

Bonding and Bridging

Understanding the Relationship between Social Capital and Civic Action

Larissa Larsen, Sharon L. Harlan, Bob Bolin, Edward J. Hackett, Diane Hope, Andrew Kirby, Amy Nelson, Tom R. Rex, & Shaphard Wolf

Abstract

This study investigates the relationship between social connections and collective civic action. Measuring social capital in eight Phoenix, Arizona, neighborhoods allowed the authors to determine that individuals with strong social bonding (i.e., association and trust among neighbors) are more likely to take civic action. However, while social capital lessens the relationship between an individual's social status and the likelihood of taking action, it does not eliminate the positive relationship. The analysis also suggests that bonding and bridging are distinct forms of social capital that have some different antecedents

Keywords: *collective civic action; social connection; status*

Larissa Larsen is an assistant professor in the School of Natural Resources and Environment at the University of Michigan.

Sharon L. Harlan is an associate professor in the Department of Sociology at Arizona State University.

Bob Bolin is a professor at the Center for Environmental Studies and in the Department of Sociology at Arizona State University.

Edward J. Hackett is a professor in the Center for Environmental Studies and in the

A neighborhood's ability to act collectively to address common problems is an indicator of its well-being (Ferguson and Dickens 1999). Today, understanding why individuals in some neighborhoods undertake civic actions is increasingly important as more residential communities opt for gated separation; formalize their neighborhood relationships and rights via the codes, covenants, and restrictions of a homeowners' association (HOA); or advocate for resources from public programs. With the decentralization of social programs, administrative responsibility is being transferred from the federal level to the state and local levels of government. Therefore, the neighborhood may be increasingly called upon to ask the appropriate public institutions for its "fair share" of acceptable housing conditions, "good" schools for children, appropriate police and fire protection, economic opportunity and security, and a healthy environment. Securing the positive elements and deflecting the negative threats can require that neighborhood residents politically engage with service providers (usually the municipality), compete with other communities, and potentially oppose private corporations. With the death of "big" government, Saul Alinsky's (1971) warning that lower- and moderate-income neighborhoods must use civic action if they are to wrest equitable services and treatment from the power holders has a greater sense of urgency.

Bandura (1997) stated that people are more likely to take collective action if they have strong social ties and higher social status. Therefore, social ties among neighborhood residents, often referred to as "bonding social capital," contributes to the likelihood that individuals will move beyond their diverse self-interests toward mutually beneficial collective action. Communal ties magnify prior tendencies toward collective action (Steinberger 1981). However, the key predictor of collective action has traditionally been socioeconomic status (Sampson 1991; Mesch and Schwirian 1996; Boardman and Robert 2000). Residents with higher levels of social status, the combination of education and wealth, are more likely to believe in their ability to influence government decisions and are more likely to take collective action. Boardman and Robert (2000) found that the neighborhood effect of higher socioeconomic status increased

Journal of Planning Education and Research 24:64-77

DOI: 10.1177/0739456X04267181

© 2004 Association of Collegiate Schools of Planning

the probability for collective action above and beyond the impact of individual socioeconomic status. Bandura wrote, “Social ties alone are not enough. It takes efficacious individuals to organize and activate a public constituency” (p. 487). The recent literature seems to be divided on this point. Although many authors have identified the importance of social capital as a community asset from which all residents can benefit, the work of Bandura and others would lead us to believe that social status is more important than social capital in predicting civic action.

The purpose of this study is to investigate the relationship between social connections and collective civic action within the context of rapid and sprawling growth in a Sun Belt city. The research assesses how individual and contextual characteristics affect the creation and use of social capital in a variety of neighborhood settings. Recent theoretical developments suggest that neighborhood social capital originates with the formation of bonds among residents, which in turn empower them to protect and pursue their collective interests as they engage external institutions and organizations that might help them to resist threats to their well-being (Sampson 1988; Putnam 1993; Sampson, Raudenbush, and Earls 1997; Sampson, Morenoff, and Earls 1999; Warren, Thompson, and Saegert 2001).

This study contributes in two ways to the conceptual development and understanding of social capital and collective action in urban neighborhoods. First, we examine the formation of bonding social capital, the networks and trust that develop between neighbors. Are there certain characteristics of individuals or types of neighborhoods where these social ties are predictably more or less likely to develop? Second, we determine the extent to which bonding social capital mediates individual and neighborhood effects on individuals’ demonstrated willingness to engage outside agents to try to solve neighborhood problems. Is neighborhood social capital a sufficiently motivating and independent force in urban

neighborhoods that it moves residents, regardless of their social status, to become agents in civic action? Operationalizing and measuring social capital in eight Phoenix, Arizona, neighborhoods allowed us to determine that individuals with reportedly strong social bonds in their neighborhood are indeed more likely to engage in problem-solving actions that represent the formation of bridging social capital.

► The Dual Nature of Social Capital

Planners recognize that different neighborhoods have varying amounts of resources upon which residents can draw and that some neighborhoods are substantially more robust or “rich” as a result of social relationships that exist among residents and residents’ attachment to their neighborhood. Social capital emanates from the idea that relationships can be viewed as a resource and, therefore, may contribute to “production” just as physical or human capital may contribute “production” (Durkheim 1895/1962; Bourdieu 1986; Coleman 1988, 1994; Putnam 1993, 1999).

“Social capital refers to features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit” (Putnam 1993, 35). Portes and Sensenbrenner (1993) write that social capital is constituted by “those expectations for action within a collectivity that affect the economic goals and goal-seeking behavior of its members, even if these expectations are not oriented toward the economic sphere” (p. 1323). In reviewing the many definitions, Paxton (1999) concluded that the concept of social capital has two distinct components: trust and association. Trust refers to passive emotional sentiments and association refers to the behaviors that produce familiarity, such as informal socializing or lending a tool or assistance to complete a household task. Social capital, while the assemblage of individual sentiments and behaviors, is embedded within the individual and the group (Granovetter 1973) and has the potential to generate either positive or negative outcomes for the group (Witte 1996).

Recent writings have noted that all forms of social capital are not equal and important differences exist between bonding social capital and bridging social capital (Putnam 1993). Bonding social capital occurs within a community of individuals, such as a neighborhood, but the relationships and trust formed by bonding social capital may not precipitate action in addressing a neighborhood problem. Bonding social capital is a necessary antecedent for the development of the more powerful form of bridging social capital (Ferguson and Dickens 1999; Warren, Thompson, and Saegert 2001).

Department of Sociology at Arizona State University. His research interests include technology and society.

Diane Hope is an assistant research professor on the Central Arizona–Phoenix Long-Term Ecological Research Project.

Andrew Kirby is a professor of social sciences at Arizona State University’s West campus.

Amy Nelson is a senior researcher at the Primary Care Research Institute in the College of Medicine at Ohio State University.

Tom R. Rex is research manager at the Center for Business Research, L. William Seidman Research Institute, Arizona State.

Shaphard Wolf is director of the Survey Research Laboratory at Arizona State’s Institute for Social Science Research.

Bridging social capital is what Paxton (1999) refers to as cross-cutting ties. Bridging social capital occurs when members of one group connect with members of other groups to seek access or support or to gain information. Examples of bridging social capital include calling a city department to voice a complaint about public services or forming a neighborhood group to conduct a protest. In our work, bridging social capital is defined as residents' efforts to extend contact beyond the members of the neighborhood, and collective action is the product of bridging social capital.

While bonding social capital may be an asset of lower-income neighborhoods, Sampson (1999) questioned whether bridging social capital was present within lower-income neighborhoods. Warren, Thompson, and Saegert (2001, 4) note that "the main problem for poor communities may not be a relative deficit in social capital, but that their social assets have greater obstacles to overcome, and are constantly under assault." Therefore, poor neighborhoods may contain high levels of bonding social capital, but this form of social capital does not necessarily result in collective action. Lower- and moderate-income neighborhoods may face greater challenges in converting their bonding social capital into the more politically important bridging form of social capital. For example, Edin and Lein (1997) found that poor mothers living in public housing developments relied on money obtained from a network of family and friends to make ends meet; this is an example of bonding social capital. While bonding capital allowed these mothers to cobble together enough resources to survive, their efforts never extended beyond their immediate network. Therefore, they did not employ bonding capital to ally with individuals or organizations outside their network that might promote social change or identify other forms of assistance.

► The Antecedents of Social Capital in Neighborhoods

Because of the embedded nature of social capital, both individual and neighborhood characteristics have been found to contribute to the formation of social capital in residential communities. Although most studies do not explicitly distinguish between bonding and bridging social capital, it seems that affective bonds between neighbors and attempts to buffer the neighborhood from external disturbances are the products of the same individual characteristics and neighborhood contexts. Past research identifies three key individual-level predictors of social capital—social status, length of residence, and race—as well as the importance of neighborhood context. Bridging social capital may require the existence of bonding social capital as well as additional resources.

Individual Effects

Social status is a key determinant of civic action and has been identified as contributing to higher levels of social capital (Bandura 1997). A neighborhood is more likely to have greater social capital when "more of its members have education, experience, and information and perhaps more physical and financial wealth as well to share" (Loury as cited in Ferguson and Dickens 1999, 5). Individual social status, often referred to as socioeconomic status, "was linked to increased levels of organizational participation" (Sampson 1999); this can represent a higher level of social capital. However, Sampson, Raudenbush, and Earls (1997) also discovered that social capital (neighbors' willingness to act and their level of trust) was of greater importance than social status in predicting violent crime rates. Violent crime was less frequent in neighborhoods with higher levels of social capital, because those residents had higher levels of collective efficacy. Given the diverse findings in the literature, more research is needed to untangle the relationship between social class and bonding and bridging social capital. We believe that social class is positively related to social capital but that social capital mediates the effect of social class on civic action.

Another key characteristic predicting social capital is an individual's length of residence in his or her home. Sampson (1988) found that length of residence was linked to increased social ties and participation in social leisure activities at both the individual and neighborhood level. As Putnam (1993, 170) explains, "Unlike other forms of capital, [social capital is often the] . . . by-product of other social activities," and therefore individuals who have lived for a longer period of time in the neighborhood will have participated in more activities and informal social encounters. Kasarda and Janowitz (1974) found that length of residence positively correlated with participation in local affairs, community sentiment, and the number of local friendships.

Related to an individual's length of residence is the importance of home ownership to the generation of social capital. Sometimes referred to as tenure, owners are more likely to live in one location for a longer period of time and are more likely to have an increased sense of concern for the neighborhood due to their financial investment in their own home. Home ownership increases residents' life satisfaction (Rohe and Stegman 1994) and was shown to be an important individual characteristic contributing to the formation of social capital in England (Sampson 1988).

Little information exists to suggest how minority status influences the development of social capital. Research on ethnic enclaves would suggest that bonding social capital can be high (Gans 1962). However, the strong links between class and

race within the United States might suggest that social capital is more difficult to establish in neighborhoods with high levels of social isolation (Wilson 1987), and typically African Americans disproportionately reside in neighborhoods with high concentrations of poverty (Jargowsky 1997). In Phoenix, an increasing proportion of the population is Hispanic. Davis (2001) believes that the social networks of many Hispanic residents exist outside of their neighborhood, in the church or in their employment sector. He also believes that some Hispanic individuals live a dual existence. While working in the United States, many Hispanic residents make regular trips back to Mexico and continue to identify with their Mexican culture. Therefore, forming bonding social capital within their neighborhood may be less important if they perceive their true home to be elsewhere. The development of bridging social capital may be inhibited as it requires a daunting commitment to understand the political workings of a different culture and this commitment detracts from time with family or at work.

Neighborhood Effects

While bonding social capital begins in a relationship between two individuals, context has an important influence on the development of an emergent group property. Therefore, the neighborhood's stability and the concentration of poverty or affluence may impact an individual's level of bonding social capital. Individuals in unstable neighborhoods, despite their own lengthy tenure, had fewer contacts and were less motivated to participate in community activities. Sampson (1999) found that 70 percent of the variation in collective efficacy (the willingness of residents to intervene and their feelings of trust) could be explained by concentrated disadvantage, immigration concentration, and residential stability.

William Julius Wilson's (1987) work described how concentrated deprivation compounded the neighborhood's economic deficits by increasing residents' levels of social isolation and weakening the ability of neighborhood social institutions to serve as buffers. Massey and Denton (1993, 138) wrote that "in the face of persistent neighborhood disorder, residents come to distrust their neighbors and to look upon them as threats rather than as sources of support or assistance . . . this withdrawal only promotes further disorder by lowering the number of watchful neighbors in public places and by undermining the community's capacity for collective action." While concentrated neighborhood poverty has traditionally been considered an impediment to the creation of social capital, newer research suggests that concentrated affluence may be of even greater importance in enhancing social capital.

Sampson, Morenoff, and Earls (1999) investigated the presence of collective efficacy (the willingness of residents to intervene on behalf of other residents and their feelings of trust) as it related to informal child control. The researchers found that "residential stability and concentrated affluence, more so than poverty and racial/ethnic composition" predicted higher levels of informal social control (p. 633). Similarly, Brooks-Gunn et al. (1993) found that positive spillover effects from concentrated socioeconomic resources were more important for predicting adolescent outcomes than were the effects of concentrated poverty.

Neighborhood context may also have an important influence on the development of bridging social capital. In Bandura's (1997) social cognition theory of self-efficacy, which Wilson (1996) nested within his work on neighborhood effects, Bandura suggests the possibility of "vicarious mastery." When people see or hear of how other people similar to themselves successfully performed a task, this extends their beliefs in their own potential abilities (Boardman and Robert 2000). Therefore, if one neighbor explains the procedure for speaking at a public planning hearing and relates her resulting sense of empowerment to her neighbor, this may encourage her neighbor to take on a similar task. Thus, the exchange of knowledge and the sharing of experiences between similar individuals in close proximity to each other may be the mechanism that promotes civic action, which is an example of bridging social capital.

Perception of Neighborhoods

Individuals' perceptions of their neighborhoods, independently of individual and neighborhood characteristics, may also influence how likely they are to engage in neighborhood problem-solving behaviors. Three potential effects on respondents' likelihood of taking civic actions are (1) perceptions of how well the neighborhood is functioning (Varady 1983), (2) beliefs about whether residents are empowered to affect what happens in their neighborhood (Bandura 1997), and (3) perceptions of how many problems exist in their neighborhood.

One of the ways that planners typically assess neighborhood functioning is by residents' satisfaction with the provision of public services. If an individual's neighborhood has insufficient police protection or inadequate water pressure, an interest in correcting the problem might generate social capital between individual residents as they share concerns and strategize about how to alleviate the problem. On the other hand, people who are satisfied that their neighborhood is

being cared for by civic authorities may not feel they need to take problem solving into their own hands.

The finding of Sampson, Raudenbush, and Earls (1997), that people with a greater sense of collective efficacy were more willing to intervene in neighborhood affairs, suggests that feelings of efficacy, or the sense of being empowered and in control of neighborhood events, would be an important predictor of whether people take action. Action should be more common where people feel they can make a difference.

Individuals' perceptions of how many problems assail their neighborhood would appear intuitively to influence whether people engage in civic action. An accumulation of grievances about neighborhood conditions should increase the likelihood that people would act, and as in the case of neighborhood functioning (or dysfunctioning), individuals who perceive more problems in their neighborhood will be more likely to confer with neighbors and consider collective action than individuals living in a neighborhood with fewer problems.

► Hypotheses

Our analysis tests five main hypotheses about the determinants of social capital among residents in different types of neighborhoods. Theoretically, neighborhood social capital originates with the formation of bonds among neighbors, which in turn empower them to protect and pursue their own interests by engaging institutions and organizations that could enhance or detract from their well-being. The development and deployment of social capital is a graduated process that leads individuals to use bonding social capital generated inside the neighborhood to benefit the collectivity in interactions with external agents. These hypotheses seek to resolve several key issues about the individual and neighborhood determinants of social capital, the exact relationship between social status and social capital, and the distinction between bonding and bridging social capital.

1. Bonding social capital, which we define as strong networks and trust between neighbors, is more likely to form among people with higher social status, longer residential tenure, and non-Hispanic ethnicity.
2. Residents in neighborhoods of concentrated affluence and greater residential stability are the most likely to form bonding social capital, net of their individual characteristics.
3. The effect of living in a neighborhood of concentrated poverty is to reduce the amount of social capital, net of individual characteristics.
4. The individual and neighborhood conditions that increase bonding social capital also affect the development of bridging social capital, which we define as the propensity of individuals to engage in civic action on neighborhood problems.
5. Bonding social capital has an independent effect on individuals' propensity to take civic actions, net of individual and neighborhood characteristics and other control variables. Specifically, bonding social capital mediates the relationship between individual social status and civic action.

► Method

Study Area

This study was conducted in eight neighborhoods in Phoenix, Arizona, a Sun Belt city that is rapidly expanding within a region that actively promotes economic growth and development. The population of the Phoenix metropolitan area currently exceeds 3.3 million. It has been increasing by approximately one hundred thousand people per year since the mid-1990s, making it one of the largest and fastest-growing urban areas in the nation. One-quarter of the city's 2000 population had arrived from outside the Phoenix metropolitan area between 1995 and 2000. Large differences in wealth and income exist among Phoenix residents; in this way, it is similar to many urban settings within the United States. Like many cities in the southwest, the largest minority population is Hispanic, primarily from Mexico. According to the 2000 census, 34 percent of the city's population is Hispanic. Many Phoenix residents have moved here from other locations—20 percent are foreign-born, and most of those are from Mexico.

The evidence of Phoenicians' attachment and commitment to their neighborhoods is mixed. Of 1,020 residents polled in a 1999 quality-of-life study in the metropolitan area, 43 percent replied that they would leave the Phoenix area tomorrow if able to do so (Morrison Institute 1999). In our study, however, more than 80 percent of respondents said they felt a sense of community in their neighborhood, and 70 percent thought they would live in their present home five years from now. If neighborhood social capital exists and has an impact on neighborhood problem-solving activity in Phoenix, a city undergoing rapid demographic transitions, then it is likely that the same processes exist in other more stable cities and neighborhoods as well.

Study Neighborhoods and Sample Households

The Phoenix Area Social Survey (PASS) was part of the Central Arizona–Phoenix Long-Term Ecological Research Project (CAP LTER) and was designed to investigate and monitor the interaction of a rapidly growing human community with its natural environment and to examine how

neighborhoods form and how they work in an urban area characterized by high rates of in- and out-migration, a large minority population, and a great deal of socioeconomic inequality. Because of our environmental focus, seven of the eight study neighborhoods were selected to coincide with sites being monitored as part of the larger CAP LTER.¹ Neighborhood boundaries were established using census block group boundaries, which in most cases conformed to a visually homogeneous group of homes with no significant natural or built barriers (Harlan et al. 2003).²

Selection of study neighborhoods only within the city of Phoenix allowed for a constant level of municipal services and a uniform system of local government. We determined income and other population characteristics by a review of the 1990 and 2000 census block group information on median household income, race, age of housing stock, and population (U.S. Census 2003). Our neighborhoods represent different types of urban communities based on median household income levels ranging from high (\$120,000) to low (\$20,000) and locations ranging from the urban core to the northern and southern desert fringe. On average, our sample is slightly more advantaged in education, income, and home ownership than the city population, as determined by comparison with block groups across the entire city.

The PASS respondents were selected from an area probability sample of households within the specified boundaries of each neighborhood. A systematic random sample of households was drawn within each sample area. A random adult respondent was chosen within each household using the most-recent-birthday method. A total of 302 interviews was completed in 2002, approximately equally distributed across the eight neighborhoods ($n_s = 29$ to 47).³ The overall response rate for the survey was 40 percent.

Survey Instrument

The survey was a forty-five-minute (on average) telephone or in-person interview administered in English and Spanish by the Survey Research Laboratory in the Department of Sociology at Arizona State University using a Computer Assisted

Table 1.
Descriptive statistics for variables in the analysis.

Variable	Standard				n
	Mean	Deviation	Minimum	Maximum	
Bonding social capital index	3.07	0.66	1.20	4.00	290
Took action on neighborhood problems: yes ^a	0.41	0.49	0	1.0	302
Total <i>n</i> actions taken on problem issues	0.71	1.09	0	6.00	302
Education: some postsecondary ^a	0.31	0.46	0	1.0	290
Education: at least a college degree ^a	0.37	0.48	0	1.0	290
Years in home	7.97	9.86	0	53.00	291
Ethnicity: Hispanic ^a	0.29	0.45	0	1.0	300
Neighborhood stability ^{a,b}	0.39	0.18	0.08	0.56	302
Affluent neighborhoods ^{a,c}	0.37	0.48	0	1.0	302
Poor neighborhoods ^{a,d}	0.28	0.45	0	1.0	302
Neighborhood functioning index	2.84	0.84	1.00	4.00	295
Neighborhood efficacy index	2.86	0.85	1.00	4.00	296
<i>n</i> issues identified as big problems	1.22	1.80	0	10.00	302

a. Mean is expressed as a proportion.

b. Percentage of residents in census block group that lived in same home five years ago according to the 2000 U.S. Census.

c. Percentage of respondents who lived in the three highest-income neighborhoods: median household incomes of survey respondents = \$120,000, \$117,500, \$110,000.

d. Percentage of respondents who lived in the two lowest-income neighborhoods: median household incomes of survey respondents = \$30,500, \$20,000.

Telephone Interviewing (CATI) system. Interviewers asked questions about neighborhood associations and trust, neighborhood level of attachment, neighborhood functioning, environmental attitudes, and perceived neighborhood problems and actions.⁴ Demographic information about the household's members, income, education, age, race, and marital status was also collected.

Measures

Several measures were developed to represent the key variables in the analysis. These are described below, beginning with the dependent variables that measure two types of social capital. Social capital is most often discussed as a public good that exists within the community (Coleman 1988), but it is also an individual resource that members of the community create and draw upon asymmetrically. Our analysis uses both individual characteristics and neighborhood characteristics to predict individuals' reported levels of social capital and individuals' actions on neighborhood problems. Table 1 presents the means and standard deviations of these variables.

Bonding social capital. Bonding social capital is composed of two elements: association and trust between neighbors. Each of these elements was operationalized in the survey by four

items drawn from the literature, such as, “How well do you know your neighbors?” and “How much can people in your neighborhood be trusted?” We combined the eight items into a summated and averaged 4-point scale with a mean of 3.07 (Cronbach’s alpha = .87). (See the appendix for exact wording and response set of scale items.)

Bridging social capital: Taking actions on neighborhood problems. Since PASS deals with people’s perceptions of the physical environment, we used people’s actions on neighborhood environmental problems as an indicator of whether they engaged outside institutions and organizations to protect their neighborhood from externally generated threats to their health, safety, and well-being. Although our variable represents actions taken by individual respondents, the types of problems we asked about—such as hazardous waste sites, widening of roads, and number of transients—affect the neighborhood as a collective entity. We developed the list of problems from the literature and by monitoring local newspapers to determine the kinds of neighborhood environmental issues that were being reported. The actions people take may be viewed as being in their own interest, but they also clearly benefit the collectivity of which the individual is a part. There must be an element of community consciousness involved in a respondent’s willingness to either act alone or in concert with neighbors to prevent detractions or threats to the neighborhood.

Interviewers read respondents a list of seventeen potential neighborhood problems and asked if each one is or has been a “big problem, little problem, or not a problem at all for your neighborhood.” If the respondent replied that it is a problem, he or she was then asked, “Have you taken any action to try to solve this problem?” From this information, we constructed a discrete (yes = 1, no = 0) variable that indicated whether the respondent had acted on *any* of the items that they had listed as a neighborhood problem. Forty-one percent of respondents reported having done something about at least one problem. (The problems listed in the survey are found in the appendix.) As a second variable, we also counted the *number* of items for which they reported taking a problem-solving action.⁵ Fifty-nine percent of respondents did not act on any problems, and thus the mean number of actions is only .71. Most people who did something acted on one, two, or three problems. Only eight people acted on more than three problems. For each model in which “action” is used as a dependent variable, we controlled for the number of big neighborhood problems that respondents reported (mean = 1.22 and maximum = 10).

Individual characteristics. Sociodemographic variables for respondents, including level of education, number of years in present home, and ethnicity are used as independent variables

in the analysis. Level of education was constructed as two dummy variables with high school diploma or less as the reference category (0). The sample is about evenly divided into respondents with a high school diploma or less, some postsecondary education, and college degree or higher. Education is used, instead of individual income or an index of education and income, to measure social status because education has a lower correlation with the neighborhood income contextual effects (described below). In our sample, respondent’s education is also a better predictor than household income of the propensity to act on a neighborhood problem. Years in home averages eight, ranging from less than one to fifty-three years. Ethnicity was calculated as a dummy variable with Hispanic = 1 and other = 0. Hispanics are 29 percent of the sample; African American, Asian or Pacific Islander, Native American, and other ethnicities are another 7.3 percent. The latter groups are included in the reference category along with non-Hispanic whites, who are 63.7 percent of the sample.

Neighborhood Characteristics. Three contextual effects are included in the analysis to control for group properties of neighborhoods. First, neighborhood stability is measured by the percentage of respondents in the block group who lived in their home five years prior to the 2000 census. Second, a dummy variable, representing the three highest-income neighborhoods, measures the effect of concentrated affluence on social capital formation. Respondents in these neighborhoods reported median household incomes nearly twice as high as the next highest middle-income neighborhood (i.e., \$120,000 compared to \$65,000 for the highest middle-income neighborhood). Third, a dummy variable also represents the two lowest-income neighborhoods (with annual median incomes of \$20,000 and \$30,000), measuring the effect of concentrated poverty. These neighborhoods are in the urban core and have a high concentration of Hispanic residents, although one is predominately a single-family home-owning community, and the other has many multifamily dwellings that are predominately rentals.

The collinearity between individual’s Hispanic ethnicity and education, as well as between Hispanic ethnicity and the degree of neighborhood affluence or poverty, is apparent in Table 2. In this sample, very few Hispanics have more than a high school education, whereas almost half of non-Hispanic whites have more. The two lowest-income neighborhoods are also home to 81 percent of the Hispanics in this sample. Given the reality of ethnic inequality and residential segregation in Phoenix and many other American cities, the effects of race and class are difficult to separate empirically, especially in a small sample. Nevertheless, as we demonstrate below, both variables show independent effects in the multivariate analysis.

Table 2.
Correlations.

<i>Variable</i>	<i>Took Action on One or More Problems (1, 0)</i>	<i>Total n Actions Taken on Problems</i>	<i>Education: Some Post-secondary (1, 0)</i>	<i>Education: At Least a College Degree (1, 0)</i>	<i>Years in Home</i>	<i>Ethnicity Hispanic (1, 0)</i>	<i>Neighborhood Stability (1, 0)</i>	<i>Affluent Neighborhoods (1, 0)</i>	<i>Poor Neighborhoods (1, 0)</i>	<i>Neighborhood Functioning Index</i>	<i>Neighborhood Efficacy Index</i>	<i>n Issues Identified as Big Problems</i>
Bonding social capital index	.216	.198	-.035	.292	.175	-.368	.212	.324	-.363	.259	.281	-.065
Took action on one or more problems (1, 0)		.789	.126	.154	.071	-.204	.097	.167	-.180	-.059	.079	.252
Total <i>n</i> actions taken on problems			.118	.154	.141	-.177	.095	.186	-.130	-.044	.072	.358
Education: some postsecondary (1, 0)				-.517	-.046	-.001	.103	-.189	-.055	-.108	.000	.035
Education: at least a college degree (1, 0)					.027	-.421	.087	.473	-.473	.214	.176	.001
Years in home						-.111	.314	.059	-.007	.095	.068	.067
Ethnicity: Hispanic (1, 0)							-.105	-.436	.756	-.107	-.144	.107
Neighborhood stability								-.034	-.158	.122	.214	.027
Affluent neighborhoods (1, 0)									-.488	.187	.256	-.029
Poor neighborhoods (1, 0)										-.173	-.201	.238
Neighborhood functioning index											.451	-.242
Neighborhood efficacy index												-.136

Perceptions of neighborhoods. First, to measure neighborhood functioning, we averaged two items on, “How responsive is the city government to your neighborhood’s concerns and problems?” and “How do you rate the quality of police protection in your neighborhood?” (4-point scales, Cronbach’s alpha = .62). Second, to capture the respondents’ beliefs about efficacy in problem solving, we averaged two items on, “How much impact do you think people like you can have on making your neighborhood a better place?” and “Would you say you and your neighbors have a lot of control about what goes on in the neighborhood?” (4-point scales, Cronbach’s alpha = .56). The means of the functioning and efficacy variables are nearly identical at 2.8. Finally, we summed the total number of big problems that respondents reported for their neighborhoods. Half of our sample identified at least one big problem that their neighborhood faced, and most of those identified more than one big problem.

► Results

In Table 3, we test propositions about the independent effects of individual and contextual variables on an index of bonding social capital, a measure that taps the degree of interaction and trust individual survey respondents reportedly share with their neighbors. The ordinary least squares (OLS) regression model 1 uses only individual characteristics to predict respondents’ reported levels of social capital. These findings support our first hypothesis because respondents’ education, longevity in the neighborhood, and ethnicity are all significant predictors of bonding social capital, or how much they reportedly interact with and feel cohesiveness with their neighbors. As expected, respondents with higher social status (at least a college degree), longer-term residents, and non-Hispanics are more likely to engage in creating ties and sharing trust within the neighborhood. We also tested the effects of home ownership, gender, age, and presence of children in this model, but none of these variables are statistically significant once the other variables were controlled, and they do not alter the effects in the model in Table 3.

In model 2, neighborhood stability and two dummy variables for extremely affluent neighborhoods and poor

Table 3.
Regression predicting bonding social capital with individual and neighborhood characteristics.

Variable	Model 1			Model 2		
	B	SE	Beta	B	SE	Beta
Individual characteristics						
Some postsecondary education	.131	.093	.093	.069	.096	.048
B.A. and higher education	.314***	.098	.230	.169	.107	.124
Years in home	.010***	.004	.150	.007*	.004	.108
Hispanic	-.370***	.090	-.253	-.231*	.124	-.158
Neighborhood characteristics						
Neighborhood stability				.507***	.212	.138
Affluent neighborhoods				.220**	.088	.161
Poor neighborhoods				-.113**	.135	-.078
Constant	2.935***	0.089		2.745***	0.122	
<i>n</i>	288			288		
Adjusted R^2	.172			.201		
Change in R^2				.037**		

* $p < .05$. ** $p < .01$. *** $p < .005$ (one-tailed tests).

neighborhoods enter the equation. All three of these variables exert significant effects in the expected directions on individuals’ bonding social capital, net of respondents’ individual characteristics. Residents of more stable neighborhoods and those with concentrated affluence report that they experience much higher levels of interaction and cohesiveness than we would predict based on their personal characteristics alone. On the other hand, residents of the two poorest neighborhoods report feeling that they have less social capital within their neighborhoods, regardless of personal characteristics. The incremental test for R^2 confirms that neighborhood variables add significantly to the explanatory power of the model, increasing adjusted R^2 to 20 percent of the variance explained. Thus, our second and third hypotheses are supported: neighborhood contexts of wealth, poverty, and stability are important in the formation of bonding social capital.

When neighborhood stability and social class are included in the model, the coefficients of the individual characteristics decrease in size. Nevertheless, number of years respondent has lived in the neighborhood and ethnicity are still statistically significant effects. Individuals who are long-term residents report tighter bonds in the neighborhood, and Hispanics report fewer bonds, regardless of the neighborhoods in which they live. Even though Hispanics are highly concentrated in poor neighborhoods, each variable—individual Hispanic ethnicity and low median neighborhood income—exerts independent effects on social capital. We also estimated the models excluding the ethnicity dummy variable, and this did not change the significance level of the other variables in the model. These relationships, however, should be investigated with a larger sample.

Table 4.
Logistic regression predicting whether respondents took action on neighborhood problems.

Variable	Model 1			Model 2			Model 3		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Individual characteristics									
Some postsecondary education	1.282***	0.359	3.604	1.100***	0.374	3.004	1.063**	0.377	2.896
B.A. and higher education	1.005***	0.394	2.733	0.828*	0.411	2.290	0.738*	0.415	2.113
Years in home	0.010	0.014	1.010	0.012	0.014	1.012	0.008	0.015	1.008
Hispanic	-0.446	0.465	0.640	-0.278	0.492	0.751	-0.119	0.503	0.888
Neighborhood characteristics									
Neighborhood stability	0.407	0.794	1.503	0.326	0.855	1.386	0.137	0.865	1.146
Affluent neighborhoods	0.514*	0.310	1.672	0.413	0.326	1.511	0.334	0.331	1.396
Poor neighborhoods	0.227	0.502	1.255	-0.547	0.563	0.579	-0.515	0.568	0.597
Perceptions									
Neighborhood functioning				-0.266	0.186	0.766	-0.318*	0.191	0.727
Neighborhood efficacy				0.156	0.181	1.168	0.118	0.185	1.126
Number of big neighborhood problems				0.320***	0.086	1.377	0.329***	0.089	1.390
Social capital									
Bonding social capital index							0.580**	0.249	1.786
Constant	-1.491***	0.462	0.225	-1.265*	0.687	0.282	-2.689***	0.931	0.068
<i>n</i>	288			288			288		
Cox and Snell R^2	.102			.165			.181		
Change in chi-square	30.891***			20.876***			5.591*		

Note: Took action is coded 1.

* $p < .05$. ** $p < .01$. *** $p < .005$ (one-tailed tests).

The logistic regressions in Table 4 model the predictors of respondents' engagement in performing acts of bridging social capital. The dependent variable is specified as two categories: respondent took an action on a problem at least once (1) or else never acted (0). Model 1 uses the same set of individual and neighborhood predictors of bonding social capital as Table 3 to examine whether they also predict bridging social capital. We find a somewhat different pattern of variables that matter. Dummy variables for both levels of postsecondary education are statistically significant in predicting whether people will take action on neighborhood problems. Respondents with some postsecondary education are 3.6 times more likely to act than respondents with only a high school education or less, and respondents with a B.A. or higher degree are also more likely to act. The only other significant predictor is the dummy variable for affluent neighborhoods, which is also significant in predicting bonding social capital. Residents of the richest neighborhoods are 1.6 times more likely than residents of the middle-income neighborhoods to take actions on problems. Thus our fourth hypothesis, which claims that the same characteristics affect bonding and bridging social capital, is only partially supported. Individual's education and neighborhood affluence are the common features of both models.

Model 2 adds three additional control variables, but of these, only the number of big problems perceived by respondents has a significant effect on the likelihood that they will act. For each additional big problem residents perceive, they are 38 percent more likely to take an action on something ($\text{Exp}[B] = 1.377$). This one variable increases the R^2 by nearly 8 percentage points. Respondents' perceptions of how well the neighborhood functions and how much control residents exert over their neighborhood have the expected signs, but they are not statistically significant effects in this model. The coefficient for affluent neighborhoods falls below the .05 threshold of statistical significance after the number of neighborhood problems is controlled, but the sign remains the same. The sign of the coefficient for concentrated neighborhood poverty, however, changes from positive to negative, and the difference between the neighborhood coefficients is much larger. For a given number of problems, people in affluent neighborhoods are three times more likely to act than people in poor neighborhoods.

Finally, model 3 adds the bonding social capital index to determine if the degree of association and trust between neighbors increases respondents' likelihood of acting on problems that affect them as a collectivity. Bonding social

capital is statistically significant, increasing the likelihood of taking action by 79 percent for each point increase on the 4-point index. Thus, our fifth hypothesis is supported: individuals with higher reported levels of association and trust within the neighborhood are empowered to act on environmental problems that threaten their neighborhood, net of other individual and neighborhood characteristics. However, bonding social capital does not mediate the effect of an individual's social status on taking actions—the education variables remain significant effects in all the models, indicating that both social status and social capital are important predictors of individual civic action. This model predicted 71 percent of the cases correctly. When the ethnicity variable is excluded from the equation (not shown), the neighborhood effect for concentrated poverty becomes statistically significant.

In the final model, the portrait of an individual who is most likely to engage in bridging social capital (taking action) is someone who perceives that problems exist in his or her neighborhood and who believes that the neighborhood is not functioning well. However, this person also has emotional bonds and social contacts with neighbors and has enough education to understand how to address environmental problems. When these conditions exist, individuals are most likely to engage in civic actions on behalf of the collectivity.

In a separate OLS regression not reported here, we tested these same models on a dependent variable that counted the number of actions taken by respondents. Using a scale that ranged between zero and four actions, the results of these models parallel the bivariate logistic regression very closely. The only difference between these two different specifications of the dependent variable is that the dummy variable for affluent neighborhood is also a significant predictor of how often people act. Thus, respondents in rich neighborhoods may act more often than others.

► Discussion

Our analysis suggests that individuals with higher levels of social capital are more likely to take civic action. However, while social capital lessens the relationship between individual social status and the likelihood of taking civic action, it does not eliminate the positive relationship. This is a key finding, which should be tested using not only education but also other indicators of social status. Our analysis also suggests that bonding and bridging social capital are distinct forms of social capital that are predicted by some different antecedents.

Bonding social capital was higher among residents with higher levels of education, those with longer periods of residency in their home, and those who were not Hispanic. While

the importance of education and length of residence (Bandura 1997; Kasarda and Janowitz 1974; Sampson 1988) are identified within the literature as important antecedents to the development of social capital, the influence of ethnicity is less obvious. Our survey found that Hispanic individuals had fewer ties with neighbors and believed their neighbors were less trustworthy than did non-Hispanics. While this finding may appear contradictory to the powerful networks that exist in many ethnic neighborhoods, we must consider the new circumstances of immigration that allow for extensive traffic (legal and illegal) back to the homeland (Davis 2001), particularly in Phoenix, which is within a few hours' drive of northern Mexico.

Three neighborhood-level characteristics contributed to an individual's level of bonding social capital. The stability of the neighborhood was an important characteristic beyond the stability of the individual. Forming bonding social capital can take time, but when a new individual moves into a stable neighborhood, the existing network of connections may accelerate integration. Long-term neighbors may introduce the new resident to others, thus expediting the social connections that may otherwise have taken a number of chance meetings. Consistent with the ideas of Wilson (1987, 1996), we found that concentrated poverty discouraged the development of bonding social capital. As Massey and Denton (1993) noted, the probability that a neighbor may be seen as a threat increases in extremely impoverished neighborhoods. However, concentrated affluence was significantly associated with higher levels of bonding social capital. This finding contributes to an increasing body of research supporting the importance of positive spillover effects from affluent neighborhoods into the surrounding neighborhoods and local institutions (Brooks-Gunn et al. 1993; Sampson, Morenoff, and Earls 1999).

We found empirical support for the notion that bonding and bridging capital are distinct constructs that have different sets of predictors. Bridging capital requires making connections beyond the neighborhood, and many writers have proposed that bonding social capital must exist before bridging social capital can develop (Putnam 1993; Sampson 1999; Warren, Thompson, and Saegert 2001). In this research, bridging social capital was identified as taking action to address a neighborhood-level environmental problem, and the presence of bonding social capital was a significant predictor of taking civic action. Therefore, people who associate with their neighbors and trust their neighbors are more likely to take action when controlling for all other variables.

Happily, bonding social capital appears not to be contingent upon the presence of higher levels of social status, as Bandura (1997) believed. However, as he theorized, social status, measured as educational attainment, does significantly

contribute to the likelihood of an individual’s taking action. Individuals with higher levels of education may be more likely to feel comfortable speaking out, have a greater understanding of avenues for recourse, and have higher levels of belief in their own abilities to induce change. Individuals living in the higher socioeconomic status Phoenix neighborhoods more frequently took action to address a neighborhood problem.

One limitation of this study is that the social survey was administered at one point in time. When respondents were asked whether the neighborhood problem had been solved, most replied that the issue was ongoing. A longitudinal study would help us to track the relationship between taking action and achieving a positive outcome as well as unraveling the causal connection between social capital and civic action. While bonding social capital can be a catalyst for taking action, taking action can result in increased bonding social capital. While a certain amount of overlap between bonding social capital and taking action is likely, we cannot infer causality from this study.

Another possible limitation of this study is the definition of neighborhood. Neighborhoods were defined according to census block groups. While visits to the eight neighborhoods were made to ensure that the block group boundaries did not contain significant physical barriers, and interviewers informed the respondents of our geographical definition prior to the interview, our concern over the appropriateness of this definition of neighborhood must be noted.

Planners interested in community development recognize the importance of social capital as a neighborhood asset. Temkin and Rohe (1998) have gone so far as to propose that social capital may serve as a better indicator of neighborhood stability than other measures, such as home ownership. However, we must understand social capital’s different forms and their relative strengths and limitations. While bonding social capital may have positive effects on residents, its greater importance for the good of the collective may be its contribution to the development of bridging social capital. While our research has revealed that social capital is not contingent upon socioeconomic status, transforming bonding social capital into bridging social capital appears highly dependent upon residents’ social status. Therefore, efforts to empower poor and moderate-income residents in the development of bridging social capital may require revealing the operating procedures of the municipal “system” in an understandable manner.

Other planners have encouraged community development corporations to lessen their current focus on housing development and central city redevelopment to renew their interest in promoting social activism (Carmon 1997; Temkin and Rohe 1998). Planners must consider strategies to provide “bracing” (Rydin et al. 2003) so that neighborhood bonding can

transform into the more politically powerful bridging activities. Carmon (1997, 139) states, “The amount of social capital in a [democratic] society . . . is directly related to the extent of internal inequity. The greater the inequity, the lower the social capital.” Therefore, while bonding social capital may exist in a diversity of neighborhoods, mobilizing this resource into bridging social capital, so that a neighborhood may demand its “fair share,” requires overcoming structural impediments.

► Appendix

Table A1.
Index of bonding social capital
(Cronbach’s alpha = .87)

Items measuring association:

1. How often do you or members of your household stop and chat informally with neighbors? (*often, sometimes, seldom, or never*)
2. How often do you or members of your household invite neighbors over or have neighbors invited you over? (*often, sometimes, seldom, or never*)
3. How often do you or members of your household help your neighbors by lending things like tools, giving someone a ride, or assisting with household tasks? (*often, sometimes, seldom, or never*)
4. How well do you feel you know your neighbors? (*very well, fairly well, not very well, or not at all*)

Items measuring trust:

1. How much are people in your neighborhood willing to help their neighbors? (*a lot, somewhat, a little, not at all*)
2. How close-knit is your neighborhood? Would you say a lot, somewhat, a little, or not at all? (*a lot, somewhat, a little, not at all*)
3. How much can people in your neighborhood be trusted? (*a lot, somewhat, a little, not at all*)
4. How much do people in your neighborhood generally get along with each other? (*a lot, somewhat, a little, not at all*)

Table A2.
Neighborhood environmental problems

<i>Problem Type^a</i>	<i>Identified as Big Problem (n)</i>	<i>Identified as Little Problem (n)</i>	<i>Identified as Big or Little Problem (%)</i>
Please tell me if each of these is or has been a big problem, a little problem or not a problem at all for your neighborhood. Responses: big problem, little problem, not a problem, don’t know. ^b			
Noise/litter/vandalism	53	102	53.6
Noise/fumes from road	51	81	45.5
Number of transients	33	64	33.4
Freeway development	33	50	28.5
Airplane flight paths	25	76	35.0
Widening of major streets/roads	19	51	24.3

► Appendix (continued)

Table A2 (continued)

<i>Problem Type^a</i>	<i>Identified as Big Problem (n)</i>	<i>Identified as Little Problem (n)</i>	<i>Identified as Big or Little Problem (%)</i>
Public school boundaries	15	39	19.6
Construction of new homes	18	37	18.9
Development of desert	26	36	21.5
Hazardous waste sites	19	11	10.7
Nearby vacant land	11	41	17.9
Industrial toxic emissions	27	25	18.2
Construction of new industrial/commercial buildings	16	25	14.1
Regulation of industries	11	17	10.0
Operation of farms ^c	7	5	4.2
Power station development ^c	4	14	5.6

a. "Other" problems were also identified by 21.9 percent of the respondents.

b. Listed in the order of how many respondents identified problem as the most serious problem faced by the neighborhood.

c. No one listed this as the most serious neighborhood problem.

Authors' Note: This project was supported in part by grants from the National Science Foundation (no. DEB 9714833, Central Arizona–Phoenix Long-Term Ecological Research project and no. SES 0216281, Neighborhood Ecosystems). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation. Additional support was provided by Arizona State University (ASU). We thank Bill Edwards, Joanne Valdenegro, and student interviewers of the Survey Research Laboratory at ASU for administering the survey, as well as the graduate students enrolled in the Sociology Department's Survey Research Practicum. An earlier version of this article was presented at the ACSP-AESOP Third Joint Congress in Leuven, Belgium, on July 12, 2003. The authors wish to formally acknowledge the helpful comments received at the conference session and particularly thank earlier reviewers for their insightful ideas. These comments caused us to rethink our approach and analysis.

► Notes

1. This ongoing project monitors 206 sites in Maricopa County, Arizona, through a synoptic integrated field inventory of key biotic, abiotic, and human variables (Hope et al.), of which 117 are located in residential areas and 46 of these within the city of Phoenix. Some aspects of our study coordinate the social survey data reported here with an array of other scientific data gathered at these sites. The eighth neighborhood was added to our study because it is an upper-income, centrally located neighborhood, which is a type that did not fall at any of the Long-Term Ecological Research Project (LTER) survey points.

2. In two cases, however, a natural boundary did exist within the neighborhood. In one, a butte separated the northern and southern halves of the block group, and in another, a dry wash separated

the residential from the more commercial part of the development. In the two urban fringe neighborhoods, the block groups are geographically large (mostly empty space), so we only surveyed the more densely populated portion of those block groups.

3. According to the 2000 census data, there are 6,606 occupied housing units in the sample neighborhoods. Thus, we have a 5 percent sample of units.

4. The survey instrument, consisting of 370 items, as well as a report on six of the neighborhoods, is available on the Web at <http://www.asu.clas/sociology/pass.html>. Approximately 16 percent of the interviews were taken in Spanish at the request of the respondent. A pair of movie tickets was offered to those who would complete an interview.

5. Respondents were also asked to designate which problem on the list is the most serious for their neighborhood. For the most serious problem only, we explored what kinds of actions were taken, such as whether they acted individually or in concert with neighbors or through a neighborhood group, such as a homeowners association or neighborhood watch. However, for the variables used here, which are constructed from all the problems, the type of action was not specified. Since most people do not act at all, our *n* is not large enough to do a multivariate analysis on types of actions.

► References

- Alinsky, S. 1971. *Rules for radicals*. New York: Random House.
- Bandura, A. 1997. *Self-efficacy*. New York: W. H. Freeman and Company.
- Boardman, J. D., and S. A. Robert. 2000. Neighborhood socioeconomic status and perceptions of self-efficacy. *Sociological Perspectives* 43 (1): 117-36.
- Bourdieu, P. 1986. The forms of capital. In *Handbook of theory and research for the sociology of education*, ed. J. G. Richardson, 241-58. New York: Greenwood.
- Brooks-Gunn, J., G. Duncan, J. Klebanov, and N. Sealant. 1993. Do neighborhoods influence child and adolescent development? *American Journal of Sociology* 99 (2): 353-95.
- Carmon, N. 1997. Neighborhood regeneration: The state of the art. *Journal of Planning Education and Research* 17:131-44.
- Coleman, J. S. 1988. Social capital in the creation of human capital. *American Journal of Sociology* 94: S95-S120.
- . 1994. *Foundations of social theory*. 2nd ed. Cambridge, MA: Belknap Press.
- Davis, M. 2001. *Magical urbanism: Latinos reinvent the US big city*. New York: Verso.
- Durkheim, E. 1895/1962. *The rules of sociological method*. Trans. Sara Solovay and John Mueller. New York: Free Press.
- Edin, K., and L. Lein. 1997. *Making ends meet*. New York: Russell Sage Foundation.
- Ferguson, R. F., and W. T. Dickens. 1999. Introduction. In *Urban problems and community development*, ed. R. F. Ferguson and W. T. Dickens, 1-31. Washington, DC: Brookings Institution.
- Gans, H. 1962. *The urban villagers: Group and class in the life of Italian-Americans*. New York: Free Press.
- Granovetter, M. 1973. The strength of weak ties. *American Journal of Sociology* 78 (6): 1360-80.
- Harlan, S., T. Rex, L. Larsen, E. Hackett, A. Kirby, S. Wolf, R. Bolin, A. Nelson, and D. Hope. 2003. *The Phoenix area social survey: Community and environment in a desert metropolis, central Arizona-Phoenix long-term ecological research project contribution*, no. 2.

- Tempe: Arizona State University, <http://www.asu.edu/clas/sociology/pass.htm/> (accessed March 2003).
- Jargowsky, P. J. 1997. *Poverty and place*. New York: Russell Sage Foundation.
- Kasarda, J., and M. Janowitz. 1974. Community attachment in mass society. *American Sociological Review* 39:328-39.
- Massey, D. S., and N. A. Denton. 1993. *American apartheid*. Cambridge, MA: Harvard University Press.
- Mesch, G. S., and K. P. Schwirian. 1996. The effectiveness of neighborhood collective action. *Social Problems* 43 (4): 467-83.
- Morrison Institute for Public Policy. 2000. *Hits and misses: Fast growth in metropolitan Phoenix*. Tempe, AZ: Author.
- Paxton, P. 1999. Is social capital declining in the United States? A multiple indicator assessment. *American Journal of Sociology* 105 (1): 88-127.
- Portes, A., and J. Sensenbrenner. 1993. Embeddedness and immigration: Notes on the social determinants of economic action. *American Journal of Sociology* 98 (6): 1320-50.
- Putnam, R. D. 1993. The prosperous community. *American Prospect*. 7 (Spring): 35-42.
- . 1999. *Bowling alone*. New York: Touchstone Books.
- Rohe, W. M., and M. A. Stegman. 1994. The effects of homeownership. *Journal of the American Planning Association* 60 (2): 173-84.
- Rydin, Y., E. Falleth, H. O. Brata, and I. Saglie. 2003. The role of social capital in spatial planning for resource management. Paper presented at the ACSP-AOESP Third Joint Congress, July 9, in Leuven, Belgium.
- Sampson, R. J. 1988. Local friendship ties and community attachment in mass society: A multilevel systemic model. *American Sociological Review* 53 (October): 766-79.
- . 1991. Linking the micro and macrolevel dimensions of community social organization. *Social Forces* 70:43-64.
- . 1999. What "community" supplies. In *Urban problems and community redevelopment*, ed. R. F. Ferguson and W. T. Dickens, 241-92. Washington, DC: Brookings Institution.
- Sampson, R. J., J. D. Morenoff, and F. Earls. 1999. Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review* 64 (5): 633-60.
- Sampson, R. J., S. Raudenbush, and F. Earls. 1997. Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science* 277:918-24.
- Steinberger, P. J. 1981. Social context and political efficacy. *Sociology and Social Research* 65 (2): 129-41.
- Temkin, K., and W. M. Rohe. 1998. Social capital and neighborhood stability: An empirical investigation. *Housing Policy Debate* 9 (1): 61-88.
- U.S. Census Bureau. 2000. *Phoenix-Mesa metropolitan statistical area population demographics*, <http://www.census.gov/> (accessed March 2002).
- Varady, D. R. 1983. Determinants of residential mobility decisions. *Journal of the American Planning Association*. 49 (Spring): 184-99.
- Warren, M. R., J. P. Thompson, and S. Saegert. 2001. The role of social capital in combating poverty. In *Social capital and poor communities*, ed. S. Saegert, J. P. Thompson, and M. R. Warren, 1-28. New York: Russell Sage Foundation.
- Wilson, W. J. 1987. *The truly disadvantaged*. Chicago: University of Chicago Press.
- . 1996. *When work disappears*. New York: Knopf.
- Witte, A. D. 1996. Urban crimes: Issues and policies. *Housing Policy Debate* 7 (4): 731-48.