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The Paradox of Social Capital and the Rural Poor's Relationship with Their Communities

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ABSTRACT

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Is increased access to social capital associated with a lower likelihood of poverty? Using data from a survey of nearly 10,000 residents of Iowa taken in 1994 and again in 2004, this study seeks to understand what types of social capital are associated with higher or lower likelihood of poverty at both the community and individual levels. Results suggest that higher bonding social capital at both levels is associated with a higher likelihood of poverty. The inverse of this relationship is found between bridging social capital and poverty. Although high bonding is generally an asset, when combined with low levels of bridging social capital, it is associated with significantly higher rural poverty rates in 1994 and 2004— exceeding the statewide average poverty rate of 15%. It is not clear, however, if high levels of bonding social capital cause high poverty rates by creating more insular networks in the context of low social bridging or if high bonding and low bridging are the direct result of high rural poverty.

Keywords: poverty, social capital, bridging social capital, bonding social capital, rural community

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Introduction

Is increased access to social capital associated with a lower likelihood of poverty? This study analyzes the relationship between various types of social capital and poverty. Social capital, defined as a way for individuals to access socially-based resources, has long been associated with economic outcomes (Bowen 2009; Knack & Keefer 1997; Hyggen 2006). Specifically, bonding social capital, defined as connections among immediate family and friends, helps individuals 'get by' in day to day life (Briggs 1998), whereas bridging social capital, defined as large, loose networks between individuals and acquaintances throughout the community in different social circles, along with relationships between individuals and formal organizations, allows people to 'get ahead' (Briggs 1998).

These relationships between poverty and types of social capital are potentially compounded at the community level in rural communities due to their physical and often economic isolation (Duncan 1999), especially given that social capital is frequently identified as an "important resource for community improvement," (Besser 2009: 186; Putnam 2000; Zekeri 1999). The definition of social capital also carries it beyond individual-level outcomes, as it is often defined as a community-level phenomenon that exists outside of individuals and is something individuals gain access to through their social relationships (Agnitsch et al. 2006; Ryan et al. 2005; Flaherty & Brown 2010). Consequently, it should be expected that community context, or a given community's level of aggregate social capital, should have an effect on individual residents' economic outcomes. In fact, it has been suggested that the best situation for community development would be to have both high bonding social capital and high bridging social capital (Besser 2009; Agnitsch 2006; Putnam 2000). This study will reassess this approach, given that, as Boon and Farnsworth (2011) suggest, poverty may actually *increase*

with high bonding social capital. Therefore, this study examines the association between bonding and bridging social capital and poverty status at both the individual and community levels across 99 rural Iowan communities at two different times, 1994 and 2004.

Rural poverty scholars have noted the limited social relationships low income rural residents sometimes have across class boundaries, along with a resulting lack of trust (Harvey 1993; Duncan 1999; Carr & Kefalas 2009). Few, however, have theorized this in terms of social capital. Therefore this study expands the current understanding of poverty by identifying characteristics of both individuals and communities associated with poverty status and high poverty rates respectively. Furthermore, this analysis compares and contrasts a large number of communities, using a dataset that allows for "genuine community-level comparisons" (Flaherty & Brown 2010), whereas most recent research has limited its scope to a single community or just a few communities using cross-sectional data. Using data from the Iowa Rural Development Initiative project (RDI), the effects of both bonding and bridging social capital on poverty status in 99 rural Iowan communities from 1994 and 2004 are explored. The importance of this research, therefore, is its ability to demonstrate whether bonding and bridging differ in their relationship to poverty, and if there is indeed a community context, or community-level effect of social capital on poverty status.

Background

Social Capital and Poor Communities

As of 1999, nearly nine million rural Americans were living in poverty, "one third in communities with persistently high poverty rates" (Duncan 1999: 201). Poverty continues to be prevalent and persistent in rural areas (Sherman 2006). In 2000, rural areas accounted for just one-fifth of the population of the United States, but one-third of its poor (Duncan 2001). Most

poverty research has focused on urban poverty, and thus much of what we know about the social mechanisms surrounding poverty is based in these settings (Besser 2009; Havery 1993; Burtless 2000). Yet in 2000, the poverty rate for the rural population (18.1%) was virtually equal to the poverty rate of the inner-city urban population (18.0%), and substantially higher than the estimated 12.3% poverty rate of the combined metropolitan American population (meaning inner-city and non-inner city residents of metropolitan areas) (Duncan 2001; Dahl et al. 2008; Sherman 2006). The paucity of critical research on rural poverty, combined with the lack of attention policy makers give to those stuck in persistent poverty in such areas, has led many to describe poor rural communities as "places left behind" (Duncan 1999; Snyder 2004; Durham 2006).

Enhancing social capital in rural communities has been offered as a key solution to rural poverty (Duncan 1999; Brown 2000). Studying the relationship between social capital in poverty in rural settings offers "advantages for making the connection between the face-to-face relations and common experiences people have and larger social processes involving structures of class and power" (Duncan 1999: 192). Furthermore, the relative isolation of rural towns from each other allows a large multilevel analysis of rural communities to provide insight into the group processes that form the underpinnings of sociological approaches to both rural and urban poverty. Social capital theory itself has its roots in the study of rural poverty. As Putnam (2001) points out, it arose out of an idea first described by L. Judson Hanifan during his studies of Rural Appalachia (Putnam 2001; Hanifan 1916). Putnam (2001: xv) explains that Hanifan (1916: 130) noted that the "grave problems of those communities could be solved only by strengthening the networks of solidarity among their residents." Thus from its origination, social capital theory has been focused on the "urgent issues of poverty and inequality" in the communities of rural

America (Putnam 2001: xvi). Following along these lines, Warren et al. (2001: 2) call for a greater understanding of the role "that social capital can play in not just helping families survive… but in combating poverty." It follows then, that a more in-depth analysis of how social capital functions at both the individual and community levels in regards to rural poverty is necessary.

Social Capital

The concept of social capital has existed in some form in sociology since the early 20th century. Social capital in its current form was perhaps first defined by Pierre Bourdieu, who used the term to refer to the resources "attainable by actors through social relationships" (Ekline-Frick et al. 2011: 994; Boon & Farnsworth 2011; Bourdieu 1986; Coleman 1988; Putnam 2000; Besser 2008). These relationships result in norms of trust between community residents that are connected to a long list of positive social outcomes: community improvement (Besser 2009), higher rates of voluntarism (Agnistsch et al. 2006; Putnam 2000), more effective local governments (Putnam 2000), and even lower rates of crime (Sampson 2001) and better health of local residents (James et al. 2001). Critics, however, have noted a propensity to portray social capital as an unqualified good, pointing to the possibility of insularity of tight knit social groups to the exclusion of outsiders and potential downward-leveling pressures on insiders (Portes 1998; Woolcock 1998; Schulman & Anderson 1999). Based on this conceptualization of social capital, it should be expected that social capital have an association with economic outcomes such as poverty.

In order to adequately analyze this relationship, social capital must be measured correctly. This becomes difficult, however, as social capital has been operationalized in almost as many different ways as it has been measured. This confusion stems in large part from the

discussion around whether social capital is the "infrastructure or the content of social relations (ties vs. trust)" (Keyes 2001: 136; Woolcock 1998; Woolcock 2010). However, Putnam's (1993: 36) definition of social capital encompasses both elements—"features of social organization, such as networks, norms and trust that facilitate cooperation for mutual benefit." This study builds off of Putnam's definition and conceptualizes and operationalizes social capital using both elements: social networks along with the resulting norms of trust and reciprocity. Doing so will allow the operational definition to be clearly linked with the conceptual definition and thus maintain the conceptual integrity of the construct[1], while allowing for a test of how the effects of ties and trust differ in relation to poverty.

Bonding and Bridging Social Capital

Increased recognition of both the positive and negative[2] effects of social capital has led to the theoretical bifurcation of social capital into two types: bonding social capital and bridging social capital (Putnam 2000; Gittell 1998; Narayan 1999; Woolcock 1998; Besser 2009; Woolcock 2010). Bonding social capital is associated with ties to close friends or family, deep interpersonal relationships, and a resulting feeling or sense of "closeness" (Putnam 2000; Besser 2009; Gould 1993). Bridging social capital has been described as relationships or associations with others outside of one's immediate social group or across social classes, racial groups, or organizations and the resulting feeling of generalized trust of others, their motives, and a belief that your community has a "public good" orientation (Besser 2009: 186; Ryan 2011). Briggs (1998) has described the distinction between these two types of social capital as being that

[1] Michael Woolcock (1998) emphasized the importance of clearly linking the operational definition of social capital to the conceptual definition: "As arguably the most influential concept to emerge from economic sociology in the last decade, it behooves serious students to critique, clarify, and refine what they mean by this tantalizing term [social capital], lest it go from intellectual insight appropriated by policy pundits, to journalistic cliché, to eventual oblivion" (184)

[2] See Gittell 1998; Woolcock 1998; Portes 1998

bonding social capital can provide individuals with the resources necessary to "get by," whereas bridging social capital may provide access to resources needed to "get ahead" (Boon & Farnsworth 2011; Lockhart 2005).

Bonding social capital is often associated with increased reciprocity and solidarity (Putnam 2000). However, it has also been associated with in-group insularity, downward-leveling norms and exclusion of outsiders (Portes 1998; Portes & Landolt 1996; Schulman & Anderson 1999). Bonding social capital can exert strong pulls on individuals to act in particular ways in order to gain access to resources available via these types of relationships[3] (Portes & Landolt 1996; Agnitsch et al. 2006; Putnam 2000; see also Stack 1974). Bridging social capital is generally better for linkages to external assets by providing access to resources such as information, job referrals, etc. (Burt 1992; Freudenburg 1986). It is seen as constituting norms of looking outward of self or one's immediate social group and bridging "across social cleavages" (Putnam 2000: 22). While bridging social capital can help individual connect to new job opportunities (Granovetter 1983; Burt 1992), it often cannot, for example, provide resources needed for immediate sustenance or survival (such as the ability to borrow money for rent, hospital bills, etc.) (Boon & Farnsworth 2011; Portes & Landolt 1996; see also Sherman 2009).

It is essential to note that neither bridging nor bonding social capital are exclusive categories, and both can be present at high or low levels at a given point in time for a given individual or community (Putnam 2000). While bonding social capital has been linked with being "highly exclusionary, narrow in group orientation, or in other ways contrary to community well-being and the public good" (Portes 1998; Levitas 2006), one type is not always good nor is another always bad (Woolcock 1998). While bridging social capital might provide opportunities

[3] See Stack 1974

for mobility (Freudenburg 1986; Granovetter 1973), an abandonment of bonding relationships and a concentration purely on weak ties or bridging relationships is not advisable. Bonding social capital is equally necessary and reliance on these kinds of relationships is often the most effective coping mechanism that can be employed by those living in poverty (Stack 1974; Sherman 2006). However, it has been demonstrated in social capital literature that it can be the social relationships that an individual has as well as those they don't have that deny them access to the resources they need (Boon & Farnsworth 2011; Woolcock 1998). The downward leveling norms sometimes associated with bonding social capital might limit an individual's motivation to move away from kinship networks for fear of losing access to those resources (Stack 1974). This had led to a growing number of scholars suggesting that more social capital is not always the answer to community or individual problems. Woolcock (1998) warns that "more [social capital] is not always better and the term can understate corresponding negative aspects" (pg. 159). The implications of this—that nuance between the positive and negative aspects of more or less social capital—have yet to be thoroughly tested.

Despite the theoretical distinctions between bonding and bridging social capital, they have often been analyzed in ways that anticipate positive outcomes and that represent a "more is better" mentality. Given the differences between these subtypes of social capital in terms of the kinds of resources available through them and in terms of the social relationships they represent, it should be expected that they would have distinctly different relationships with outcomes such as poverty status for both individuals and communities.

Community Effects

As previously noted, social capital is inherently a community-level phenomenon as it exists outside of the individual (Ryan et al. 2006; Portes & Sensenbrenner 1993), but is

something they gain access to through their relationships with others (Sampson 2001; Schulman & Anderson 1999; Bourdieu 1986). As a community-level concept, it is a "structural feature of communities and is fundamentally rooted in the cultural traditions and institutional forms of those communities, as well as in the physical spaces they occupy" (Duncan 2001; Salamon 2003). Duncan (1999), in her qualitative analysis of poverty in three rural American communities, found that the historical economic structures and long-time interactions among residents (i.e. racial divides, historic lack of a middle class, etc.) of communities influenced the types and levels of social capital available to residents (see Duncan 1999: 198; Brown 2000). For example, in a community long dominated by racial tensions, Duncan found that connections between residents from different social strata were almost nonexistent. In this way the ability of social capital to generate positive individual-level outcomes is mitigated by community-level context (Dewilde 2008; Mitchell & Lagory 2002; Ramsey 1996; Sharp et al. 2002; see also Flaherty & Brown 2010). Social capital is not, however, always measured at the community-level and is treated primarily as a characteristic of individuals in most analyses. If the social capital available to individuals is rooted in the history and institutions of communities, and social capital is a community-level concept, community context must be taken into account.

Even the most deeply divided rural communities are deeply intertwined economically (Duncan 1999) and thus residents' should share in a common community-level effect (Sharp et al. 2002). For this reason, social capital proponents have long advocated building community-level social capital as a way of combating persistent poverty (Putnam 2000; Besser 2009). Community context in terms of social capital has been found to be associated with very specific economic outcomes and has even been identified as a principal determinant of social mobility (Duncan 1999). Furthermore, community-level social capital is thought to reconcile social

cleavages by sustaining and nourishing inclusive community institutions (Orfield 1999; Duncan 1999).

Given their definitions, aggregate levels of bonding and bridging social capital should have very different effects (Narayan 1999; Schulman & Anderson1999; Portes 1998). This is a distinction that often fails to be made. Taking into consideration the difference between bonding and bridging social capital at the community level is crucial. Looking at communities in Italy, Putnam (1993) found that both democracy and economic development thrived where social relations were "horizontal" rather than "vertical". Putnam found generally stalled economic social development in communities characterized by "vertical" social relationships—often resulting in high insularity among a select group that spread economic benefits mainly among their close friends and family (Duncan 1999: 199). More horizontal ties were only possible when there was a more "equitable class structure in which power and wealth are not concentrated" in the hands of a few, but more equally dispersed throughout the community (Duncan 1999: 199). Vertical and horizontal social relationships could be interpreted in this case to indicate high aggregate bonding social capital and high aggregate bridging social capital respectively. Putnam's results suggest that effects of bonding and bridging social capital at the community level differ greatly. Thus, there is a need to further examine the effects of bridging and bonding social capital at both the individual and community levels on rural poverty.

Hypotheses

Given the long-established relationship between community context and social capital (Schulman & Anderson 1999; Duncan 1999) it is expected that there will be significant variance between communities in the relationship between social capital and poverty. Furthermore, communities with high bonding social capital and low bridging social capital are expected to be

associated with the highest average poverty rates (Duncan 1999). Conversely, it is anticipated that the communities with high bridging social capital and low bonding social capital will be associated with the lowest average poverty rates. Aggregate bonding at the community-level is expected to be negatively associated with individual poverty and aggregate bridging social capital at the community-level will have a negative association with individual poverty. Many of the conclusions made previously concerning community context in terms of social capital have been based off of small samples, qualitative data, or individual-level analyses. Brown (2000) suggested that these relationships might be best tested using large-scale multilevel analysis. Therefore, to better analyze if there is a relationship between different types of social capital (i.e. bonding and bridging social capital) and poverty status at both the individual and community level, this study examines the aforementioned hypothesized relationships using multilevel modeling techniques. Based on the conceptual definitions of bonding and bridging social capital and the growing number of studies analyzing the downsides of social capital (Schulman & Anderson 1999; Portes 1998,1996), it is expected that there will be a positive association between bonding social capital and poverty at the individual-level, and a negative association between bridging social capital and individual poverty.

Data and Methods

Sample

The data used in this analysis were collected in 1994 and 2004 by the Iowa Rural Development Initiative Project (RDI). In both years, the RDI surveyed 150 households from 99 rural (defined as communities with populations ranging from 500 to 10,000) communities in Iowa[4]. The sampling frame consisted of a three-stage probability sampling procedure. Each of

[4] Having data from a single state instead of multiple states is actually a strength in a multilevel analysis such as this as it means that cross-state variation will not be confused with cross-community variation.

Iowa's 99 counties was identified and the telephone exchange area of one incorporated municipality from each county was selected. From each of these municipalities, 150 households were sampled using local telephone directories[5]. In a mailed survey, it was indicated that the head of each household should complete the survey. If co-heads were present in the household, the respondent was randomly chosen. In total, 10,798 of the 14,850 questionnaires were completed and returned for a response rate of 73% in 1994. In 2004, 9,962 completed surveys were returned, representing an overall response rate of 67%[6]. Response rates per community ranged between 47% to 81% in 2004 and between 62% to 83% in 1994.

Measurement[7]

Poverty. Poverty status was assigned to each respondent based on US Census Bureau Poverty Thresholds for 1994 (US Census Bureau 1994) and 2004 (US Census Bureau 2004) respectively8. The thresholds take into account annual income, household size and age (Iceland 2006; Johnson & Webb 2000; O'Higgins & Jenkins 2001). The state of Iowa uses these same guidelines when determining eligibility for government assistance. Based on a respondent's reported household income, age and household size, poverty status was assigned to each respondent (1= respondent's self-reported household income is below the appropriate poverty threshold and 0= respondent's income is NOT below the appropriate threshold). Based on comparisons to census data, the distribution for the self-reported incomes in the sample appears to be representative of the population (Besser 2009; Ryan et al. 2005). Aggregates of poverty status were used to create poverty rates (or percentages of individuals under the poverty line) for

[5] The adequacy of using telephone directories in the sampling frame was assessed by comparing sample characteristics to census figures. Results indicated the overall representativeness of the population (see Besser 2009; Ryan et al. 1995 a,b).
[6] The lower response rate in 2004 is still acceptable for mailed survey methodology (see Dillman 2000).
[7] Table 1 contains exact question wording and descriptive statistics for each variable included in the analysis
[8] See Appendix for official US Census Bureau Poverty Guidelines for both 1994 and 2004

each community and for individuals that share certain characteristics important to the modeling strategy (see Table 4a and 4b).

Social Capital. Social capital can be broadly defined as "features of social organization, such as networks, norms, and trust that facilitate cooperation for mutual benefit" (Putnam 1993:36; Sampson 2001). The norms and trust associated with bonding and bridging social capital are conceptualized as arising out of the structure of the social relationships (Sampson 2001). Therefore, in any operationalization of these constructs it is important to include measures of both the norms of trust and reciprocity and the social networks from which they arise. Norms and trust associated with both bonding and bridging social capital are measured here using answers respondents provided to questions regarding how they perceive the level of trust and reciprocity in their communities. The questions used to measure bonding and bridging social capital have been used previously in research by Besser (2009; 2002), Agnitsch et al. (2006), and Rice (2001) and were originally developed by Glynn (1981). Norms associated with bonding social capital are measured using a factor scale of three questions "assessing the extent to which resident feels close to others" in their community (Besser 2009). Factor loading scores indicate that these items do make up a single construct, with loadings exceeding .40 in both years. Cronbach alpha coefficients for bonding social capital are .72 in 1994 and .70 in 2004. Norms associated with bridging social capital are measured using four questions "assessing generalized trust and the extent to which community norms support a public good orientation" (Besser 2009). The factor loadings and Cronbach alpha coefficients again proved to be sufficient[9]. For the purposes of including between-level interactions in the analysis, the factor scores for both bonding and bridging were also aggregated to the community-level and included in the analysis.

[9] Cronbach alpha coefficients for this measure of bridging social capital were .66 in 1994 and .66 in 2004

The social networks associated with bonding and bridging social capital are measured with four questions representing strong (*Friends* and *Family),* weak (*Acquaintances*) (see Granovetter 1973) and formal ties (that are both formal and informal in nature) (Flaherty & Brown 2010). Strong ties were used to represent the social network components of bonding social capital, whereas weak and formal ties are associated with bridging social capital. *Friends* was measured using responses to the question, "About what proportion of your close personal adult friends live in [respondent's community]?" *Family* was measured using the question, "About what proportion of your adult relatives and in-laws live in [respondent's community]?" *Acquaintances* was measured using responses to, "About what proportion of the adults living in [respondent's community] would you say you know by name?" *Formal ties* used the question, "How involved are you in local groups and organizations, that is, those that hold meetings and activities in [respondent's community]?" Respondents indicated their answers (1= yes; 0= no) for this question for five different types of groups or organizations (service groups, recreation groups, political groups, job groups and church groups) and their responses were recoded into a summative scale representing the total number of organizations respondents reported being connected to.

High Bonding Social Capital and High Bridging Social Capital. For Table 2[10], communities were grouped into four categories: (1) high bonding and high bridging, (2) high bonding and low bridging, (3) low bonding and high bridging, and (4) low bonding and low bridging. Communities were grouped into these categories based on thresholds that were established according to respondents scores on the variables associated with bonding social capital and bridging social capital respectively. Thresholds were set for each question associated with bonding and bridging (5 for bonding, 6 for bridging—including all of the norms, trust, and

[10] It is important to note that this is not the measurement used to establish "high" and "low" for Table 4a and Table 4b. The following explanation applies to Table 2 only.

network components for each variable). Based on the distribution of each associated variable, thresholds were set above the means—meaning if a respondent answered above the mean of the population for a given question they got a "1," if they answered below the mean they were given a "0." Next, each respondent was given a score by adding up each score for each question (meaning they were given a score out of 5 for bonding and out of 6 for bridging). Next, based on the distribution of these scores, thresholds were once again set at the mean to give respondents a score for "high bridging" and "high bonding"—if they were above the mean they were given a "1," if they were below the mean they were given a "0." When aggregated to the community level, this provided a percent of each community with high bonding and high bridging. Communities were then grouped by putting communities that were in the upper two quartiles for bonding or bridging in the "high" category and those in the bottom two quartiles in the "low category."

Controls. [11]Socio-demographic variables commonly associated with poverty status (see Albrecht et al. 2000) were also included in the analysis as control variables. These include *Female* (1= female, 0= male), age, educational attainment (coded as 1= less than 9th grade to 7= graduate or professional degree), number of years lived in current community, and employment status (dummy variables for *Full-Time Employed,* and *Part-Time Employed* were included in the model). Respondent's race was not included in this analysis as only 2.92% of the population reported identifying with any other race besides "White." This dataset does not provide extensive ability to control for important characteristics beyond those included, as it contains limited demographic questions. However, given its unique community-level characteristics along with its extensive inclusion of questions and measures relating to social capital use of this dataset is justified despite its lack of controls.

[11] The question "Have you ever lived elsewhere previously?" was originally included in the analysis as an attempt to capture the effect of being a newcomer versus a long time resident of a given town. However, this question was not included in the data collected in 2004 so it was left out of the broader discussion of the analysis presented here. For the results from 1994 with this variable included, please see the Appendix.

Modeling Strategy

Analysis was conducted using Stata 12.1 statistical software. As social capital is conceptualized as a community-level variable, poverty rates for communities with different combinations of high and low bonding and bridging social capital were first calculated and reported in Table 3 for each year. To further highlight the characteristics of the communities in each of these categories, descriptive statistics are also provided. These provide insight into the people in these categories and who is associated with the highest poverty rates given different combinations of high and low bonding and bridging social capital. In order to further analyze the individual and community level variables associated with the trends seen in Table 3, a series of seven binary logistic and multilevel logistic regression models were estimated for both 1994 and 2004. Binary logistic regression was chosen because the dependent variable (poverty status) was dichotomous and odds ratios were obtained by exponentiating the coefficients. The reported odds represent the likelihood, statistically adjusting for the other variables in the model, associated with each independent variable that an individual is below the poverty line.

The first model included only the individual-level control variables. These included some of the variables most commonly associated with poverty. This was done first in order to establish a baseline by which to demonstrate in later models how the effect of these variables change when key independent variables are added. The second model included only the key individual-level independent variables associated with bonding and bridging social capital. The third model included both the individual-level control variables and individual-level independent variables. The fourth model added a multilevel element in order to test whether or not the analysis need consider community context and to demonstrate how the effects of the individual-level variables would change once the community-level was controlled for. The fifth model included level-two variables by adding how an individual's community's aggregate bonding or bridging norms affect their likelihood of poverty status. The sixth model added between-level interactions in order to determine whether the effects of bonding and bridging are compounded by an individual's community's level of aggregate bonding or bridging norms. The last model is the full

model[12], containing all individual-level variables and retaining the level-two variables, but excluding the between-level interactions as they fail to significantly improve the model.

After taking into account the results of these models, and the strength of the effects bonding norms and bridging norms factors, further analysis was performed. This analysis attempted to further identify the relationship between different levels of bonding and bridging social capital and poverty status. The average poverty rates associated with individuals at different levels of bonding and bridging social was calculated. Because of the standardized nature of factor scores, these levels were calculated based on 0.5 standard deviation increments[13] at the individual-level and produced a score 1 to 5 for each respondent. Next, the average poverty rates associated with communities at different levels of aggregate bonding and bridging social capital were calculated. These levels were calculated based on aggregate factor scores rounded to the nearest 0.1 standard deviations and likewise based on 0.5 standard deviation increments. Because of the smaller sample of communities compared to individuals, communities were given scores on a scale of 1 to 3. The resulting tables shed further light into the characteristics associated with being poor in rural Iowa. This was done for both 1994 and 2004.

Findings

Table 3[14] provides the average poverty rate[15] for communities with different combinations of high or low aggregate bonding and bridging social capital. Findings indicate that the average percentage of the sample under the poverty line for communities with high bonding social capital and high bridging social

[12] The full model originally included aggregate community-level versions of the control variables along with the aggregates of the social network variables. However, these all failed to be significant and negatively contributed to the overall model fit and were thus excluded.

[13] The scale for the factors of bonding and bridging social capital used in Table 4a and Table 4b was **1:** x >-0.5; **2:** x=-0.5; **3:** x=0; **4:** x=0.5; **5:** x> 0.5 (x= a respondent's given factor score for either bonding or bridging rounded to the nearest 0.5)

[14] Refer to the measurement section in Data and Methods for an explanation of how thresholds were established for high and low bonging and bridging social capital

[15] It is important to note that these poverty rates were calculated using respondent's self-reported incomes, not census statistics on poverty rates in Iowa. This was done for two reasons. First, as stated earlier the sample has been demonstrated to be representative of the population. Second, 1994 and 2004 both fall in between censuses. I therefore feel more accurate estimates of the poverty rates for these communities, for the purposes of this study, can be obtained using the sample data.

capital is 17.17% in 1994 and 16.5% in 2004. Having high bonding but low bridging yielded the highest poverty rates for both years, with 17.82% in 1994 and 17.9% in 2004. Low bonging social capital and high bridging social capital appears to be associated with the lowest poverty rate in 1994 and the second-lowest in 2004. The final combination, low bonding social capital and high bridging social capital, is associated with a poverty rate of 14.02% in the 1994 (the second lowest for that year) and 13.54% in 2004 (the lowest for that year). High aggregate bonding social capital appears to be associated with the higher poverty rates across both years, regardless of low or high bridging social capital.

As stated, in both years communities with high bonding and low bridging social capital were associated with the highest poverty rates. These communities had the highest average percent of population that was female, 56.1% in 2004, and the highest average age (57.8). They also had the highest average years lived in community and second-lowest percent of respondents who were employed full-time. Conversely, communities with low bonding and high bridging social capital (representing the lowest poverty rates in 1994 and second-lowest in 2004) had the second-lowest percent female, second-lowest average age, and highest average educational attainment (4.17 represents on average these respondents had at least some college). Furthermore, these respondents had by far the lowest average years lived in community (28.29) and the second-highest percent employed full-time.

Table 4 reports the odds ratios from the seven multilevel logistic regression models that were estimated with poverty status as the dependent or outcome variable. The findings reported here are from Table 4a and come from the 2004 data. The results from 1994 mirror these same trends with few significant differences. Table 4b contains the results from the 1994 analysis and can be found in the Appendix. At the individual level in Model 1, the control variables operate as expected. Controlling for the other variables in the model[16], being female is associated with an 88% higher likelihood of being below the poverty line. Each one unit increase in education attainment (i.e. from "less than 9th grade" to "9-12 grade, no diploma") is associated with a 31% lower likelihood of poverty status. Having full-time

[16] Note: All interpretations of odds ratios represent the likelihood of an individual having an income falling below the appropriate poverty threshold after statistically adjusting for the other variables included in the given model

employment is also associated with lower odds of poverty status. Respondent's age and having part-time employment failed to reach statistical significance and are associated with inconsequential odds ratios.

In Model 2, it appears that Bonding Norms and Bridging Norms have opposite effects. Higher factor scores for Bonding Norms are associated with a 35% higher likelihood of poverty status, while higher factor scores for Bridging Norms are associated with a 28% lower likelihood of poverty status. In terms of the social network components of bonding social capital, the proportion of close friends a respondent has in their community fails to be significant, while the proportion of family members a respondent has in their community is associated with being 7% more likely of having an income falling below the poverty line. As for the social network components of bridging social capital, density of acquaintanceship in an individual's community fails to have a significant effect[17]. Formal Ties, however, is associated with a 26% lower likelihood of poverty status is statistically significant. It should be noted that based on the model fit statistics Model 2 (containing only the social capital variables), appears to be a better fitting model than Model 1 (containing only the control variables).

Model 3 contains all the individual-level explanatory variables. While the magnitude of the odds ratio associated with Bonding Norms does decrease, it maintains significance. Similarly, Bridging Norms and Formal Ties maintain significance, with only a .05 decrease in the odds ratio associated with Formal Ties. The only major change is that the proportion of family members a respondent has in their community loses significance. Model 4 adds in the community level[18]. From the associated variance (0.0923) and the Psuedo R^2, it appears that there is significant variance happening between communities. Based on the model fit statistics, taking into account the community level makes Model 4 better fitting than Model 1, 2 or 3. Model 5 retains the social capital variables, but excludes the individual-level

[17] Through bivariate analysis it is evident that density of acquaintanceship is significant when included alone in the model. However, when formal ties is added this effect disappears. This perhaps indicates that formal ties are the most consequential "weak ties" when it comes to economic poverty.

[18] Originally, each social capital variables was included at the community-level in order to calculate the between-community variances of each. A table of the results is included in Appendix 1

controls[19]. Two community-level variables were added in Model 5: Aggregate Community Bonding Norms and Aggregate Community Bridging Norms. Both of these variables indicate the average factor score for individuals in a given community. Both of these were centered at means before being added to the model.

The results suggest that an individual living in a community with Average Bonding Norms one standard deviation above the mean, is approximately 30% more likely of being below the poverty line. Conversely, an individual living in a community with Average Bridging Norms one standard deviation above the mean is approximately 21% less likely to be below the poverty line. In Model 6, between-level interactions variables are added to the model. The first of these represents an interaction between Average Community Bonding Norms in a community and the Bonding Norms factor score for a given individual in that community. The second is an interaction between Average Community Bridging Norms in a community and the Bridging Norms factor score for a given individual in that community. The idea behind these factor scores is that hypothetically the effects will compound each other (i.e. living in a high bonding community, while being an individual with a high score for Bonding Norms would result in the highest odds of poverty status). However, both of these interactions fail to reach statistical significance and Model 6 appears to have worse model fit than Model 5. Model 7 is the full model, including all independent variables (minus the interaction effects). From Model 7 it is evident that the effects associated with the level one and level two social capital variables are tempered by the inclusion of control variables, they still hold significance and are relatively large. In Model 7, a one unit increase in an individual's Bonding Norms is associated with an approximately 21% increase in likelihood of poverty status. A one unit increase in an individual's Bridging Norms is associated with an approximately 27% decrease in likelihood of poverty status. A one unit increase in Formal Ties (being a member of one more organization) is associated with an approximately 22% decrease in the likelihood of poverty status. These effects are mirrored in the level two variables. An individual living in a community with Average

[19] Level two controls (average age of community, average education, average number of years lived in community, etc.) were added in originally, but weakened the model fit and failed to reach significance.

Community Bonding Norms one standard deviation above the mean is approximately 24% more likely to be below the poverty line. An individual living in a community with Average Community Bridging Norms one standard deviation above the mean is approximately 18% less likely to be below the poverty.

Given the size of the odds ratios associated with the measures of bonding and bridging social capital[20], further analysis was done to test their relationship. Analysis indicated that these factors have a correlation above 0.4. To further explore the nature of this relationship in terms of poverty, the mean of poverty status for each combination of these two factors was calculated[21]. The results are reported in Table 4a and Table 4b. The boxes in the tables are shaded from light to dark, with lighter colors corresponding to lower poverty rates and darker colors corresponding to higher poverty rates. The highest average poverty rates for 1994 were reported for individuals with high bonding social capital and low bridging social capital with a poverty rate of 25%-- a full 10% higher than the state average of 15% for 1994. The lowest poverty rates were found among individuals medium levels of bonding social capital (2 or 3) and high bridging social capital (4 or 5). In this it should be noted that it is not the ideal to have low bonding as the lowest poverty rates were not found where bonding was lowest. A dearth of both types of social capital (indicated in the top left corner of the table) is also associated with poverty rates above the state average. However, it seems that the largest problems are found when a particular mix is present: high bonding social capital and low bridging social capital. Table 4b shows the results from this analysis for 2004. It appears that this pattern holds. Once again, high bonding and low bridging is associated with the highest poverty rate for individuals (25%). Higher bridging (4 or 5) combined with medium levels of bonding (2 or 3) is associated with poverty rates of 8%, 9%, 9% and 7%-- the lowest found. Once again, when both bonding social capital and bridging social capital are low, poverty rates are above the state average (16%).

These same patterns are reflected at the community level in Table 5a and Table 5b. Because the sample size of communities is limited to 99, the categories for low to high social capital were condensed

[20] See appendix for supplementary analysis done on each of these factors
[21] With each factor score for each respondent recalculated into the five categories discussed earlier

to three. In 1994, communities with high bonding and low bridging social capital are associated with an average poverty of 24%. For 2004, this relationship is also associated with an average poverty of 21%. In 1994, communities with low bonding and low bridging have an average poverty rate of 15% (14% in 2004). High bonding and high bridging is represented with an average poverty rate of 17% in 1994 and 14% in 2004. The lowest poverty rate for 1994 is 10% and is found in the highest level of bridging and lowest bonding. For 2004, the lowest poverty rate is 12% and is found when bridging is highest and bonding is 2.

Summary and Discussion

The findings reported in Table 2 indicate that communities with high bonding social capital are associated with the highest poverty rates and that this trend holds regardless of whether a given community has high or low bridging social capital. Conversely, communities with lower bonding social capital were associated with the lowest poverty rates. At the individual level in the multilevel logistic regression models, bonding norms were significantly associated with higher likelihood of poverty status. Furthermore, higher aggregate community bonding social capital norms appear to be significantly associated with a higher likelihood of poverty status. The data, however, is limited in its ability to show the exact processes behind the apparent downsides of social capital. However, Table 4a and 4b get the closest to doing so. It is clear from these tables that the highest poverty rates are associated with individuals who have high bonding social capital but low bridging social capital. In this way more social capital is not always better. It is at the extremes—high bonding and low bridging—that those who are economically worst off are concentrated. However, it is equally clear that the ideal is not to have low bonding social capital. The lowest poverty rates are found when bonding social capital is at a medium level or degree and bridging social capital is high.

This analysis is not based on panel data and thus causality cannot be inferred. The results instead should be interpreted as representing the characteristics associated with an individual living in poverty, not as the cause of poverty. It is not clear from this analysis whether high bonding social capital causes

poverty, or whether being in poverty is associated with higher likelihood of relying on alternate coping mechanisms in order to "get by"—such as drawing more on bonding social networks (Stack 1974).

There are potentially several explanations for high likelihood of poverty associated with bonding social capital. The dynamic of bonding and bridging social capital at the extremes—with those who report high bonding and low bridging and are associated with the highest poverty rates in both years— echoes the findings of Patrick J. Carr and Maria J. Kefalas (2009) who, in their extensive qualitative profile of the rural Iowan population, argue that this population can be divided into four categories: Achievers, Seekers, Returners, and Stayers. They define Stayers[22] as often socially isolated from other social groups (mainly by choice), as the most likely to be poor and as "people who like to be around those who share their orientation to the world" (Carr & Kefalas 2009: 82). They conclude that "being around people who are like you means the Other will be tolerated but not necessarily accepted" (Carr & Kefalas 2009: 82). The main dilemma of this population, then, is a desire to lock out the "Other" who cannot be trusted, while "[sustaining] life in their remote corner of the world" (Carr & Kefalas 2009: 82).

The findings might also be interpreted as certain individuals being "stuck" in place. As has been noted before, places can both empower, but also entrap residents when they keep them isolated from greater economic resources. While solidarity, insularity of social networks, and attachment to community might work to empower individuals (as demonstrated in certain studies of ethnic enclaves), attachment to places lacking opportunities and resources can have the opposite effect (Wilson 1999). Bonding social capital, then, might be a proxy for those individuals who lack the resources (social or otherwise) to either advance their economic position in their current community or move elsewhere.

The dynamic of high bonding social capital and low bridging social capital found in this study might be representative of a value judgment or a conscious decision to choose the relative economic safety of close knit relationships or "kin networks" over the increased social mobility that could be found

[22] Based on supplementary analyses (see Appendix) having "lived elsewhere previously" is significantly associated with a lower likelihood of poverty status. However, this question was not included in both the 1994 and 2004 data (it was only in the data from 1994) and therefore was left out of the reported analysis.

through employment, education, or a move to an urban center. Close kin networks are categorized by the "asylum gained through generosity and exchange," but this asylum is maintained through strict patterns of obligation and regulation (Stack1974: 124). The individual security that is potentially associated with this structural adaptation to poverty therefore might also represent downward leveling norms as "it is impossible for potentially mobile persons to draw all of their kin into the middle class" (Stack 1974:127; Portes 1998). Any attempt at social mobility by employment or otherwise can risk sacrificing this asylum. Stack (1974) concludes that:

> The strategies that the poor have evolved to cope with poverty do not compensate for poverty in themselves, nor do they perpetuate the poverty cycle. But when mainstream values fail the poor… the harsh economic conditions of poverty force people to return to proven strategies for survival. (Stack 1974: 129)

While Stack (1974) was studying an urban population of a racial minority group, others have found the same patterns of behavior in the rural poor (see Sherman 2009; Nelson & Smith 1998). The findings presented here then might be indicative of such coping strategies.

The findings also contribute to the general measurement of social capital. The norms of trust and reciprocity associated with bonding and bridging social capital are significantly associated with larger effects on poverty status than are the corresponding indicators of social ties (with the exception of formal ties). While it is still theoretically and statistically important to include the social network components of social capital, it appears that the directionality and effect size expected to be associated with bonding and bridging social capital respectively is captured almost entirely by the variables associated norms of trust and reciprocity.

Evidence is present that bridging social capital is generally associated with lower likelihood of poverty. This matches with both past research (Duncan 2001; Putnam 2000; Granovetter 1973) and follows with the conceptual definition of bridging social capital as providing an individual with access to resources outside of their immediate social group (resources needed to "get ahead"). Lastly, significant evidence was found to support the conclusion that community context does matter when studying social

capital and poverty. Significant variance was found between communities, and the aggregate level of bonding or bridging social capital in a respondent's community was significantly associated with a relatively large effect.

Conclusion

Findings support the notion that the community-level is important and should be included in any serious analysis of this kind. Although this study cannot speak to causality, it appears that community context does affect individual likelihood of poverty status. However, the individual-level is equally important and likewise needs to be taken into consideration. Furthermore, findings indicate that nuance must be used in social capital research as researchers recognize the complex relationship not just between social capital and important outcomes, but also between different types of social capital.

While this analysis takes into consideration data from two points in time from the same population, it is not panel data and thus causality cannot be inferred. The findings cannot provide insight into whether these combinations of bonding and bridging social capital cause higher likelihood of poverty status, or whether being poor causes individuals to develop and rely on these types of social capital. Future research should attempt to explore this relationship and identify the causal direction. However, this data is currently by far the best available in its ability to provide a large sample of communities along with the necessary measures of social capital. Further research that gathers similar types of data would be very important to advancing answers to these lingering questions.

Given the limitations of this data, it becomes difficult to advance any policy recommendations. However, the results provide some support for the notion that we must be concerned with "not just building social capital, but with rebuilding the kinds of institutions that … [provide] representation and political power for low-income communities" (Duncan 2001: 61). Inclusive community institutions that facilitate interactions across social group boundaries or facilitate general trust of others in the community should be encouraged. These types of institutions might perhaps foster the combinations of high bridging social capital that from this analysis appear to be associated with lower poverty rates.

In the case of social capital, more is not always better (Woolcock 1998). There needs to be more nuance to arguments involving social capital—both in the definition of social capital and its measurement and interpretation. This analysis demonstrates the core effect found happened at the extremes of a combination of bonding and bridging social capital. Generalizations about positive or negative qualities of bonding or bridging social capital should be avoided: bonding is not always bad nor is bridging always good.

This analysis shows important characteristics of social capital that are associated with poverty status, but cannot speak to the causes of poverty. Further analysis involving large scale community-level panel data could provide further insight into the not only the causes of poverty, but how social capital interacts with *persistent* poverty. Unfortunately, we know of no such data sets that would allow for this level of analysis. While this sample is restricted to only one state—Iowa—there is no indication that data from other rural areas in the U.S. would demonstrate a different relationship between social capital and poverty status. However, further work needs to be done to study whether or not the results are same for urban areas or for populations characterized my more racial diversity. Future research able to capture more detail about how social capital interacts with community institutions in terms of poverty would also make a valuable contribution. Social capital is not the unqualified good that it is sometimes portrayed as and has a complex relationship with poverty. While social capital might provide access to resources, it appears that the effect of this access varies considerably across types of social capital and from community to community.

References

Agnitsch, Kerry, Jan Flora, and Vern Ryan. 2006. "Bonding and Bridging Social Capital: The Interactive Effects on Community Action." *Community Development* 37(1):36–51.

Albrecht, Don E, Carol Mulford Albrecht, and Stan L Albrecht. 2000. "Poverty in Nonmetropolitan America: Impacts of Industrial, Employment, and Family Structure Variables." *Rural Sociology* 65(1):87–103.

Besser, Terry L. 2002. *The Conscience of Capitalism: Business Social Responsibility to Communities*. Westport, CT: Praeger.

Besser, Terry L. 2009. "Changes in Small Town Social Capital and Civic Engagement." *Journal of Rural Studies* 25(2):185–193.

Besser, Terry L., Nicholas Recker, and Kerry Agnitsch. 2008. "The Impact of Economic Shocks on Quality of Life and Social Capital in Small Towns." *Rural Sociology* 73(4):580–604.

Boon, Bronwyn, and John Farnsworth. 2011. "Social Exclusion and Poverty: Translating Social Capital into Accessible Resources." *Social Policy & Administration* 45(5):507–524.

Bourdieu, Pierre. 1986. "The Forms of Capital." in *Handbook of Theory and Research for the Sociology of Education*, edited by Jason Richardson. New York, NY: Greenwood.

Bowen, Glenn A. 2009. "Social Capital, Social Funds and Poor Communities: An Exploratory Analysis." *Social Policy & Administration* 43(3):245–269.

Briggs, Xavier de Souza. 1998. "Doing Democracy Up-Close: Culture, Power, and Communication in Community Building." *Journal of Planning Education and Research1* 18(1):1–13.

Brown, David. 2000. "Review: Worlds Apart: Why Poverty Persists in Rural America by Cynthia M. Duncan." *American Journal of Sociology* 105(4):1222–1224.

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

Burtless, Gary, and Timothy M. Smeeding. 2000. "The Level, Trend, and Composition of Poverty." in *Understanding Poverty*, edited by Sheldon H. Danziger and Robert H. Haveman. Cambridge, MA: Russell Sage Foundation.

Carr, Patrick J., and Maria J. Kefalas. 2009. *Hollowing Out the Middle: the Rural Brain Drain and What it Means for America*. Boston, MA: Beacon Press.

Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociolgoy* 94(Supplement: Organization and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure):S95–S120.

Dahl, Espen, Tone Fløtten, and Thomas Lorentzen. 2008. "Poverty Dynamics and Social Exclusion: An Analysis of Norwegian Panel Data." *Journal of Social Policy* 37(02):231–249.

Dewilde, Caroline. 2008. "Individual and Institutional Determinants of Multidimensional Poverty: A European Comparison." *Social Indicators Research* 86(2):233–256.

Dillman, Don A. 2000. *Mail and Internet Surveys: The Tailored Design Method*. 2nd Edition. New York, NY: Wiley and Sons.

Duncan, Cynthia M. 1999. *Worlds Apart: Why Poverty Persists in Rural America*. New Haven, CT: Yale University Press.

Duncan, Cynthia M. 2001. "Social Capital in America's Poor Rural Communities." Pp. 60–88 in *Social Capital and Poor Communities*, edited by Susan Saegert, J. Phillip Thompson, and Mark R. Warren. New York, NY: Russell Sage Foundation.

Durham, Rachel E, and P Johnelle Smith. 2006. "Nonmetropolitan Status and Kindergarteners' Early Literacy Skills: Is There a Rural Disadvantage ?" *Rural Sociology* 71(4):625–661.

Eklinder-Frick, Jens, Lars-Torsten Eriksson, and Lars Hallén. 2011. "Bridging and bonding forms of social capital in a regional strategic network." *Industrial Marketing Management* 40(6):994–1003.

Fitchen, Janet M. 1981. *Poverty in Rural America: A Case Study*. Prospect Heights, IL: Waveland Press, Inc.

Flaherty, Jeremy, and Ralph B Brown. 2010. "A Multilevel Systemic Model of Community Attachment: Assessing the Relative Importance of the Community and Individual Levels." *American Journal of Sociology* 116(2):503–542.

Freudenburg, William R. 1986. "The Density of Acquaintanceship: An Overlooked Variable in Community Research?" *American Journal of Sociology* 92(1):27–63.

Gittell, Ross J. 1998. *Community Organizing: Building Social Capital as a Development Strategy*. Thousand Oaks, CA: Sage Publications.

Glynn, T. J. 1981. "Psychological Sense of Community: Measurement and Application." *Human Relations* 34(9):789–818.

Gould, Roger V. 1993. "Action and Network Structure." *American Sociological Review* 58(2):182–196.

Granovetter, Mark S. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78(6):1360–1380.

Hanifan, Lyda Judson. 1916. "The Rural School Community Center." *Annals of the American Academy of Political and Social Science* 67: 130-38.

Harvey, David L. 1993. *Potter Addition: Poverty, Family, and Kinship in a Heartland Community*. New York, NY: Aldine Transaction.

Hyggen, Christer. 2006. "Risks and Resources: Social Capital among Social Assistance Recipients in Norway." *Social Policy & Administration* 40(5):493–508.

Iceland, John. 2006. *Poverty in America: a Handbook*. Los Angeles, CA: University of California Press.

James, Sherman A; Amy J. Schulz and Juliana van Olphen. 2001. "Social Capital, Poverty, and Community Health: An Exploration of Linkages." Pp. 165-188 in *Social Capital and Poor Communities*, edited by Susan Saegert, J. Phillip Thompson, and Mark R. Warren. New York, NY: Russell Sage Foundation.

Johnson, Paul, and Steven Webb. 2000. "Official Statistics on Poverty in the United Kingdom." in *Poverty Measurement for Economics in Transition in Eastern European Countries*. Warsaw, Poland: Office, Polish Statistical Association and Polish Central Statistical.

Keyes, Langley. 2001. "Housing, Social Capital and Poor Communities." Pp. 136–164 in *Social Capital and Poor Communities*, edited by Susan Saegert, J. Phillip Thompson, and Mark R. Warren. New York, NY: Russell Sage Foundation.

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

Levitas, Ruth. 2006. "The Concept and Measurement of Social Exclusion." in *Poverty and Social Exclusion in Britain: The Millenium Survey*, edited by Christina Pantazis, David Gordon, and Ruth Levitas. Bristol: Polity Press.

Lockhart, William H. 2005. "Building Bridges and Bonds: Generating Social Capital in Secular and Faith-Based Poverty-to-Work Programs." *Sociology of Religion* 66(1):45–60.

Mitchell, Carey Usher, and Mark Lagory. 2002. "Social Capital and Mental Distress in an Impoverished Community." *City & Community* 1(2):199–222.

Narayan, Deepa. 1999. "Bonds and Bridges." *The World Bank* Policy Res.

Nelson, Margaret K., and Joan Smith. 1998. "Economic Restructuring, Household Strategies, and Gender: A Case Study of a Rural Community." *Feminist Studies* 24(1):79–114.

O'Higgins, Michael, and Stephen Jenkins. 2001. "Poverty in the EC: Estimates for 1975, 1980, and 1985." in *Analyzing Poverty in the European Community: Policy Issues, Research Options and Data Sources*. Luxemburg: Office of Official Publications of the European Communities.

Orfield, Myron. 1998. "Metropolitics: A Regional Agenda for Community and Stability." *Forum for Social Economics* 33–50.

Portes, Alejandro. 1998. "Social Capital: Its Origins and Applications in Modern Sociology." *Annual Review of Sociology* 24:1–24.

Portes, Alejandro, and Patricia Landolt. 1996. "The Downside of Social Capital." *The American Prospect* 26(94):18–21.

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

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

Putnam, Robert. 2000. *Bowling Alone: The Collapse and Revival of America's Civic Community*. New York, NY: Simon and Schuster.

Putnam, Robert. 2001. "Foreword." Pp. xv–xvi in *Social Capital and Poor Communities2*, edited by Susan Saegert, J. Phillip Thompson, and Mark R. Warren. New York, NY: Russell Sage Foundation.

Ramsey, Meredith. 1996. *Community, Culture, and Economic Development: The Social Roots of Local Action*. Albany, NY: SUNY Press.

Rice, Tom W. 2001. "Social Capital and Government Performance in Iowa Communities." *Journal of Urban Affairs* 23(3):375–389.

Ryan, Louise. 2011. "Migrants' Social Networks and Weak Ties: Accessing Resources and Constructing Relationships Post-Migration." *The Sociological Review* 59(4):707–724.

Ryan, Vernon D, and Kerry A Agnitsch. 2005. "Making Sense of Voluntary Participation : A Theoretical Synthesis." *Rural Sociology* 70(3):287–313.

Salamon, Sonya. 2003. *Newcomers to Old Towns*. Chicago, IL: Chicago University Press.

Sampson, Robert J. 2001. "Crime and Public Safety: Insights from Community-Level Perspectives on Social Capital." Pp. 89–114 in *Social Capital and Poor Communities*, edited by Susan Saegert, J. Phillip Thompson, and Mark R. Warren. New York, NY: Russell Sage Foundation.

Schulman, Michael D., and Cynthia Anderson. 1999. "The Dark Side of the Force: A Case Study of Restructuring and Social Capital." *Rural Sociology* 64(3):351–372.

Sharp, Jeff S, Kerry Agnitsch, Vern Ryan, and Jan Flora. 2002. "Social Infrastructure and Community Economic Development Strategies: the Case of Self-Development and Industrial Recruitment in Rural Iowa." *Journal of Rural Studies* 18(4):405–417.

Sherman, Jennifer. 2006. "Coping with Rural Poverty: Economic Survival and Moral Capital in Rural America." *Social Forces* 85(2):891–913.

Sherman, Jennifer. 2009. *Those Who Work, Those Who Don't: Poverty, Morality, and Family in Rural America*. Minneapolis, MN: University of Minnesota Press.

Snyder, Anastasia R., and Diane K. McLaughlin. 2004. "Female-Headed Families and Poverty in Rural America." *Rural Sociology* 69(1):127–149.

Stack, Carol. 1974. *All Our Kin*. New York, NY: Basic Books.

Warren, Mark R.; J. Phillip Thompson, and Susan Saegert. 2001. "The Role of Social Capital in Combating Poverty." Pp. 1-28 in *Social Capital and Poor Communities*, edited by Susan Saegert, J. Phillip Thompson, and Mark R. Warren. New York, NY: Russell Sage Foundation.

Wilson, William Julius. 1999. "Jobless Poverty: A New Form of Social Dislocation in the Inner-City Ghetto." Pp. 133–150 in *A Nation Divided: Diversity, Inequality, and Community in American Society*, edited by Phyllis Moen, Donna Dempster-McClain, and Henry A. Walker. Ithaca, NY: Cornell University Press.

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

Woolcock, Michael. 2010. "The Rise and Routinization of Social Capital, 1988–2008." *Annual Review of Political Science* 13(1):469–487.

Zekeri, Andrew A. 1999. "Community-ness of a Major Economic Development Effort in a Biracial Community of Alabama." *Journal of Rural Studies* 15(2):159–169.

Appendix

TABLE 1: 2004: Results from Factor Analysis of Bonding and Bridging Social Capital

Table 1

2004: Results from Factor Analysis of Bonding and Bridging Social Capital (*N* = 9,962)†

	Factor Loadings	Mean	SD	Range
Bonding Social Capital				
On a Scale of 1 to 7 where 1= unfriendly and 7= friendly, rate (*community*)	0.68	5.50	1.40	(1-7)
Being a resident of (*community*) is like living with a group of close friends††	0.73	3.50	0.98	(1-5)
The immediate neighborhood I live in is closely knit††	0.48	3.14	1.07	(1-5)
Cronbach's alpha	0.70			
Bridging Social Capital				
On a scale of 1 to 7 where 1= not trusting and 7= trusting, rate (*community*)	0.53	4.96	1.47	(1-7)
Clubs and organizations in (*community*) are interested in what is best for all residents††	0.61	3.55	0.90	(1-5)
Residents in (*community*) are receptive to new residents taking leadership positions††	0.53	3.14	0.96	(1-5)
I think that "every person for themselves" is a good description of how people in (*community*) act††	0.52	3.41	1.00	(1-5)
Cronbach's alpha	0.66			

† See appendix for results from the factor analysis using the 1994 data

†† 1= strongly disagree to 5= strongly agree

TABLE 2: Variable Descriptions and Descriptive Statistics (2004)

Table 2

Variable Descritipions and Descriptive Statistics (2004)[1]

	Mean	Std. Dev	Range
Poverty……	0.15	0.36	(0-1)
BONDING SOCIAL CAPITAL			
Bonding Norms (factor of three items)……	0.003	0.81	(-2.63-1.39)
Friends (proportion of close friends in community)….	3.61	1.17	(1-6)
Family (proporiton of family members in community)	2.92	1.05	(1-6)
BRIDGING SOCIAL CAPITAL			
Bridging Norms (factor of four items)……	0.005	0.77	(-2.78-1.78)
Density of Acquaintanceship……	2.65	0.95	(1-5)
Formal Ties……	1.19	1.19	(0-5)
CONTROLS			
Female……	0.56	0.50	(0-1)
Age……..	56.70	17.19	(18-107)
Educational Attainment…….	3.97	1.51	(1-7)
Number of Years Lived in Community……..	33.17	22.40	(1-107)
Full-Time Employed……..	0.50	0.50	(0-1)
Part-Time Employed……	0.10	0.30	(0-1)

1 See the appendix for descriptive statistics from 1994

TABLE 3: Characteristics of Different Communities Given Combinations of Bonding and Bridging Social Capital

TABLE 3

Characteristics of Different Communities Given Combinations of Bonding and Bridging Social Capital[†]

	Low Bond High Bridge	**Low Bond Low Bridge**	**High Bond High Bridge**	**High Bond Low Bridge**
1994 Average Percent of Population Under Poverty Line	12.9%	14.0%	17.7%	17.8%
2004 Average Percent of Population Under Poverty Line	14.3%	13.5%	16.5%	17.9%
Average Percentage of Population That is Female	56.0%	55.5%	55.4%	56.1%
Average Age	55.9	55.4	57.68	57.8
Average Educational Attainment	4.17	3.98	3.92	3.98
Average Years Lived in Community	28.29	30.72	35.23	36.68
Average Percent of Community Full-time Employed	51.4%	52.0%	47.5%	49.2%
Average Percent of Community Part-time Employed	10.8%	9.9%	10.8%	9.6%
Average Household Size	2.52	2.48	2.36	2.33
Average Number of Houshold Members Under 18	64.0%	58.0%	53.0%	50.0%
Average Percent of Community Who Own Home	85.9%	87.7%	87.3%	85.6%
Average Percent of Community Married	69.5%	70.2%	67.5%	67.1%
Average Percent of Community Divorced	10.1%	10.3%	8.3%	10.4%

[†] All reported numbers are from 2004 unless otherwise indicated

TABLE 4a: 2004: Odds Ratios from Multilevel Logistics/Binary Regression on Poverty Status

TABLE 4a
2004: Odds Ratios from Multilevel Logistic/Binary Regression on Poverty Status

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Individual-Level							
Bonding Social Capital							
Bonding Norms (Factor of Three Items)		1.35***	1.22**	1.22**	1.32***	1.32***	1.21**
Friends (proportion of close friends in community)		0.95	0.94	0.94†	1.00	1.00	0.94†
Family (proporiton of family members in community)		1.07*	1.07	1.06	1.06†	1.06†	1.06
Bridging Social Capital							
Bridging Norms (Factor of Four Items)		0.72***	0.72***	0.72***	0.75***	0.75***	0.73***
Density of Acquaintanceship		0.99	1.07	1.05	0.96	0.96	1.03
Formal Ties		0.74***	0.79***	0.78***	0.73***	0.73***	0.78***
Controls							
Female	1.88***		1.87***	1.87***			1.87***
Age	1.00		1.00	1.00			1.00
Educational Attainment	0.69***		0.75***	0.75***			0.75***
Number of Years Lived in Community	1.00*		1.00	1.00			0.89
Full-Time Employed	0.31***		0.32***	0.32***			0.32***
Part-Time Employed	1.07		1.16	1.16			1.16
_cons	1.01	0.179***	0.63	0.68	0.20***	0.20***	0.75
Between-Level Interactions							
Average Community Bonding Norms††					1.30**	1.30**	1.24**
Average Community Bridging Norms††					0.79**	0.78**	0.82*
Average Bonding Norms x Individual Bonding Norms						1.05	
Average Bridging Norms x Individual Bridging Norms						0.95	
Community-Level							
Variance				0.0923	0.0772	0.0766	0.0765
Std. Err.				0.0329	0.0280	0.0279	0.0303
Model							
AIC	6278.98	6051.58	5264.14	5249.17	6022.27	6024.83	5247.31
BIC	6328.14	6100.17	5353.84	5345.78	6109.27	6108.12	5357.72
Psuedo R^2				0.172	0.311	0.318	0.319
LR test vs. logistic regression				0.000	0.000	0.000	0.000

* p < 0.05
** p < 0.01
*** p< 0.001
† p<0.10
†† Centered at means

TABLE 4b: 1994: Odds Ratios from Multilevel Logistics/Binary Regression on Poverty Status

TABLE 3b
1994: Odds Ratios from Multilevel Logistic/Binary Regression on Poverty Status

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Individual-Level							
Bonding Social Capital							
Bonding Norms (Factor of Three Items)		1.36***	1.23**	1.22**	1.31***	1.31***	1.19**
Friends (proportion of close friends in community)		1.09*	1.02	1.02	1.11**	1.11**	1.03
Family (proporiton of family members in community)		1.12**	1.10**	1.10**	1.11**	1.11**	1.10*
Bridging Social Capital							
Bridging Norms (Factor of Four Items)		0.75***	0.72***	0.73***	0.78***	0.78***	0.75***
Density of Acquaintanceship		0.97	1.00	0.98	0.89**	0.89**	0.96
Formal Ties		0.70***	0.78***	0.77***	0.70***	0.70***	0.78***
Controls							
Female	1.96***		1.84***	1.84***			1.85***
Age	1.01*		1.01*	1.01*			1.00†
Educational Attainment	0.68***		0.73***	0.73***			0.73***
Number of Years Lived in Community	1.00**		1.00†	1.00†			1.00†
Full-Time Employed	0.38***		0.38***	0.38***			0.38***
Part-Time Employed	0.66***		0.72**	0.72**			0.72**
_cons	0.54**	0.14***	0.39**	0.39**	0.16***	0.16***	0.39**
Between-Level Interactions							
Aggregate Community Bonding Norms††					1.46***	1.46***	1.36***
Aggregate Community Bridging Norms††					0.75***	0.74***	0.76***
Aggregate Bonding Norms x Individual Bonding Norms						1.09†	
Aggregate Bridging Norms x Individual Bridging Norms						0.93	
Community-Level							
Variance				0.0839	0.0878	0.0897	0.0500
Std. Err.				0.0298	0.0276	0.0278	0.0236
Model							
AIC	6914.00	6332.26	5542.13	5526.64	6270.20	6354.53	5511.57
BIC	6963.83	6281.27	5632.70	5624.17	6340.22	6354.55	5623.04
Psuedo R^2				0.381	0.351	0.337	0.631
LR test vs. logistic regression				0.000	0.000	0.000	0.000

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$
† $p = 0.083$
†† Centered at means

TABLE 5a: 1994: Average Poverty Rates of INDIVIDUALS Given Different Levels of Bonding and Bridging Social Capital

TABLE 5a
1994: Average Poverty Rates of INDIVIDUALS Given Different Levels of Bonding and Bridging Social Capital[1]

Bridging[3] \ Bonding[2]	1 (Low)	2	3	4	5 (High)
1 (Low)	16%	14%	14%	24%	25%
2	12%	17%	18%	22%	24%
3	9%	14%	12%	15%	14%
4	11%	8%	9%	15%	20%
5 (High)	13%	9%	7%	12%	15%

1 Levels established based on factor scores rounded to the nearest 0.5 standard deviation
2 Bonding social capital norms (factor of three items)
3 Bridging social capitla norms (factor of four items)

TABLE 5b: 2004: Average Poverty Rates of INDIVIDUALS Given Different Levels of Bonding and Bridging Social Capital

TABLE 5b
2004: Average Poverty Rates of INDIVIDUALS Given Different Levels of Bonding and Bridging Social Capital[1]

Bridging[3] \ Bonding[2]	1 (Low)	2	3	4	5 (High)
1 (Low)	18%	20%	21%	20%	25%
2	14%	15%	14%	17%	27%
3	12%	11%	14%	16%	19%
4	7%	10%	10%	11%	15%
5 (High)	10%	8%	7%	15%	16%

1 Levels established based on factor scores rounded to the nearest 0.5 standard deviation

2 Bonding social capital norms (factor of three items)

3 Bridging social capitla norms (factor of four items)

TABLE 6a: 1994: Average Poverty Rates of COMMUNITIES Given Different Levels of Bonding and Bridging Social Capital

TABLE 6a
1994: Average Poverty Rates of COMMUNITIES Given Different Levels of Bonding and Bridging Social Capital[1]

Bridging[3] \ Bonding[2]	1 (Low)	2	3 (High)
1 (Low)	15%	17%	24%
2	14%	13%	19%
3 (High)	10%	14%	17%

1 Levels established based on aggregate factor scores rounded to the nearest 0.1 standard deviation

2 Bonding social capital norms (factor of three items)

3 Bridging social capitla norms (factor of four items)

TABLE 6b: 2004: Average Poverty Rates of COMMUNITIES Given Different Levels of Bonding and Bridging Social Capital

TABLE 6b
2004: Average Poverty Rates of COMMUNITIES Given Different Levels of Bonding and Bridging Social Capital[1]

Bridging[3] \ Bonding[2]	1 (Low)	2	3 (High)
1 (Low)	14%	18%	21%
2	13%	18%	21%
3 (High)	15%	12%	14%

1 Levels established based on aggregate factor scores rounded to the nearest 0.1 standard deviation

2 Bonding social capital norms (factor of three items)

3 Bridging social capitla norms (factor of four items)

TABLE 7a: U.S. Census Poverty Thresholds 1994

Table 7a: U.S. Census Poverty Thresholds 1994

Size of Family Unit	Weighted Average Thresholds	None	One	Two	Three	Four	Five	Six	Seven	Eight or More
One person (unrelated individual)	7,547									
Under 65 Years	7,710	7,710								
65 Years and Over	7,108	7,108								
Two persons	9,661									
Householder under 65 years	9,976	9,924	10,215							
Householder over 65 years	8,967	8,958	10,176							
Three persons	11,821	11,592	11,929	11,940						
Four persons	15,141	15,286	15,536	15,029	15,081					
Five persons	17,900	18,434	18,702	18,129	17,686	17,416				
Six persons	20,235	21,203	21,287	20,848	20,427	19,802	19,432			
Seven persons	22,923	24,396	24,548	24,023	23,657	22,975	22,180	21,307		
Eight persons	25,427	27,285	27,526	27,031	26,596	22,980	25,198	24,385	24,178	
Nine persons or more	30,300	32,822	32,981	32,543	32,174	31,570	30,738	29,985	29,799	28,651

TABLE 7b: U.S. Census Poverty Thresholds 2004

Table 7b: U.S. Census Poverty Thresholds 2004

Size of Family Unit	Weighted Average Thresholds	None	One	Two	Three	Four	Five	Six	Seven	Eight or More
One person (unrelated individual)	9,645									
Under 65 Years	9,827	9,827								
65 Years and Over	9,060	9,060								
Two persons	12,334									
Householder under 65 years	12,714	12,649	13,020							
Householder over 65 years	11,430	11,418	12,971							
Three persons	15,067	14,776	15,205	15,219						
Four persons	19,307	19,484	19,803	19,157	19,223					
Five persons	22,831	23,497	23,838	23,108	22,543	22,199				
Six persons	25,788	27,025	27,133	26,573	26,037	25,241	24,768			
Seven persons	29,236	31,096	31,290	30,621	30,154	29,285	28,271	27,159		
Eight persons	32,641	34,778	35,086	34,454	33,901	33,115	32,119	31,082	30,818	
Nine persons or more	39,048	41,836	42,039	41,480	41,010	40,240	39,179	38,220	37,983	36,520

TABLE 8: Variable Descriptions and Descriptive Statistics from 1994

Variable Descritipions and Descriptive Statistics (1994)[1]

	Mean	Std. Dev	Range
Poverty…….	0.15	0.36	(0-1)
BONDING SOCIAL CAPITAL			
Bonding Norms (factor of three items)……	0.003	0.81	(-2.74-1.35)
On a scale of 1-7 where 1=friendly and 7= unfriendly, rate (community)	5.57	1.31	(0-7)
Being a resident of (community) is like living with a group of close friends	3.54	1.03	(1-5)
Our neighborhood is closely knit	3.31	1.03	(1-5)
Friends (proportion of close friends in community)….	3.68	1.15	(1-6)
Family (proporiton of family members in community)	2.97	1.03	(1-6)
BRIDGING SOCIAL CAPITAL			
Bridging Norms (factor of four items)……	0.002	0.79	(-3.02-1.64)
On a scale of 1-7 where 7= not trusting and 1= trusting, rate (community)	5.17	1.40	(1-7)
Clubs and organizations are interested in what is best for all residents	3.74	0.90	(1-5)
Residents of (community) are receptive to new residents in leadership positions	3.28	0.97	(1-5)
I think that "every person for themselves" is a good description of how people in (community) act (reverse coded)	3.56	1.00	(1-5)
Density of Acquaintanceship……	2.73	0.96	(1-5)
Formal Ties……	1.38	1.29	(0-5)
CONTROLS			
Female……	0.55	0.50	(0-1)
Age…….	54.69	17.61	(18-98)
Educational Attainment…….	3.66	1.50	(1-7)
Number of Years Lived in Community……..	31.94	21.91	(0-98)
Full-Time Employed……..	0.50	0.50	(0-1)
Part-Time Employed……	0.10	0.31	(0-1)