

The Public School as a Public Good:
Direct and Indirect Pathways to Community Satisfaction

Zachary P. Neal
Michigan State University

Jennifer Watling Neal
Michigan State University

Preprint of:

Neal, Z. P., & Neal, J. W. (2012). The public school as a public good: direct and indirect pathways to community satisfaction. *Journal of Urban Affairs*, 34, 469 – 485.
<http://dx.doi.org/10.1111/j.1467-9906.2011.00595.x>

For a copy of the final version, email zpneal@msu.edu

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ABSTRACT

Individuals' satisfaction with their community can play an important role in urban politics, and the quality of public schools is a key predictor of community satisfaction. However, most discussions of public schools focus only their educational and social benefits for children, while others expand the scope to consider benefits to their parents as well. In this paper, we take a broader view, arguing that local public schools are providers of public goods that potentially benefit all members of a community, including those without school-aged children. Using data from the Soul of the Community survey, we examine the relationship between public school quality and community satisfaction in 26 US communities, and find no differences between individuals with and without school-aged children at home. Furthermore, for those without children, we find that the effect of schools on community satisfaction is partially mediated by community-based social capital, suggesting that public schools provide both direct and indirect pathways to community satisfaction. We conclude with a discussion of these findings, focusing on their implications for the maintenance and structure of public schools in American cities.

The Public School as a Public Good: Direct and Indirect Pathways to Community Satisfaction

Many different models of urban strategy contend that when individuals are satisfied with their local community, they re-elect local officials and by remaining in the community, continue contributing to the tax base (e.g. Tiebout 1956). Thus, understanding what makes people satisfied with their community – that is, the sources of community satisfaction – is important for understanding broader political and fiscal strategies; it highlights where urban officials and urban policies should focus their efforts to enhance constituents' community satisfaction. While past research has shown that a wide range of personal and community characteristics drive individuals' satisfaction with their community (Marans and Rodgers 1975, Lee and Guest 1983, Hipp 2009), in this paper we argue that the quality of local public schools also plays an important role in community satisfaction. Prospective home buyers with school-aged children or those who are planning to have children frequently ask their real estate agents about area schools, in some cases conducting detailed research on achievement test scores and classroom sizes. More broadly, access to good schools has long been associated with a broad range of educational, social, and health benefits not only for children, but also for their parents (e.g., Dewey 1902; Dryfoos 1994). However, questions remain about who derives community satisfaction from quality public schools, and why.

We examine the relationship between public schools and community satisfaction in 26 US communities using data from the Soul of the Community survey, conducted in 2008 and 2009 by the Knight Foundation. Finding that the quality of public schools is positively associated with residents' community satisfaction, even after controlling for a

wide range of other factors, we focus specifically on this relationship for those without school-aged children. Drawing on a long history of viewing the school as a social institution (Dewey 1902; Hanifan 1916; Robbins 1918; Warren 2005; Joseph & Feldman 2009), we argue that quality public schools are providers of public goods, which enhance the community satisfaction even those not directly invested in their educational mission (e.g., those without school-aged children). A series of regression models provide support for this view, suggesting that the benefits of quality public schools extend beyond children and their parents, and calling for a more encompassing view of the benefits (and costs) of public schools. This finding is significant for considerations of urban strategy because, by suggesting that public school quality is important for the community satisfaction of even those without school-aged children, it highlights additional reasons that local officials should focus on issues of public education. Moreover, it provides a new perspective on several ongoing debates concerning the maintenance and structuring of public education in American cities, including whether public schools should be funded through use taxes, and on the costs and benefits of new institutional arrangements such as charter schools and school vouchers.

The paper is organized in four sections. In the first section, we situate our focus on community satisfaction in the literature on Tiebout models of urban politics, then review past research on school quality and other predictors of community satisfaction, describing how the school can be viewed as a social institution that provides public goods both directly and indirectly. In the second section, we describe the Soul of the Community survey, which we use to examine individuals' community satisfaction in 26

US communities. In the third section, we present the results of a series of regression analyses designed to test the influence of perceived school quality on community satisfaction, and a mediated model designed to examine the intervening influence of community social capital. We conclude, in the fourth section, with a discussion of these results, focusing on their implications for the maintenance and structure of public schools in American cities.

CITIES, COMMUNITY SATISFACTION, AND SCHOOLS

A broad class of models deriving from Tiebout's (1956) theory of public expenditure suggests that individuals' satisfaction with their local communities, and specifically with the quality of local public services, has implications for urban political processes. First, when individuals are dissatisfied with local public services, they express their dissatisfaction at the polls where they withhold votes from incumbent local officials (i.e. voice). Second, they can 'vote with their feet' by leaving the area, taking with them their contributions to the tax base (i.e. exit). These models, therefore, contend that local officials' political power and tax revenue depend partly on their constituents' community satisfaction (DeHoog, Lowery, and Lyons 1990; Kelleher and Lowery 2002; Devereux and Weisbrod 2006; Mellander, Florida, and Stolarick 2011). Within this vein, several studies have focused on the particular case of public school services, where quality public schools can attract and retain some residents (Oates 1969; Margulis 2001), but perhaps not others (e.g. the young and elderly; Hilber, Mayer, Hoxby, and Cullen 2004). Continuing in this direction, but departing from the traditional

Tiebout focus on government spending and resident mobility, we concentrate on public school quality as a source of community satisfaction. Specifically, we focus on three related questions: whether school quality is associated with community satisfaction, for whom, and why?

Numerous studies have demonstrated that homebuyers are willing to pay more for homes near better schools (Crone 1998; Black 1999; Bogart and Cromwell 2000; Kane, Riegg, and Staiger 2006; Zahirovic-Herbert and Turnbull 2009). Black (1999), for example, found that parents are willing to pay 2.5% more for a home near a school with 5% higher test scores. Similarly, prospective homebuyers consistently identify school quality as one of the most important factors influencing decisions about where to live (Finucan 2000; Evans 2008; Joseph and Feldman 2009). Recognizing the role of perceived school quality in shaping assessments of residential desirability, the National Association of Realtors provides realtors with materials to educate themselves and their clients about public schools and community selection (Kohn 2000; Everett, Ryan, and Smith 2005). By focusing on real estate transactions, school quality is indirectly linked to community satisfaction through individuals' willingness to pay, following the hedonic assumption common in economic models that people will pay more for that which they find satisfying or desirable. Work adopting this approach typically views homeowners' desire to live near quality schools, and their satisfaction with communities served by quality schools, as driven by the expectation that their children will have access to better educational resources, leading to better educational outcomes.

However, although their educational benefits to children are not to be discounted, quality schools potentially provide a much broader range of benefits to community members that serve to enhance community satisfaction. Indeed, since the Progressive Era, public schools have been viewed as more than simply educational institutions. Dewey (1902) argued that public schools should move beyond their educational purpose to function as “social centers” that bring community residents together for recreation, public discussion, and vocational training. Echoing Dewey, Robbins (1918) saw the potential of schools as “social institutions” that transmit cultural values, train community leaders, and change neighborhood social conditions, and suggested the expansion of school services to include recreational opportunities and adult education. Similarly, in his discussion of rural schools, Hanifan (1916, 1920) described how schools could function as “community centers” that provide residents with opportunities for social interaction and constructive problem solving. In each of these cases, the proposed expansion of school services mirrored activities already provided by settlement houses. However, placing these services within the context of schools provided more routine opportunities to connect with the community. The expansive role of public schools formulated during the Progressive Era paved the way for the modern community schools movement, which promotes the collaboration of schools and community-based agencies to provide education, health, and recreation services to community members (Dryfoos 1994; Dryfoos 1995; Dryfoos & Maguire 2002).

Early conceptions (e.g., Dewey 1902) and modern interpretations (e.g., Dryfoos 1994) of the social function of public schools call attention to the range of benefits that

they can provide to community members. Indeed, in addition to their main function – to educate children – public schools have been identified as places that provide community residents with direct amenities, key social services, and opportunities for social interaction. Quality schools that deliver on this expanded role have the potential to revitalize communities and strengthen interpersonal relationships (Joseph & Feldman, 2009; Warren, 2005), leading to more community satisfaction among residents. Thus, we hypothesize that *public school quality is positively associated with community satisfaction (H1)*.

Alternate explanations for community satisfaction. Although school quality is expected to enhance community satisfaction, other community characteristics as well as personal characteristics likely also play a role. Indeed, past research on community satisfaction has identified many alternate explanations that could challenge the relationship between school quality and community satisfaction as spurious. A comprehensive review of this literature is beyond the scope of this paper, but a brief review serves to illustrate the most commonly tested predictors of community satisfaction, and to identify potential alternative explanations for community satisfaction that should be considered.

The majority of studies of community satisfaction examine a set of personal characteristics, including such standard demographic features as age, race, and sex, as well as those tapping residential status, including tenure and length of residence. Despite their common inclusion in models predicting community satisfaction, findings have been both modest and mixed. For example, some studies have found that length

of residence is a significant predictor of community satisfaction (e.g., Lu 1999; Parkes, Kearnes, and Atkinson 2002), but others have failed to replicate this result (e.g., Lee, Campbell, and Miller 1991; Hipp 2009). Similarly, some find that white residents are more satisfied with their communities (Lee, Campbell, and Miller 1991; Lu 1999), but others have found greater satisfaction among African American and Latino residents (Hipp 2009; Hipp forthcoming). Age and tenure have yielded more consistently reproduced findings, suggesting that older homeowners experience greater community satisfaction than younger renters (Lee, Campbell, and Miller 1991; Lu 1999; Hipp forthcoming), but again this finding is challenged by other studies (Connerly and Marans 1985). Although now more than 35 years old, Marans and Rodgers' (1975) assertion that the relationship between "person characteristics and community satisfaction is a weak one at best" continues to characterize empirical findings (p. 317).

Nearly all studies of community satisfaction also examine one or more community characteristics, including residents' perceptions of safety, the built environment, and the adequacy of local services, as well as ecological factors like population density. Again, findings have been mixed. For example, some have found that perceived safety was positively related to community satisfaction (Hipp 2009; Hipp forthcoming), while others have found it to have no effect (Lee and Guest 1983; Herting and Guest 1985; Loo 1986). In other cases, findings are difficult to interpret. For example, Connerly and Marans (1985) used a single measure of the physical environment that combined a diverse array of community characteristics, including noise, property abandonment, traffic, and crowdedness. However, despite these

challenges, one finding is consistently reproduced: the positive effect of neighborliness, friendliness, or social capital on community satisfaction (Galster and Hesser 1981; Connerly and Marans 1985; Herting and Guest 1985; White 1985; Lee, Campbell, and Miller 1991; Parkes et al. 2002). Although both personal and community characteristics have yielded mixed findings, those who have adopted a multilevel conceptual framework (e.g., Marans and Rodgers 1975; Hipp 2009) have concluded that community characteristics are far more important than personal characteristics in determining one's level of community satisfaction.

Surprisingly, despite the frequently noted importance of schools for communities, rarely do studies of community satisfaction directly examine their effect. Some studies have examined schools' effect on community satisfaction indirectly, by including them in a composite measure of local services (Connerly and Marans 1985; Ladewig and McCann 1980; St. John and Clark 1984 White 1985). However, the combination of multiple local services into a single indicator makes it impossible to determine the independent effect of schools on community satisfaction. Those studies that have examined the separate effect of schools on community satisfaction have yielded mixed results. Some find that schools have no effect (Herting and Guest 1985) or are important only in suburban communities (Cook 1988), while others find that they positively influence community satisfaction (Marans and Rodgers 1975; Lee and Guest 1983; Parkes et al. 2002). Although past research concerning the effect of schools on community satisfaction has been limited and has yielded mixed results, because schools might benefit communities in multiple ways, in view of the econometric (e.g.,

Black 1999) and school reform (e.g., Dewey 1902; Dryfoos 1994) literatures discussed above, we hypothesize that *public school quality is positively associated with community satisfaction, after controlling for a broad range of other factors (H2)*.

Public Schools as Providers of Public Goods. Although quality public schools may enhance community satisfaction, it is possible that this beneficial effect extends only to some groups, but not others. Past research on community satisfaction has suggested that individual characteristics may moderate the relationship between community characteristics and community satisfaction (Marans and Rodgers 1975, Lee 1981, Herting and Guest 1985). For example, Herting and Guest (1985) found that neighborhood composition more strongly influenced the community satisfaction of homeowners than renters, perhaps because the former have a greater social and economic investment in the local area. In the case of public schools' influence on community satisfaction, a similar moderation may seem likely: public school quality influences the community satisfaction of those with school-aged children, but has little or no influence on the community satisfaction of others. However, consistent with an earlier finding by Marans and Rodgers (1975), we contend that this is not the case. Specifically, we argue that quality public schools enhance the community satisfaction of all community members because, in addition to their ostensibly primary mission of educating neighborhood children, they are providers of public goods.

Both the academic literature (e.g. Dryfoos & Macquire 2002; Joseph and Feldman 2009) and the lifestyle section of local newspapers (Anderson 2006; Bunge 2009) provide numerous examples of such public goods, which typically appear in three

forms. First, classified as *limited public forums* by the US Supreme Court (1983), public schools can provide physical resources to the community by opening their buildings and other facilities (e.g. computer labs, libraries, sports fields) to community members. For example, several Wisconsin high schools opened their gyms to the local community free of charge, with such success that membership-based gyms expressed concern about losing customers (Bunge 2009). Second, public schools often provide educational and social services to the local community, including courses in General Education Development (GED) and English as a Second Language (ESL) (e.g., Dryfoos 1994, Dryfoos & Maguire 2002, Whalen 2007). For example, the Los Angeles Unified School District maintains an “adult and career education” division, which offers not only GED and ESL courses, but also training for jobs in the business and health sectors, citizen preparation for immigrants, and fitness programs for senior citizens (Los Angeles Unified School District, 2010). Finally, by serving as venues for the arts and providing opportunities for cultural appreciation, public schools offer cultural amenities to communities. For example, a Chicago public school partnered with the Spertus Museum to host an exhibit showcasing the intertwined history of both Jewish and African American communities in the Lawndale neighborhood (Anderson 2006, Spertus Museum 2010). Because the resources, services, and amenities that public schools may provide can benefit all members of the community as public goods, we hypothesize that *school quality is positively associated with community satisfaction, even for those without children (H3)*.

These physical resources, social services, and cultural amenities are mechanisms through which public schools can directly enhance community satisfaction. However, public schools can also indirectly enhance community satisfaction by facilitating the cultivation of another type of public good: social capital (Warren 2005; Fischel 2006; Joseph and Feldman 2009). Indeed, one of the earliest discussions of ‘social capital’ is found in Hanifan’s (1916) account of a public school in rural West Virginia giving rise to “that in life which tends to make [economic capital] count for most in the daily lives of people, namely, goodwill, fellowship, mutual sympathy, and social intercourse” (p. 130). Similarly, in his discussion of the public goods aspects of social capital, Coleman (1988) offers a school-based community as an example, noting that parents who form a dense set of associations “experience only a subset of the benefits of this social capital surrounding the school,” which spill over to benefit other community members (p. S116).

There are at least three ways that social capital might play a role in linking public schools to community satisfaction. First, because good public schools can reduce residential mobility and provide a spatial focal point for neighborhood activities, they serve to increase interpersonal interaction (Joseph and Feldman 2009), not only in formal settings like events hosted at the school, but also in chance sidewalk encounters (Jacobs 1961, Feld 1981). These interactions – described by others as weak ties (Granovetter 1973), brokering ties (Burt 2005), or bridging social capital (Putnam 2000) – facilitate community members’ access to information, which in turn can help communities more effectively organize to achieve collective goals (Fischel 2006).

Second, as repeated interactions intensify and coalesce around bounded groups within the community, they can form the basis for a shared identity. These interactions – described by others as network closure (Coleman 1988; Burt 2005) or bonding social capital (Putnam 2000) – facilitate trust among community members, through which they can more effectively enforce norms, for example, against vandalism or other disturbances (Warner 2001). Finally, because “schools with higher levels of social capital can make the most of whatever assets they do have,” a feedback loop is possible, where good schools facilitate the formation of social capital, which in turn further enhances the quality of the school (Warren 2005:136). Thus, we hypothesize that *public school quality’s positive effect on community satisfaction for those without children is partially mediated by social capital (H4)*.

DATA AND MEASUREMENT

We use data from the Soul of the Community (SOTC) survey, conducted by Gallup for the Knight Foundation, to investigate the role of community attachment in economic prosperity. The survey used a clustered random sample in which representative samples of 400 adults were surveyed in each of 26 US communities in 2008, and a different representative sample was surveyed in 2009. Larger cities were oversampled in selected years, yielding a pooled total sample of 27,509 adults (see Table 1). Approximately 22% of cases were missing data on one or more of the variables used in the models below, and were dropped from analyses listwise, yielding an available sample size of 21,489. There was no statistically significant difference in

community satisfaction between the included and excluded cases ($t = -0.42$, $p = .671$). All analyses below were conducted using survey weights computed by Gallup to reflect the known adult population by age, gender, race, and ethnicity based on U.S. Census data, and all statistical inferences were based on cluster robust standard errors to control for intra-cluster correlation (Rogers 1993). Table 2 reports unweighted descriptive statistics for all variables discussed below, and each variable's bivariate association with the two variables of primary interest: community satisfaction and public school quality.

[INSERT TABLES 1 AND 2 ABOUT HERE]

Community Satisfaction and Public School Quality

We measure the dependent variable, community satisfaction, using respondents' answer to the question: "Taking everything into account, how satisfied are you with your community as a place to live?" Responses were coded on a five-point scale, ranging from "Not At All Satisfied" (1) to "Extremely Satisfied" (5). This measurement approach follows the majority of prior studies, which have also sought to capture individuals' global satisfaction with their communities using a single, comprehensive question. Although some studies have attempted to measure community satisfaction by combining responses to multiple questions into an index, this has yielded similar results to the single item approach (Hipp 2009). In this and other questions included in the SOTC survey, the boundaries of the community were not defined for respondents,

mirroring the lack of a definition of 'neighborhood' in the General Social Survey.

Although this is a limitation of SOTC and other similar data, past research suggests that survey respondents typically focus on the local area surrounding their home (Guest and Lee 1984, Lee and Campbell 1997).

We also measure the primary explanatory variable, public school quality, using a single question: "On a five-point rating scale, where 5 means very good and 1 means very bad, how would you rate the overall quality of public schools in your community." It is important to note that this captures individuals' perceptions of the quality of local public schools, which may not reflect more objective measures of academic performance (e.g., test scores) or community openness (e.g., frequency of school events open to the public). While such objective indicators of school quality might also be informative, the existing data could not be augmented with this information because the SOTC does not indicate where respondents lived within each community or which area schools serve their neighborhoods.

Individual and Community Characteristics

To consider alternate explanations for individuals' satisfaction with their communities, we also examine the impact of the most common individual (e.g., age, sex, race) and community characteristics (e.g., personal safety, economic conditions). The majority of these are measured either as dummy variables or using a five-point scale, as indicated by the superscripts in Table 2. We consider the effect of education, but not of income because summary statistics suggested respondents' self-reported

income was unreliable (e.g., nearly a quarter reported earning more than \$100,000 annually) and because cases with missing data on income differed systematically from others. However, prior studies of community satisfaction have found that the effects of income and education were generally similar.

The variable measuring local involvement represents an additive combination of four binary questions – Have you (a) performed local volunteer work, (b) attended a local public meeting, (c) voted in a local election, (d) worked with other residents to make change in the community – which together yield a normally distributed five-point scale.¹ We measure social capital as the mean of four items, each assessing the respondent's agreement on a five-point scale: (a) my community is a good place to meet people and make friends, (b) in my community I am treated with respect at all times, (c) the people in my community care about each other, and (d) the leaders in my community represent my interests. An exploratory factor analysis using varimax rotation confirms that these items load on a single factor (factor loadings: 0.70 – 0.58), and yield an index that is both reliable (Cronbach $\alpha = .75$) and normally distributed.

RESULTS

To test the first three hypotheses, we estimate a series of regression models using cluster robust standard errors to control for intra-cluster correlation (Rogers 1993). The unstandardized coefficient estimates obtained from these models are reported in Table 3, with the first three models estimated over the entire sample and the last two

¹ This variable is constructed as the sum of these four independent variables *plus one*, to yield a variable that ranges between 1 and 5. This makes the scale consistent with the other continuous variables.

models estimated over two mutually exclusive subgroups: those with and those without school-aged children at home. A 'multi-level' model that explicitly estimates the effects of community level characteristics (e.g., demographic composition, taxation rates, etc.) might provide greater detail, but is not used in this case for three reasons. First, such a model is not necessary to evaluate the proposed hypotheses. Second, because the SOTC does not provide respondents' geographic location below the county level, augmenting the existing data with community- or city-level data from other sources is possible only at an inappropriately high level of geographic aggregation. Finally, our fourth hypothesis suggests that social capital functions as a mediator, but methods for testing mediation in multi-level models are not yet well defined (Kenny, Korchmaros, and Bolger 2003). Thus, although the variables used in these models are grouped in Table 3 as 'personal characteristics' and 'community characteristics,' they are all measured and analyzed at the individual level. Those identified as community characteristics are in fact individual respondents' perceptions of aspects of their communities.

[INSERT TABLE 3 ABOUT HERE]

The results reported in Table 3 support each of the first three hypotheses. The first three models answer the question "are public schools beneficial?" by examining their effect on community satisfaction. As model 1 indicates, somewhat unsurprisingly, public school quality is positively associated ($b = .344, p < .01$) with community

satisfaction (**H1**). Models 2 and 3 extend this finding by demonstrating that the positive effect of public schools on community satisfaction persists even after a broad range of other personal ($b = .228, p < .01$) and community characteristics ($b = .046, p < .01$) are held constant (**H2**). Consistent with past research on community satisfaction (e.g., Marans and Rodgers 1975; Hipp 2009), we find that community characteristics are more influential than personal characteristics. Only five of twelve personal characteristics have a significant effect on community satisfaction in model 2: age, education, sex, employment status, and nearness to friends. Once community characteristics are included in model 3, the effect of each of these personal characteristics declines. Nonetheless, focusing on personal characteristics, community satisfaction appears to be lowest among poorly educated males with limited local friendship networks, and highest among those living in economically robust and environmentally pleasing suburbs with strong local leadership.

Finally, models 4 and 5 answer the question “for whom are public schools beneficial?” by demonstrating that quality public schools have a positive effect on community satisfaction both for those with ($b = .042, p < .05$) and those without ($b = .047, p < .01$) school-aged children at home (**H3**). Indeed, contrary to prevailing expectations but consistent with our hypothesis, there is no statistically significant difference in public schools’ effect on the community satisfaction of those with and without school-aged children (Chow Test: $\Delta b = .005, \chi^2 = 0.12, n.s.$). Moreover, for those without children at home, perceived public school quality is among the strongest predictors of community satisfaction, following such expectedly influential factors as

employment and local economic conditions. This suggests that public schools are more important for the wellbeing of those without school-aged children than other community amenities (e.g., personal safety, accessibility, and nightlife) that may initially seem more enticing and upon which developers and city leaders might focus when addressing this audience.

Although we do not offer explicit hypotheses, some notable differences between those with and without school-aged children emerge in models 4 and 5. For example, low-density, suburban environments have a positive effect on the community satisfaction of those with school-aged children ($b = .099$, $p < .01$), but not for those without children ($b = .044$, n.s.). This may highlight the fact that suburbs offer larger homes and more room for children to play, but can be socially isolating for the childless. Similarly, a vibrant nightlife scene has a positive effect on the community satisfaction of those without school-aged children ($b = .037$, $p < .01$), but not for those with children ($b = .005$, n.s.). Again, this finding highlights these two groups' differing lifestyles.

To test the final hypothesis, concerning the mediating role of social capital in the relationship between public schools and community satisfaction, we estimate three auxiliary regressions (Baron and Kenny 1986)². The total, direct, and indirect effects of public school quality on community satisfaction for those without school-aged children at home are reported in Figure 1. These estimates answer the question “why are public

² These models control for all variables that appear in model 3, and also use cluster robust standard errors. The first model regresses community satisfaction on public school quality without controlling for social capital to obtain the total effect. The second model regressing social capital on public school quality to obtain the first leg of the indirect effect. The third model, identical to model 5 reported in table 2, regresses community satisfaction on public school quality and social capital to obtain both the direct effect and the second leg of the indirect effect. Because the third model is the same as model 5 above, the estimates of the direct effect (.052) and second leg of the indirect effect (.321) reported in figure 1 also appear in table 2.

schools beneficial to those without school-aged children?” by indicating that over one quarter (27.7%) of the total effect of public school quality on community satisfaction is mediated by social capital. The indirect effect is found to be statistically significant using both approaches recommended by Preacher and Hayes (2004): the Sobel standard error (indirect effect = .018, se = .003, $p < .01$) and a bootstrapped confidence interval (.012 – .025). This lends support to hypothesis **H4**, indicating that public school quality directly enhances the community satisfaction of individuals without school-aged children at home, but also does so indirectly by facilitating social capital, which in turn enhances community satisfaction.

[INSERT FIGURE 1 ABOUT HERE]

DISCUSSION

Results provide support for the argument that high quality public schools benefit community members by enhancing community satisfaction both directly and indirectly. First, addressing the question of *whether* school quality is associated with community satisfaction, findings indicate that residents’ perceptions of the quality of public schools are positively related to their levels of community satisfaction. The positive relationship between school quality and community satisfaction persists even when controlling for a range of personal characteristics and perceived community characteristics, suggesting that public school quality uniquely contributes to community satisfaction above and

beyond common alternate explanations, reinforcing prior findings (Marans and Rodgers 1975; Lee and Guest 1983; Parkes et al. 2002).

Second, subgroup analyses examining *who* benefits from quality public schools demonstrate that the positive association between public school quality and community satisfaction is not limited to residents with school-aged children. Indeed, residents with and without school-aged children displayed equally positive associations between public school quality and community satisfaction than those with children. In this sample, there is a typical relationship between parental status and urbanization: those with children are more likely to live in the suburbs, while those without children are more likely to live in the city ($\chi^2 = 67.175, p < .01$). In an exploratory fashion, we investigate whether urbanization plays a role in the question of *who* benefits from quality public schools by estimating our full regression model in the four different subsamples defined by the intersection of parental status and urbanization. Table 4 reports the effect of perceived public school quality on community satisfaction for each of these subgroups. We find that school quality is positively associated with the community satisfaction of those without children, whether they live in the city ($b = .047, p < .05$) or the suburbs ($b = .045, p < .01$). In contrast, we find that school quality is associated with the community satisfaction of those with children only when they live in the suburbs ($b = .08, p < .01$), but not when they live in the city ($b = .03, n.s.$). We speculate that the challenges of raising small children in the city may shift urban parents' attention to more immediate concerns than school quality. Further research is needed to understand why

school quality matters for suburban parents, but not for urban parents, and more generally to explore subgroup differences in the predictors of community satisfaction.

[INSERT TABLE 4 ABOUT HERE]

Finally, mediational analysis examining *why* those without school-aged children benefit from quality public schools suggest that schools directly enhance community satisfaction, but also indirectly enhance community satisfaction by fostering community social capital. The indirect effect reported in figure 1 provides evidence for the hypothesized role of public schools as facilitating social capital (Warren 2005, Fischel 2006, Joseph and Feldman 2009) and the notion that social capital is a form of public good (Coleman 1988). The direct effect reported in figure 1 is also consistent with our argument, grounded in the ‘school as a social center’ literature (Dewey 1902; Dryfoos 1994), that quality public schools can benefit entire communities by providing physical resources, social services, and cultural amenities, which have characteristics of public goods. However, because we lack data on the actual provision of such public goods by the schools in the respondent’s communities, conclusions about why public school quality has a direct effect on community satisfaction are suggestive but not conclusive. Alternative explanations for the observed direct effect are also plausible. For example, perhaps those without school-aged children expect to have children in the future, driving the relationship between quality public schools and community satisfaction (Filardo et al. 2008). Another possible alternate explanation for the observed direct effect is that

even those without school-aged children enjoy the benefits of rising property values associated with quality public schools (Black 1999). However, this too might be considered a type of non-educational public good provided by public schools. Thus, additional research on the mechanisms that directly link public school quality and community satisfaction is necessary.

Future research can further augment knowledge about the relationship between public school quality and community satisfaction by addressing other limitations of the current study. First, this study relies on perceptual data on community characteristics. This is useful for understanding how residents experience their own communities, but incorporating more objective measures of community characteristics, such as the local crime rate or number of local parks, would add an additional dimension to the findings. Second, data used in this study are cross-sectional in nature and therefore do not allow for causal inference. Although we argue that high quality schools are likely to provide direct and indirect public goods that lead to community satisfaction, it is also possible that communities with satisfied residents are better positioned to mobilize resources to improve the quality of their schools. Future research should analyze the relationship between school quality and community satisfaction longitudinally to disentangle causal effects.

Despite these limitations, the results discussed above have implications for urban political processes, as well as for how public schools are funded, structured, and reproduce inequality. First, Tiebout-type models suggest that local officials' political power and tax revenue depends in part on their constituents' satisfaction with their

community because satisfied constituents re-elect their local officials and remain in the community to contribute to the tax base. Our results suggest that public school quality is an important driver of community satisfaction, and thus ought to be a central concern for local officials. Moreover, while public school quality might ordinarily be assumed to drive primarily the community satisfaction of those with school-aged children, we find that its effects are much wider, playing a role even for those without school-aged children. Thus, our results further suggest that while local officials seeking to enhance their constituents' community satisfaction often focus their rhetoric about public school quality toward parents, a much broader audience stands to benefit from efforts to improve local schools.

Second, the funding of public schools is a perennial issue in urban politics. Those who do not have children in the public school system, including those without children, senior citizens, and parents whose children are homeschooled or attend private school, often question the fairness of a school tax. For example, Turtel (2005) argues that "school taxes are often unfair because they tax all homeowners for services they may not use or benefit them" (p. 173). Similarly, Wassmer and Fisher (2002) argue that municipalities should give "greater consideration [to] user charges to fund public primary and secondary education" (p. 87). Arguments in favor of funding public schools through narrowly levied 'use' taxes presume that only those with school-aged children benefit from public schools, thereby neglecting public schools' benefits for others. Responding to these claims, advocates of public school funding through more 'universal' taxes (e.g. income, sales, or property taxes) often invoke an inter-

generational obligation (e.g., past generations paid for your education) or note the positive externalities of publicly provided education (e.g., an educated polity, economic growth). Although these may provide some rationale for a school tax levied on the childless, because they depend on largely intangible benefits, they still often fail to sway voters in favor of school funding measures. However, our results point to an additional, and potentially more compelling, justification for public school funding through universal rather than use taxes: schools not only provide educational services to community children, they also enhance the community satisfaction of all community members as providers of direct (e.g. space) and indirect (e.g. social capital) public goods. Because they are experienced in the near-term and in more tangible ways, highlighting these benefits of public schools may go further in generating support for school funding measures.

Because these benefits of quality public schools have the non-excludable characteristic of public goods, the potential for a 'tragedy of the commons' exists. That is, because those who do not participate in maintaining public schools (e.g. through not paying taxes) cannot be excluded from enjoying the positive externalities these schools produce, free riding is possible. School tax exemptions (e.g. for homeowners, for senior citizens) represent one form of free riding: exempted individuals enjoy the benefits of higher levels of local social capital that result from living near quality public schools, even if they do not pay taxes to support these schools. However, economic free riding may not be the only, or even the most common, form. The time and expertise provided by community members are also important resources for sustaining quality public

schools. Community members may volunteer their time to repair playground equipment, use their personal network connections to encourage donations from local businesses, or offer their expertise by serving on school boards or committees. Yet, these types of investments are more likely made by parents whose children attend the local schools, than by community members without children. Because community members can consume the public goods provided by public schools while making only minimum investments in them (i.e. by paying taxes), there is often little incentive for these individuals to make additional investments (e.g. by volunteering). To be sure, the non-educational benefits of public schools may not always be obvious, especially in the case of such indirect public goods as community social capital. Thus, while community members may not consciously decide to act as free riders by consuming public schools' benefits without contributing to their production, many may not realize the benefits that quality public schools provide to them. By calling attention to these often-unrecognized benefits, our results provide policy makers and community leaders with additional reasons for calling on all community members, not just those with school-aged children, to invest and participate in local public schools.

Third, the structure of public education in American cities has been complicated with the emergence of three new institutional arrangements in the past 30 years: the charter school, the school voucher, and the selective admission magnet school. Although different in many respects, these share the common consequence that children may attend different schools than their neighbors. Proponents argue that this provides parents with choices and children with expanded educational opportunities.

However, as Fischel (2006) observes, while such alternative models of education provision may provide some benefits, these come at the cost of community-based social capital. When charter, voucher, and magnet programs divert children outside the local community, or at least to different schools than those attended by other neighborhood children, they likewise divert parents' interactions with one another, thereby serving to impede the development of social capital within the community. Although the SOTC did not ask residents about the quality of local private schools, and did not distinguish traditional public schools from charter public schools or selective magnet schools, one possibility is that these alternative institutional forms enhance community satisfaction directly through the provision of some public goods (e.g., physical resources, social services, and cultural amenities), but not indirectly because they do not facilitate the formation of community-based social capital. This issue requires further investigation, but helps to frame the debate concerning voucher, charter, and magnet programs in terms of a trade-off between educational choice and community cohesion.

Finally, although we have focused on the range of benefits that quality public schools provide community members, these results also suggest that public schools may serve to reproduce and exacerbate existing inequalities. Those with access to quality public schools enjoy the overt benefits of quality education for their (or their neighbors') children, but also the less obvious benefits of the public goods that such institutions may provide. However, many lack access to quality public schools. Poor and minority communities are often home to the most under-resourced schools. Indeed, in our sample, perceived public school quality is positively associated at the

bivariate level with local economic conditions ($r = .34, p < .01$), and negatively associated with racial minority status ($b = -.06, p < .01$).³ As a result, beyond the myriad disadvantages introduced by poverty and race, individuals in these communities also experience a double disadvantage through their schools, lacking the overt benefits of quality education, but also the benefits of the public goods that schools might provide (Wacquant 1998). Quite simply, although quality public schools are poised to provide a two-pronged benefit – education for children and public goods for all – communities often enjoy both or neither. Additional research is certainly not necessary to suggest that struggling public schools should be addressed, but this serves to heighten concern by calling attention to their ill effects, not only for those with school-aged children, but for all community members.

Most discussions of public schools focus on their educational and social benefits for children, while some expand the scope to consider benefits to their parents as well. We argue that as providers of public goods, local public schools are potentially beneficial to all members of a community, including those without school-aged children. Specifically, quality public schools often directly provide such public goods as physical resources, social services, and cultural amenities, as well as indirectly fostering the development of another type of public good: community-based social capital. Together, these public goods, which can be enjoyed by all members of the community, serve to increase levels of community satisfaction. Thus, our findings suggest that local officials

³ Interestingly, the significant effect of minority racial status disappears when cluster robust standard errors are used, while the significant effect of a strong economy persists. This suggests that the race-based effect is due to racial composition differences between cities, and not with differences between whites and minorities within cities.

seeking to enhance community satisfaction ought to focus on public schools, and should not restrict their discussions of local schools to parents and children, but rather include all community members. Similarly, they also suggest that all community members can benefit from, and therefore have a reason to support and be involved in, their local public schools.

Table 1. Knight Foundation Communities

Name	Area Type
Aberdeen, SD	Micropolitan Statistical Area
Akron, OH ^b	Metropolitan Statistical Area
Gulfport-Biloxi, MI	Metropolitan Statistical Area
Boulder, CO	Metropolitan Statistical Area
Bradenton-Sarasota-Venice, FL	Metropolitan Statistical Area
Charlotte-Gastonia-Concord, NC-SC ^b	Metropolitan Statistical Area
Columbia, SC	Metropolitan Statistical Area
Columbus, GA-AL	Metropolitan Statistical Area
Detroit-Warren-Livonia, MI ^b	Metropolitan Statistical Area
Duluth-Superior, MN-WI	Metropolitan Statistical Area
Fort Wayne, IN	Metropolitan Statistical Area
Gary, IN	Metropolitan Division
Grand Forks, ND-MN	Metropolitan Statistical Area
Lexington-Fayette, KY	Metropolitan Statistical Area
Long Beach, CA	City
Macon, GA	Metropolitan Statistical Area
Miami-Miami Beach-Kendall, FL ^a	Metropolitan Division
Milledgeville, GA	Micropolitan Statistical Area
Minneapolis-St. Paul, MN-WI	Metropolitan Statistical Area
Myrtle Beach-Conway-North Myrtle Beach, NC	Metropolitan Statistical Area
Philadelphia, PA ^a	Metropolitan Division
San Jose-Sunnyvale-Santa Clara, CA ^a	Metropolitan Statistical Area
State College, PA	Metropolitan Statistical Area
Tallahassee, FL	Metropolitan Statistical Area
West Palm Beach-Boca Raton-Boynton Beach, FL	Metropolitan Division
Wichita, KS	Metropolitan Statistical Area

^a An additional 1100 surveys were conducted in these communities in 2008.

^b An additional 1100 surveys were conducted in these communities in 2009.

Table 2. Descriptive Statistics (N = 21,489)

Variable	Mean	S.D.	Bivariate Correlation with...	
			Community Satisfaction	Public Schools
Community Satisfaction ^b	3.80	1.04	—	0.39**
Public Schools ^b	3.49	1.18	0.39**	—
Year ^a	0.50	0.50	-0.05**	0.02**
Age	53.69	15.78	0.17**	0.11**
Nonwhite ^a	0.17	0.37	-0.06**	-0.06**
Education ^b	3.46	1.14	0.04**	-0.07**
Has children under 18 ^a	0.31	0.46	-0.08**	-0.03**
Married/Partnered ^a	0.65	0.48	0.01	0.00
Male ^a	0.46	0.50	-0.04**	0.02**
Owner ^a	0.83	0.38	0.06**	0.02**
Length of Residence	31.51	20.46	0.04**	0.08**
Local Involvement ^b	3.18	1.25	0.04**	-0.01
Employed ^a	0.55	0.50	-0.06**	-0.07**
Near Friends ^b	3.40	1.61	0.13**	0.10**
Near Family ^b	3.15	1.80	0.03**	0.06**
Safety ^b	3.63	1.33	0.21**	0.25**
Social Capital ^b	3.52	0.80	0.57**	0.50**
Suburban ^a	0.39	0.49	0.02*	0.01
Rural ^a	0.19	0.39	-0.00	0.04**
Parks ^b	3.94	1.07	0.37**	0.37**
Beauty ^b	3.97	1.03	0.45**	0.33**
Roads ^b	3.29	1.16	0.31**	0.34**
Affordable Housing ^b	3.13	1.22	0.24**	0.25**
Colleges ^b	4.16	0.89	0.34**	0.37**
Health ^b	3.73	1.15	0.36**	0.36**
City Leadership ^b	3.09	1.17	0.43**	0.46**
Nightlife ^b	3.60	1.14	0.30**	0.23**
Economic Conditions ^b	2.91	1.02	0.44**	0.34**

** p < .01, * p < .05

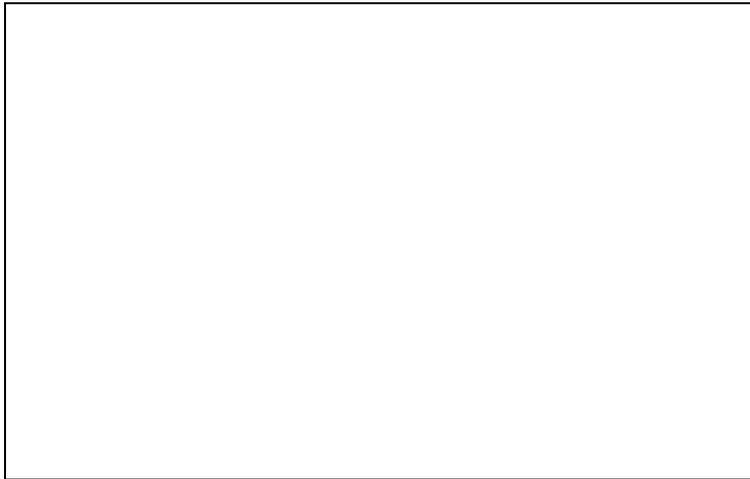
^a dummy variable, ^b five-point likert scale

Table 3. Determinants of Community Satisfaction

	(1)	(2)	(3)	(4)	(5)
	Full Sample (N = 21,489)			Children (N = 6,752)	No Children (N = 14,737)
Schools	0.344**	0.228**	0.046**	0.042*	0.047**
Personal Characteristics –					
Age		0.008**	0.004**	0.004*	0.005**
Nonwhite		0.009	0.031	0.044	0.027
Education		0.050**	0.044**	0.040*	0.044**
Has children under 18		-0.029	-0.028	—	—
Married/Partnered		0.016	0.006	0.033	-0.005
Male		-0.095**	-0.065**	-0.072**	-0.059**
Owner		0.034	0.022	0.015	0.022
Length of Residence		-0.002	-0.001	-0.001	-0.000
Local Involvement		-0.007	-0.021**	-0.028*	-0.016*
Employed		0.039*	0.033	0.003	0.051**
Near Friends		0.045**	0.021**	0.033**	0.012*
Near Family		0.009	0.004	0.009	0.001
Community Characteristics –					
Safety			0.039**	0.056**	0.029*
Social Capital			0.327**	0.333**	0.323**
Suburban			0.067**	0.099**	0.044
Rural			0.005	0.018	-0.002
Parks			0.048**	0.051**	0.044**
Beauty			0.141**	0.153**	0.132**
Roads			0.026*	0.025	0.028**
Affordable Housing			-0.002	-0.003	-0.002
Colleges			0.025	0.023	0.027
Health			0.032**	0.038**	0.027*
City Leadership			0.074**	0.075**	0.074**
Nightlife			0.024*	0.005	0.037**
Economic Conditions			0.140**	0.161**	0.126**
Year: 2009	-0.115*	-0.001	-0.059*	-0.044	-0.068*
Constant	2.594**	1.333**	0.192*	-0.001	0.287*
R ²	0.154	0.280	0.407	0.442	0.382

** p < .01, * p < .05, using cluster robust standard errors

Figure 1. Mediated Relationship between Schools and Community Satisfaction (No Children Subsample, N = 14,737)



Effect	Estimate (S.E.)
Total	.066 (.012)**
Direct	.047 (.012)**
Indirect	.018 (.003)**

** p < .01, * p < .05, using cluster robust standard errors

Table 4. The Effect of Public School Quality on Community Satisfaction, by parental status and urbanization

	Children at home	No Children
Urban	.030 (N = 2566)	.047* (N = 6401)
Suburban	.080** (N = 2887)	.045** (N = 5507)

** p < .01, * p < .05, using cluster robust standard errors

Note: Each coefficient is from a separate regression conducted on the corresponding subgroup and including all controls.

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