1764
Neola	.1824
Nora Springs	.1855
Northwood	.2177
Olin	.1068
Pacific Junction	.0800
Pleasantville	.1279
Pocahontas	.1713
Pomeroy	.2084
Quasqueton	.1120
Radcliffe	.1471
Sabula	.1006
Sac City	.2304
Saint Ansgar	.1780

Table B. continued	
Saint Charles	.0428
Sheffield	.2310
Sibley	.2047
Traer	.2782
University Park	.0240
Ventura	.1644
Villisca	.1770
Waukon	.1927
Waverly	.2577
Webster City	.1818
Wellsburg	.2117
What Cheer	.0955
Williamsburg	.3015
Winfield	.1178
Woodward	.0956

APPENDIX C. CORE-PERIPHERY ANALYSIS RESULTS

Table C. Core-Periphery Analysis of Gathering Places Structure		
Community	Core Gathering Places	Final Fitness
Afton	Eating Establishments, City Park, Town Square	0.991
Agency	Eating Establishments, City Park, Community Center	0.996
Ainsworth	Eating Establishments, Bar/Lounge, Town Square	0.910
Albert City	Eating Establishments, City Park, Town Square	0.993
Albia	Eating Establishments, Town Square	0.962
Albion	Eating Establishments, City Park, Community Center	0.985
Allerton	Eating Establishments, Town Square, Community Center	0.972
Altoona	Eating Establishments, City Park	0.920
Anita	Eating Establishments, City Park, Town Square, Community Center	0.969
Atkins	Eating Establishments, City Park, Town Square	0.977
Audubon	Eating Establishments, City Park, Town Square	0.928
Bancroft	Eating Establishments, Bar/Lounge, City Park, Golf Club, Town Square	0.927
Batavia	Eating Establishments, City Park, Community Center	0.928
Battle Creek	Eating Establishments, Bar/Lounge, Town Square, Community Center	0.961
Bayard	Eating Establishments, Bar/Lounge, City Park, Community Center	0.969
Bedford	Eating Establishments, City Park, Town Square	0.952
Bloomfield	Eating Establishments, City Park, Town Square	0.918
Buffalo Center	Eating Establishments, City Park, Town Square	0.964
Calmar	Eating Establishments, Bar/Lounge, City Park, Town Square	0.956
Center Point	Eating Establishments, City Park	0.926
Chariton	Eating Establishments, City Park, Town Square	0.931
Cherokee	Eating Establishments, Bar/Lounge, City Park, Town Square	0.955
Clarence	Eating Establishments, City Park, Town Square	0.978
Clarinda	Eating Establishments, City Park, Town Square	0.982
Colo	Eating Establishments, City Park, Town Square, Community Center	0.983
Columbus Junction	Eating Establishments, Town Square	0.909
Corning	Eating Establishments, Community Center, Town Square	0.939
Correctionville	Eating Establishments, City Park, Town Square, Community Center	0.953
Denison	Eating Establishments, City Park, Town Square	0.948
Donnellson	Eating Establishments, City Park, Town Square, Community Center	0.923
Dumont	Eating Establishments, Bowling Alley, City Park, Town Square	0.966
Eagle Grove	Eating Establishments, City Park, Town Square	0.967
Elgin	Eating Establishments, City Park, Town Square	0.980
Elk Horn	Eating Establishments, City Park, Town Square	0.996
Elma	Eating Establishments, Bar/Lounge, City Park, Town Square	0.928
Epworth	Eating Establishments, Bar/Lounge, City Park, Town Square	0.964
Estherville	Eating Establishments, Bar/Lounge, Town Square	0.932
Everly	Eating Establishments, Bar/Lounge, City Park, Community Center	0.993
Farmington	Eating Establishments, City Park, Town Square, Community Center	0.974

Fontanelle	Eating Establishments, City Park, Town Square, Community Center	0.978
Fruitland	Eating Establishments, City Park	0.925
Garnavillo	Eating Establishments, City Park, Community Center	0.977
George	Eating Establishments, Bowling Alley, City Park, Town Square	0.898
Gilbertville	Eating Establishments, Bar/Lounge, Town Square	0.985
Glidden	Eating Establishments, City Park, Town Square	0.972
Gowrie	Eating Establishments, Bar/Lounge, City Park, Town Square	0.931
Graettinger	Eating Establishments, Golf Club, City Park, Town Square	0.959
Grand Mound	Eating Establishments, Bar/Lounge, City Park, Community Center	0.968
Hamburg	Eating Establishments, City Park, Town Square	0.982
Hartford	Eating Establishments, City Park, Town Square	0.949
Hartley	Eating Establishments, City Park, Town Square, Community Center	0.943
Hills	Eating Establishments, Bar/Lounge, City Park, Community Center	0.993
Hopkinton	Eating Establishments, Bar/Lounge, Community Center, Town Square	0.958
Hospers	Eating Establishments, City Park, Town Square, Community Center	0.987
Humboldt	Eating Establishments, City Park, Town Square	0.986
Jefferson	Eating Establishments, City Park, Town Square	0.910
Kanawha	Eating Establishments, City Park, Town Square	0.981
Lake Park	Eating Establishments, Bar/Lounge, City Park, Town Square	0.888
Lamoni	Eating Establishments, City Park, Town Square	0.992
Le Claire	Eating Establishments, City Park, Town Square, Community Center	0.947
Le Mars	Eating Establishments, City Park, Town Square	0.970
Madrid	Eating Establishments, City Park, Town Square	0.982
Mapleton	Eating Establishments, City Park, Town Square, Community Center	0.929
Mediapolis	Eating Establishments, City Park, Town Square	0.996
Missouri Valley	Eating Establishments, City Park, Town Square, Community Center	0.966
Monroe	Eating Establishments, City Park, Town Square	0.950
Montezuma	Eating Establishments, City Park, Town Square	0.925
Moulton	Eating Establishments, Town Square, Community Center	0.986
Mount Ayr	Eating Establishments, City Park, Town Square	0.949
Murray	Eating Establishments, City Park, Town Square	0.981
Nashua	Eating Establishments, City Park, Town Square	0.976
Neola	Eating Establishments, Bar/Lounge, Town Square, Community Center	0.935
Nora Springs	Eating Establishments, Bowling Alley, City Park, Town Square	0.898
Northwood	Eating Establishments, Bar/Lounge, City Park, Town Square	0.932
Olin	Eating Establishments, City Park, Town Square	0.976
Pacific Junction	City Park, Town Square, Community Center	0.978
Pleasantville	Eating Establishments, City Park, Town Square	0.989
Pocahontas	Eating Establishments, City Park, Town Square	0.941
Pomeroy	Eating Establishments, City Park, Town Square, Community Center	0.930
Quasqueton	Eating Establishments, Bar/Lounge, City Park	0.989
Radcliffe	Eating Establishments, City Park, Town Square	0.930
Sabula	Eating Establishments, Bar/Lounge, City Park	0.955
Sac City	Eating Establishments, City Park, Town Square	0.920

Table C. continued		
Saint Ansgar	Eating Establishments, Bar/Lounge, City Park, Town Square	0.935
Saint Charles	Eating Establishments, Town Square	0.988
Sheffield	Eating Establishments, Bar/Lounge, City Park, Golf Club	0.946
Sibley	Eating Establishments, City Park, Town Square	0.927
Traer	Eating Establishments, Bar/Lounge, City Park, Town Square	0.849
University Park	City Park, Community Center	0.998
Ventura	Eating Establishments, Bar/Lounge, City Park, Town Square	0.969
Villisca	Eating Establishments, City Park, Town Square, Community Center	0.971
Waukon	Eating Establishments, Bar/Lounge, City Park	0.975
Waverly	Eating Establishments, City Park, Town Square	0.955
Webster City	Eating Establishments, City Park, Town Square	0.924
Wellsburg	Eating Establishments, Town Square, Community Center	0.921
What Cheer	Eating Establishments, Community Center, Town Square	0.970
Williamsburg	Eating Establishments, Mall, City Park, Town Square	0.985
Winfield	Eating Establishments, Golf Club, Town Square	0.947
Woodward	Eating Establishments, City Park, Town Square	0.983

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