

Building Social Capital in the Nation's Capital:
Can Charter Schools Build a Foundation for Cooperative Behavior?

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Abstract

A recurrent theme in political science links the structure and performance of public policies and institutions to citizens' attitudes toward government and their willingness to participate in politics and the policy process. In this paper we explore the ability of government to affect these fundamental aspects of citizenship through institutional design. Specifically, we examine how charter schools—currently among the most popular forms of school reform in the nation—affect parent attitudes toward schools and politics more broadly.

Using survey data collected in Washington, D.C., a city with an extensive system of charter schools, we find that, when compared to parents in traditional public schools, charter school parents have attitudes commonly thought to be the foundations of civic participation and social capital. This finding is robust even when controlling for self-selection into charter schools. However, this effect is domain specific: it is limited to school related attitudes and does not spill over into attitudes in broader domains.

We then examine the dynamics of this charter school effect over the course of the school year. Our data suggest that many of the differences between charter school parents and traditional public school parents are durable over time.

Can Charter Schools Build A Foundation for Cooperative Behavior?

A recurrent theme in political science links the structure and performance of public policies and institutions to citizen attitudes toward government and their willingness to participate in politics and the policy process. Ostrom (1998) argues that identifying the ways in which government institutions and policies can be designed to encourage cooperative behavior is one of the central issues in contemporary political science (also see Lubell et al. 2002). However, the literature on social capital portrays a decline in cooperative attitudes and behaviors (see Putnam 1995 or Putnam 2000) and questions the extent to which government policies can nurture them (see especially Fukuyama 1995).

In this paper, we focus on schools as arenas in which a particular set of citizens—parents—can develop the norms and expectations essential for cooperative behavior. We pay particular attention to the extent to which reorganizing schools through the introduction of school choice affects such attitudes. We believe that by analyzing how a change in the way an important government service, in this case, schooling, is organized and then linking this institutional change to the attitudes parents hold toward each other and toward teachers allows us to address three fundamental questions:

- Can government institutions build the foundation for interpersonal trust, cooperation and participation in the policy process?
- If the answer to the first question is yes, is this effect domain specific or are the effects more general, spilling over into attitudes in other, broader, domains?
- And, do any of these effects endure over time?

Specifically, we examine the effect of a particular institutional reform—the introduction of charter schools—on parents. After reviewing the literature linking the design of government

institutions to civic participation and attitudes, we turn to an empirical analysis of survey data collected in Washington, DC. We begin by assessing the effect of enrollment in charter schools on a variety of familiar measures of school and broader civic attitudes. We find that the foundations for cooperation and trust in the domain of schooling – but not in other domains – are higher among parents with children in charter schools. Using a propensity score matching technique, we show that this finding is robust when controlling for self-selection into charter schools, and we also find that the charter school advantage persists over the course of the school year.

As we proceed, we must keep in mind that, while schools are an important government institution in the lives of parents, they nonetheless represent but one venue in which parents interact with each and with public employees. In turn, there are “real world” constraints on the extent to which we should expect changes in the way schools are organized to affect broader changes in political attitudes. While we should therefore expect modest effects, existing research suggests that these links do exist.

Institutions Can Affect Political Attitudes and Behavior

A wide range of work shows that institutions, such as religious congregations, neighborhood associations, and schools can serve as training grounds for the development of civic and political skills. Rosenstone and Hansen (1993) show that political participation is firmly rooted in the institutions and organizations that mobilize individuals and structure their involvement. Verba, Schlozman, and Brady (1995) find that networks of recruitment, which in turn are embedded in institutions and organizations, are critically important for explaining civic volunteerism. Similarly, Skocpol, Ganz, and Munson (2000) argue that civic associations and citizen participation in the United States developed less from the purely local decisions of

individuals and more as a consequence of the institutional patterns of federalism, electoral politics, and political parties (also see Berry et al. 1993; Valley 1996; Minkoff 1997; and Cortes 1996).

Another body of work investigates “policy feedback”, documenting how the treatment clients of government programs receive affects their broader orientations toward government and political action. The idea of a feedback loop is raised at least as long ago as Lowi (1964), who argues that public policies are not only the product of politics but have an independent effect on the range and level of political activity associated with them. Contemporary work in this tradition moves from the systemic level that Lowi has in mind to study the links between different institutional arrangements and the behavior of individual citizens. Research investigating this feedback loop links the way in which policies are structured to the sense of responsibility, duty, and obligation held by policy recipients. Completing the loop, these attitudes in turn shape political behavior of policy recipients pertaining to the policy and even spilling over to broader policy and political domains. As Schneider and Ingram argue, the way in which government policies are implemented “affect people’s experiences with the policy and the lessons and messages they take from it. These, in turn, influence people’s values and attitudes, ... their orientations toward government, and their political participation patterns.” (Ingram and Schneider 1995: 442; also see Schneider and Ingram 1997; Soss 1999; A. Campbell 2000; and Mettler 2002).

This idea has been explicitly tested in the domain of social welfare programs. For example, Verba, Schlozman and Brady (1995, chaps. 7, 14) show that beneficiaries of non-means-tested programs are more likely to be involved in welfare-related political

activity than are recipients of means-tested programs, such as AFDC. Andrea Campbell (2000) has also demonstrated the existence of this feedback loop, which may be particularly strong among lower income recipients of social security (also see Mettler 2002 for a discussion of the greater effects of the GI Bill on less advantaged recipients). Similarly, Soss (1999) shows that recipients of SSDI believe more strongly in their political efficacy compared to recipients of AFDC, who were more likely to be poorly treated by bureaucrats and who, in turn, developed feelings of powerlessness. Closer to the policy domain we study here, Soss also shows that Head Start, a program that encourages parental participation and involvement, consistently mitigated the demobilizing effects of AFDC: "...a more participatory program design encourages more positive orientations toward political involvement. Head Start provides clients with evidence that participation can be effective and fulfilling. From the perspective of participatory theory, it is not surprising that these experiences have spill-over effects." (Soss 1999: 374).

Yet another line of research, developed in the field of public administration, has explored the importance of "coproduction"—how citizens and government officials interact in the delivery of specific services and how these interactions are related to broader patterns of civic engagement. Scholars in this tradition have noted that for many public goods, such as community policing efforts (for example, Neighborhood Watch or Crime Stoppers), or sanitation removal programs that depend on residents' cooperation in curbside recycling or transporting waste to specific areas for collection, cooperative behavior among citizens and between citizen/consumers and providers is essential.

Unfortunately, the term coproduction has all too often been confined to a limited set of citizen activities focused on particular acts involved in narrowly defined public services. Yet the benefits of coproduction may extend beyond the specific service and can, like other institutional

arrangements that encourage citizen involvement, positively affect political behavior and attitudes. According to Levine (1984):

Coproduction lays the foundation for a positive relationship between government and citizens by making citizens an integral part of the service delivery process. Through these experiences citizens may build both competence and a broader perspective, a vision of the community and what it can and should become. (Levine 1984:181; also see Marschall 2000)

Policy Feedback and Social Capital

The connection between government and citizen behavior also plays a central role in recent explorations of social capital. Many analysts argue that social capital is essential to the smooth functioning of markets and democratic politics (e.g., North 1990; Putnam 1993; Fukuyama 1995; Schneider et al. 1997; Adler and Kwon 2002)—but the role of government institutions and practices in fostering social capital has been debated.

For example, Fukuyama (1995) stresses the importance of social capital to politics and markets, but does not think much of the ability of government to create or nourish it. Similarly, for Putnam, social capital is generated mostly through the quality of secondary associations and not through government action. Putnam suggests that “civic virtue” comes from experience in associational life, which teaches “skills of cooperation as well as a sense of shared responsibility for collective endeavors” (Putnam 1993, 90). In this regard, Putnam’s reference to the “amateur soccer clubs, choral societies, hiking clubs, bird-watching groups, literary circles, hunters’ associations, Lions Clubs, and the like in each community” (1993: 91) is often cited. But it is his image of “bowling alone” (Putnam 1995) that summarizes his notion of the decline of non-political associations in the U.S. as indicative of declining social capital.

In his recent work, Putnam (2000) has argued for a broader view of the foundations of social capital, including a much more expansive role for government, but the essence of his social capital framework is built on the claim that civil societies that are characterized by a richly variegated associational life will also tend to exhibit norms of political equality, trust, and tolerance, and active participation in public affairs.

Clearly even the most “resolutely society-centered” views of social capital (to use Levi’s [1996] characterization of Putnam’s early statement of his theory) must recognize that institutional and bureaucratic context helps define the boundaries of civic engagement and the way in which citizens respond to government and politics. That is, there are government and bureaucratic processes and structures that affect the quality of grass-roots activity, associational life and social capital more generally (see, for example, Skocpol et al. 2000). And there is evidence that government institutions that treat citizens well encourage political participation and political attitudes supportive of democratic practices. In this paper we ask if one such institution, schools of choice, has this effect.¹

Linking Institutional Structure To Political Behavior: The Case Of Schools

All forms of school choice, such as alternative schools, magnet schools, open enrollment programs, vouchers, and charters, expand the range of options available to parents. Early choice reforms, however, did not have a view of systemic change. But more recent school reforms have explicitly coupled choice with a broad challenge to the current system of education.

The concern for how the broad institutional arrangements of schools affect their performance was energized by the work of John Chubb and Terry Moe, who, in their 1990 book, *Politics, Markets, and America’s Schools*, forged a clear link between choice, markets, and the

¹ For an interesting look at our argument in reverse, see the work of Fischel (2001), who argues that voters have consistently rejected school voucher referenda because they fear the loss of community-specific social capital.

relationships between stakeholders in schools. Chubb and Moe argue that while school reform has often been considered an “insider’s game,” played by bureaucrats, administrators, teachers, and other school professionals and fought over what may seem like technical problems (for example, curriculum, testing procedures, or tenure), the bedrock issue in school reform is the issue of governance: who has the right to participate in the decision making process and at what levels? Chubb and Moe consider this to be a “constitutional” issue because it structures subsequent decisions made by school officials, teachers, parents, and students.

Building on this argument, many proposals for reform now seek to rewrite the relationship between stakeholders, building on a widely shared vision emphasizing small, autonomous schools, unburdened by a large administrative structure, and fueled by a desire to bring parents, students, teachers, and administrators into cooperative, supportive relationships. In this vision, parents are given not only the power to choose but are seen as essential to school governance and to the creation of “effective” schools in which the resulting stronger community leads to higher academic performance.

Henderson (1987:1) argues that: “The evidence is now beyond dispute: parent involvement improves student achievement. When parents are involved, children do better in school, and they go to better schools.” Similarly, according to Ostrom (1996: 1079): “If students are not actively engaged in their own education, encouraged and supported by their family and friends, what teachers do may make little difference in the skills students acquire.” Bryk and his colleagues have repeatedly demonstrated that parents must be involved in schooling to ensure the quality of schools as institutions serving the community. They also show that children from low-income and minority families gain the most from parent involvement (see, for example, Bryk and Schneider 2002, Bryk, Lee, and Holland 1993, or Bryk, Sebring, and Rollow 1998). Clearly, this

vision of effective schools means that stakeholders work together to “coproduce” higher quality education, making the relationship between parents, students and teachers more cooperative and interdependent (see e.g., Henig 1994:187; Ostrom 1996).

While linking the coproduction of education to broader indices of political participation has not been widely investigated, the work on social capital and schools does hint at such a link. Indeed, Coleman’s classic article on social capital specifically addresses the question of how effective school communities can create this elusive commodity (Coleman 1988). Other work has followed Coleman’s lead. For example, Schneider, Schiller and Coleman (1994) and Astone and McLanahan (1991) examine social capital as a function of the interactions between administrators, teachers, parents, and children. Bryk, Lee, and Holland (1993) identify the “value added” of Catholic schools to a range of outcomes, many of which relate to norms that support participation and political attitudes (see also D. Campbell 2000). Berry et al. (1993: 294) cite the shift to parental control over local schools in Chicago in the late 1980s as a rare example of a successful attempt to get low-income parents more involved in local public affairs. Carnoy (2000) and Benveniste, Carnoy, and Rothstein (2003) similarly emphasize the importance of schools in fostering social and institutional networks. Schneider and his colleagues (1997, 2000) show how public school choice increases social capital of parents, measured by volunteerism, PTA membership, and sociability.

Clearly, this aspect of the school reform movement focuses on transforming parents from passive clients of a government service to active partners entitled to a say in how schools are run and how students are taught. In the empirical analysis that follows we explore the link between school choice and parental attitudes more systematically than existing work, paying particular

attention to the inferential issues raised by the self-selection of parents who choose to choose and by the of durability of any effects.

Charter Schools as an Institutional Reform

Why should we expect charter schools, arguably now the most common form of school choice in the United States, to increase the number of parents with higher levels of social capital, trust and, more generally, attitudes supportive of democratic participation? If Schneider and Ingram are correct that how government policies are implemented “affect people’s... orientations toward government, and their political participation patterns” (1995, 442) and if, as Soss and others argue, how government agencies treat their clients affect how clients see themselves as citizens, then the fact that charter schools are committed to changing the relationship between parents and schools, making them more central to the school’s educational mission, should produce positive changes in parental attitudes and behavior.

Charter schools have been subject to fairly intense scrutiny. While much of this research has shown that charter schools are not as transformative of the entire system of education as their advocates hoped, there is evidence that charter schools are changing the relationship between the school and the parent.² And it is this aspect of change that is central to our argument.

Hill et al. (2001), in one of the most comprehensive studies of charter schools to date, argue that charter schools, freed from many of the bureaucratic rules and regulations governing traditional public schools, have created new key “accountability” relationships with the teachers,

² Given their popularity and the expectations that surround them, it is not surprising that charter schools have attracted a large and still growing body of research. Much of this research is contentious but has, overall, produced a more realistic assessment of the potential and the payoff of charter schools. The research has focused on a variety of topics, some central to the more wide ranging issue of the effects of choice (for example, are charter schools innovative? Do they produce higher student achievement? Do charter schools leverage change in other traditional public schools?) and others quite specific to the charter school “movement” (e.g., How strong are chartering laws? Does it matter who charters the schools?). On these types of issues, see, for example, Gill et al. (2001) or Hill et al. (2001).

on whose performance the schools depend, and with families, whom the schools must attract and satisfy (p. 6). These relationships, according to Hill et al., transform the way in which teachers, administrators and parents deal with each other. For example, choice gives parents authority to make requests and to expect the school to respond appropriately to the needs of individual children (also see Berman, et al. 1998). Combined with the fact that charter schools usually offer a smaller, more intimate setting, staffed by people who chose to work in the school, the conditions for stronger ties between parents and the schools exist.

A growing number of studies confirm that charter schools have higher rates of parent involvement than other schools. These higher rates stem from a culture as well as policies that nurture (if not quite force) higher involvement (Corwin and Flaherty 1995; Bryk, Lee, and Holland 1993; Finn et al. 1997). For example, in California, many charter schools use contracts that require parental involvement, including their presence at the school. Contracts often include student attendance requirements, and parent commitment to provide educational materials at home and to support school codes (Schwartz 1996). According to Miron and Nelson (2000), among Pennsylvania charter schools, half the schools require parent volunteerism, and 25 percent of parents report that they volunteer more than three hours per month. Similarly, Henig et al. (1999) find evidence public charter schools in Washington DC reach out to parents.

Choice may also put pressure on administrators, teachers and staff to be more “consumer friendly.” As Hassel writes: “charter schools cannot take their ‘customers’ for granted. Their very survival depends on the degree to which families believe the schools are responding to family preferences and working hard to provide the education they demand.” (Hassel 1999: 6). Teske et al. (2001) found that parents visiting charter schools were, on average, treated better than parents visiting DC public schools and that the charter schools treated parental requests for

information about programs more seriously and responsively than did staff at the DC public schools.

In short, while the debate about the effects of charter schools on educational achievement continues, as an institutional reform there is consensus that charter schools are likely to create a milieu in which parents are better treated and in which they are encouraged to be active “co-producers” of their children’s education. Does it follow that this better treatment creates a positive feedback loop generating political attitudes supportive of democratic practices?

To answer this question, we conducted a telephone survey of parents in the Washington DC school district, where the charter school movement is one of the strongest in the country, representing about 25 percent of the publicly funded schools in the city and enrolling almost 15 percent of the students. We now turn to a discussion of the measures used in our survey.

What to Measure?

Clearly the issues and attendant measures that have been used by researchers looking at how the quality of government services affects citizen attitudes and behavior are wide ranging. In this paper, we begin with a set of measures of interpersonal trust. Such trust is essential not only for improving school performance, especially in inner-city schools (most notably see Bryk and Schneider 2000), but according to Burns and Kinder (2000), provides the foundation for cooperation and, ultimately, for democratic politics.

While our survey questions draw heavily from Burns and Kinder, other work supports our concern for interpersonal trust. Ostrom places trust at the center of the “core relationships” she argues are essential for cooperation (1998, especially pages 12-13). Leana and Van Buren (1999: 542) argue that organizational social capital lies in trust and “associability”—which they define as “the willingness and ability of individuals to define collective goals that are then

enacted collectively.” For Putnam, the norm of generalized reciprocity helps solve collective action problems and creates a viable community with a shared sense of commitment and identity (Putnam 2000; also see Casella and Rauch 2002). Adler and Kwon (2002) argue that *goodwill* is central to the concept of social capital, since information, influence and solidarity flows from goodwill—and hence the effects of social capital is based on goodwill (p. 18). Perhaps most germane to this study, Bryk and Schneider argue that “a broad base of trust across a school community lubricates much of a school’s day-to-day functioning...and is especially important as we focus on disadvantaged schools” (2002: 5-6). As noted, Bryk and Schneider link high levels of trust not only to the smooth operation of the school, but ultimately to academic performance.

We tailor our questions to the school environment to measure the foundation of trust and cooperation among parents and between parents and teachers, reflecting the importance of such relationships to the coproduction of education, which is a hallmark of effective schools. We also accept Burns and Kinder’s argument that trust is rooted in specific practices and dispositions toward neighbors and others in general: that people earn trust by “keeping promises, by being honest and respectful, and by being courteous.” (Burns and Kinder 2000: 7).

Survey Questions

To measure levels of trust, we use the following questions, which are based on measures developed by Burns and Kinder, and modified to fit the school environment:

I’m going to ask you a few questions about the parents of the students who attend your child’s school.³

³ Earlier in the survey, if the parent respondent had multiple children in the DC schools, she was asked to answer all the questions in the survey about the child whose birthday was next (to randomize the survey). In the actual survey where we use the term “your child”, the CATI system inserted the name of the child upon whom the survey was focused.

- Thinking about those parents, would you say they *treat others with respect* all of the time, most of the time, some of the time, hardly ever, or never?
- What about *irresponsible*? Would you say that *irresponsible* describes these parents extremely well, quite well, not too well, or not well at all?
- Would you say that the word *honest* describes these parents extremely well, quite well, not too well, or not well at all?

In the survey, these same questions were repeated, substituting teachers for parents. Since these individual measures are theoretically tapping an underlying concept reflecting the foundations of social capital in the school community, we estimated a common factor model on the response patterns and identify empirically a single latent factor on which all these measures load.⁴ We first explore the effects of charter school enrollment on the school-based individual measures and on the estimated factor score; we then expand our list of dependent variables to include measures of attitudes for the larger world of politics outside the school.

Figure 1, below, summarizes the indicators of attitude that we measure and use in subsequent analyses. Our measures of broader civic attitudes are a series of questions drawn from the literature on political efficacy (Campbell et al. 1960; Converse 1975; Converse 1964) and includes measures of both “internal” and “external” efficacy (Campbell, Gurin, and Miller 1972). More specifically, we measure the respondent’s self-reported trust in government, understanding of politics, belief that she is well-qualified to participate, and agreement with the statement that “I don’t think public officials care much what people like me think.”

FIGURE 1 HERE

⁴ More specifically, we estimated a common factor model with varimax rotation. The latent factor that we score and use in subsequent analysis has positive loadings on all of the six school attitude variables and also is the factor that accounts for the most variance. We confirm the statistical significance of this factor by comparing its eigenvalue from a principal components analysis with a null model following Horn’s (1969) method of parallel analysis. We report the loadings in Table A1 in the Appendix.

Using these measures, we return to the specific questions we posed earlier:

- Do parents who have enrolled their children in charter schools exhibit attitudes more supportive of cooperative behavior within the school?
- Do these school based norms and behaviors affect parents in other areas of political life?
- Do these attitudes endure over time?

Before answering these questions empirically, however, we must first consider the fact the charter school parents are not randomly chosen from the population at large.

Who Chooses Charter Schools? The Problem of Self-Selection

It is well-known that results from quasi-experimental studies of the effects of public policy (or other such “treatments”) are potentially biased when the factors predicting self-selection into the program (here, charter schools) are correlated with the outcome measures (Rosenbaum 2002, Maddala 1983). In our particular case there may be a selection bias in who chooses charter school. Charter school parents may not be a random sample of a wider population of parents. This bias may explain any larger stock of social capital in charter school parents independent of any positive effects of charter school enrollment. The possibility of selection bias is built into the very way in which charter schools are designed—charter schools, like most current school choice plans, are what Elmore (1991) calls “option demand” choice.

In contrast to a system of “universal choice” where all parents must choose a school for their child, option demand choice is a two-stage process. First, parents must “choose to choose”—that is, they must be dissatisfied enough with their existing schools or be sufficiently attracted to an alternative to their neighborhood school that they decide to exercise choice. Once they decide to choose, the parent then has to select among the alternatives to find a school in

which to enroll her child. Given this two-stage process, the possibility of bias due to self-selection must be taken into account when studying any outcomes of choice. That is, it is likely that the individuals who choose to choose are not representative of the entire population of parents (see, for example, Schneider, Teske, and Marschall 2000) and the characteristics that are motivating them to choose may affect their subsequent behavior and attitudes. To the extent this is true, simple comparisons of choosers and non-choosers are biased and the norms and expectations essential for cooperative behavior—if they are found among charter school parent—may be a function of the factors that led them to choose in the first place.

There are a variety of techniques that have been developed to deal with this problem. One solution to this problem is the estimation of some form of parametric “treatment effects” model, usually by means of a consistent two-step or full-information maximum likelihood model (for a summary see Greene 2000, Maddala 1983). Instead we use here a semiparametric estimator, propensity score matching, originally introduced by Rosenbaum and Rubin (1983; 1985) in a biometric context and recently applied widely in econometric studies evaluating the effects of training programs on subsequent earnings (e.g. Bryson, Dorsett, and Purdon 2002; Dehejia and Wahba 1998; Heckman, Ichimura, and Todd 1997), and in other literature ranging from estimating the impact of environmental regulations on new manufacturing plants creation (List et al. Forthcoming) to evaluating successful techniques of heart catheterization (Hirano and Imbens 2001).

The logic underlying this method is to construct, from quasi-experimental data, a new variable (the propensity score) that summarizes pre-treatment characteristics of each respondent. Based on these propensity scores, a treatment group and a matched control group are created and

the size and significance of the treatment effect can be estimated using these groups (Becker and Ichino 2002).

Propensity score matching has several advantages, such as the relaxation of restrictive parametric assumptions and no requirement to find instrumental variables for practical model identification, over more familiar “Heckman-type” treatment effects models (see LaLonde 1986 and Puhani 2000 for a discussion of the sensitivity of Heckman-type of models to misspecification and to violations of their parametric assumptions). Moreover, as Dehejia and Wahba (1998) argue, matching provides estimates of the treatment effects more similar to randomized field trials than can be obtained using other corrections for self-selection.

To implement this procedure, first a probit model (or other appropriate generalized linear model for dichotomous data) is estimated to generate the propensity scores. The covariates we use to estimate the propensity score are:⁵

- charter school, coded 1 if the respondent’s child is in a DC charter school;
- a set of three dichotomous variables for self-reported race (Hispanic, white, other, with African-American the excluded—and modal—category);
- residential mobility measured by the number of years the person has lived in her current neighborhood and by the years the person has lived in D.C.;
- respondent’s years of schooling;
- the grade the respondent assigned to the DC public schools in general;
- the respondent’s gender;
- whether or not the respondent was employed, and

⁵ Research on school choice has found these demographic variables to be important in choice behavior. Note too that the survey data are appropriately post-stratified on charter enrollment due to intentional over-sampling of this subpopulation and appropriate weights are used in the models estimated below when necessary (Bryson, Dorsett, and Purdon 2002: 29-30).

- frequency of church attendance.

Missing values in the data are imputed via multiple imputation (Allison 2002; King et al. 2001; Rubin 1987) using a multivariate Bayesian normal linear regression model (Van Buuren and Oudshoorn 1999) and the results presented for all analyses below are the average of results from five imputed datasets.⁶

After estimating the propensity scores for both the charter and the traditional parents,⁷ we verify that the balancing property is satisfied by examining the first and second moments of the distribution of propensity scores for treated and non-treated units. This property ensures that the pretreatment characteristics of the respondents within equally spaced intervals of the propensity score, independent of them being in a charter school, have the same mean and variance (Rosenbaum 2002, 295-328; Becker and Ichino 2002).

Once we have the propensity score estimates and satisfied this test of equality of distribution, instead of simply computing the difference in mean values for the various measures, we use the scores to construct a new dataset (actually five new datasets due to the multiple imputation procedure) that consists of the charter parents and their matched controls.⁸ We are now ready to examine the data and empirically answer our research questions.

⁶ Variables are transformed as necessary prior to imputation to improve normality and then retransformed to their original distribution (Van Buuren and Oudshoorn 1999). Note also that we impute missing values due to panel attrition over the school year as well as item nonresponse to prevent a significant loss of data (only 613 respondents in the beginning of the school year and 373 respondents in the end of the school year answered all the questions of interest). We then separately analyze the five complete datasets and average the results of the five analyses to account for the uncertainty concerning the imputation using Rubin's method (Rubin 1987, Horton and Lipsitz 2001).

⁷ We present the results of our probit model for estimating the propensity score in Appendix Table A2.

⁸ As the propensity score is a continuous variable, it is unlikely that two respondents share the exact same value; therefore, matching is based on some measure of proximity matching parents receiving the "treatment" (charter schools) to parents who act as controls (parents in the DC public schools). We use the nearest-neighbor matching method and sample with replacement from the non-treatment group to ensure the closest possible matching (Becker and Ichino 2002). For each charter school parent we find his or her traditional public school counterpart with the closest propensity score. The unmatched units are not used in our analyses. Our final datasets thus each contain 548 charter parents and their 548 matched non-

The Foundations for Cooperation and Trust are Higher Among Charter School Parents

To begin answering these questions, we estimate independent standard linear regression models⁹ of the six school-related attitudes (teachers and parents respectful, responsible, and honest), the combined factor scale, and four broader attitudes (trust in government, understanding politics, well-qualified to participate in politics, and politicians don't care) measured in the first months of the 2001-2 school year on a dichotomous indicator of charter enrollment, as well as on two control variables: the length of time that the child has been attending the school, and the size of the school (measured by number of students).¹⁰ The estimated coefficients for charter school enrollment are presented in the first column of Table 1, and results of the full models are presented in Appendix Table A3.

TABLE 1 HERE

Our results indicate that our first question can be answered “yes”: enrollment in charter schools appears to foster the attitudinal foundation upon which increased civic participation can be built. We find a significant effect for four of the six school-related attitude measures. We also find a very strong positive effect of charter school enrollment on the underlying factor score reflecting the foundations of social capital in the school community.

On the subject of the second question, however, these positive “within school” attitudes do not spill over to broader domains, with the exception of how well parents feel they understand politics. Despite this lack of strong spill-over effects, the results tell a story supportive of charter

charter parents, for a total augmented number of observations of 1096. Note that this construction of augmented datasets is equivalent to a weighting procedure where the frequency weights are determined by the propensity scores (Bryson, Dorsett, and Purdon 2002, 29-30).

⁹ We assume here that our dependent variables can be measured on a continuous scale. As they are primarily five-point Likert-type items designed to measure attitudes, we believe this is a reasonable assumption. As Likert (1932) notes, such items have been found empirically to correlate between .95 and 1.0 with items with “true” interval scaling.

¹⁰ In our outcome equations, we control for these two variables that do not affect the propensity to choose but may affect evaluations and levels of parent participation.

schools as an institutional reform that can build social capital and a stronger school-based community. Based on the research we discussed above, this stronger community should ultimately produce better academic performance—although we leave answering that question for further research.

In the second column of Table 1 we repeat the analyses using data obtained from the same respondents at the end of the school year, again regressing each individual measure (plus the school community factor) measured end of the school year on the charter enrollment, time in school, and size of school covariates.

We find that at the end of the school year, the charter school “advantage” has persisted. Moreover, while charter school parents still find teachers and other parents more respectful and honest than parents with children in the traditional DC public schools (though only marginally so in the case of other parents), charter school parents now are more likely to find their fellow parents and child’s teacher more responsible. Note that charter school enrollment still has a significant effect on the summary scale; however, the coefficient is lower than at the beginning of the school year. There is no evidence of a build-up of political efficacy over the course of the school year—as in the beginning of the school year, charter school enrollment only matters for the parents’ reported understanding of politics.

Is The Link Between Charter Parents, Civic Participation and Social Capital Strong Enough?

In the 1800s, Horace Mann argued that public schools were a venue in which the growing number of immigrants to the United States could learn the norms of American civic life and could develop the capacity to be engaged in American democracy. John Dewey also emphasized the importance of the school as “social centres” (Dewey 1976). Indeed, according to David

Campbell (2000), linking American public schools to the need to produce “better citizens” became one of the main supports for the rapid expansion of public education in the United States throughout the late 19th and early 20th centuries and continues to be one of the expectations placed on today’s schools (Henig 1994: 201).

Clearly creating better citizens is a complex task, but according to Gutmann, one of the defining characteristics of a democratic education is the “ability to deliberate” in a context of “mutual respect...” (1999: 46). This perspective is clearly in line with Burns and Kinder’s emphasis on respect and honesty, and with Putnam’s broad vision of social capital. For these authors, respect for others and mutual trust are essential for the smooth working of democratic societies. For Putnam, in particular, the norm of generalized trust built within social networks people form as they interact in voluntary associations and other settings—including schools—is central. In his view, as trust is built, collaborative effort results, and as successful collaborative efforts move forward more trust is built, creating a “virtuous circle.”

While much of the argument examining the role of schools in fostering democratic norms and practices focuses on children, we have extended that analysis by examining, to borrow Sapiro’s term, schools as venues of “adult political learning.”¹¹ (Sapiro 1994) Many proponents argue that charter schools are creating opportunities for such adult political learning. This argument is supported by empirical evidence showing that many charter schools encourage parents to become integral to the functioning of the school. Proponents further argue that as this fundamental change takes place, parents will learn to respect one another and other members of the school community. In this atmosphere of cooperation and mutual respect, the schools will

¹¹ This may be a liberal “borrowing”: Sapiro’s analysis is more a general piece on adult political learning focusing on the timing and sequence of political socialization over a life time, but the term fits our argument—and the concept that Sapiro studies is related to the idea we explore here.

improve, while at the same time parents will develop the norms essential for democratic participation and a virtuous circle will be built.

Our results indicate that on almost every school-related attitude we measured, parents in the DC charter schools indeed exhibited a stronger foundation for cooperative behavior than did parents in the traditional DC public schools. Specifically, our evidence suggests that charter schools in Washington D.C. present an atmosphere in which parents report strong foundations for higher levels of trust, respect, and cooperative behavior among themselves and between themselves and their children's teachers.

Unfortunately, these positive findings are off-set by another set of results: with one exception, our analysis suggests that the benefits of charter enrollment did not spill-over to broader political attitudes.

Like so much research on the relationship between the design of government institutions and individual political behavior and like so much empirical work on educational reforms, we are faced with mixed results. Given these ambivalent data, we can read our results in one of two ways.

On one hand, on many indicators, charter schools dominate the traditional public schools and, more importantly, there is *no* indicator where charter school parents view other parents or teachers more negatively than do other parents. Moreover, that these effects are found at all could be taken as a strong endorsement of charter schools. After all, parents' attitudes and behaviors regarding their children's schools are built on a long history of interaction with the schools. In contrast, charter schools are relatively new and many parents in the DC charter

schools have had children in charter schools only for a relatively short time.¹² Thus one could argue that the charter school experiment is “working”: when it comes to building social capital *within* a school, charter schools are Pareto superior to the DC public schools. From this perspective, charter schools already pass a crucial test of policy reform and are a reform worth supporting.

On the other hand, the value added of charter school is not overwhelming, they did not cumulate between the beginning and the end of the school year, and they are limited to the school community with no evidence of any spillover effects from school-based social capital to broader domains. Critics could therefore argue that charter schools represent at best a marginal gain that do not justify all the money, time, and energy invested in them.

Of course, our results from a single year of data do not conclusively demonstrate that the institutional reform of schools will not affect broader political attitudes over the next few years. Indeed our data cannot definitively answer the question of whether or not the positive within school results we report endure or cumulate over a longer time period. A priori expectations vary widely. We could postulate that our positive findings flow from a “Hawthorne effect:” charter schools are a new, highly touted form of schooling, supported by enthusiastic policy entrepreneurs and basking in (mostly positive) media attention. From this perspective, the positive results we report here would be expected to disappear over time. But it is just as reasonable to argue that the effects of an institutional reform such as charter schools will take time to gain purchase. From this perspective, we would expect the positive findings we report to strengthen over time as charter schools work out the “kinks” of institutional change. Moreover, whatever fluctuation and decay we have documented in the charter school advantage could be

¹² While we controlled for time in school in our outcome equations, the efficacy of the control may be somewhat blunted by the distribution of the variable: Over one quarter of the charter school students in our study were newly enrolled in their school and about the same number were in their second year.

the result of the normal accumulation of problems that attend the progress of any school year (as virtually every parent, student, and teacher knows, the beginning of every school year is attended by a level of optimism that inevitably erodes over the course of the year), a cycle that may be worse in relatively new schools. In this light, consider the work of Tedin and Weiher (forthcoming). In their exploration of the effects of charter schools in Texas, they find that it may take as much as three years before social capital starts accumulating as a result of enrollment in charter schools. If this proves to be the case in Washington DC, then the charter school advantage will increase over time and spread to indicators of involvement in politics.

Finally, there is yet another consideration that may have attenuated the feedback loop from the schools to broader political practices: in the policy areas in which a loop has been established by other researchers (mostly social services such as AFDC), the public nature of the service is clearly evident. In contrast, charter schools, although public schools by law, may not be recognized as such by all parents—contributing to the failure of school-related attitudes to spill-over to broader political practices. Cities and states seeking to reap the democratic benefits of an increase in school-related social capital may need to embrace these relatively new institutions more publicly and take credit for their successes. Alternatively, developing the feedback loop may require additional time and exposure to the new institutional environment. Perhaps too few parents have been in charter schools long enough for their improved affect towards the school to translate into a greater sense of empowerment as a citizen.

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Figure 1: Measures Of School And Broader Community Attitudes Used As Dependent Variables In Subsequent Analyses.

Schools Attitudes	Broader Context Attitudes
Teachers/Parents <ul style="list-style-type: none"> • Respectful • Responsible • Honest • School community factor 	<ul style="list-style-type: none"> • Trust in government • Understand politics • Well-qualified to participate in politics • Politicians don't care

Table 1: D.C. Charter School Parents Exhibit Attitudes More Supportive Of Cooperative Behavior Within The School Community Than Do Parents Whose Child Is In A Traditional Public School.

	Beginning of School Year Charter Effect	End of School Year Charter Effect
Parents Respectful	.307 (.078)***	.353 (.125)***
Parents Responsible	.072 (.084)	.212 (.117) [†]
Parents Honest	.211 (.058)***	.107 (.085) [†]
Teachers Respectful	.282 (.061)***	.381 (.140)***
Teachers Responsible	.031 (.085)	.164 (.102)*
Teachers Honest	.236 (.055)***	.153 (.078)**
School Community Factor	.243 (.059)***	.135 (.062)**
Trust in Government	.077 (.079)	-.038 (.106)
Understand Politics	.178 (.085)**	.153 (.082)*
Well- Qualified	.003 (.104)	-.209 (.169)
Politicians Don't Care	-.089 (.100)	.080 (.149)

*** $p \leq .01$, two-tailed; ** $p \leq .05$, two-tailed; * $p \leq .10$, two-tailed; [†] $p \leq .10$, one-tailed
 Note: Results presented are the estimated coefficients of the charter variable in independent normal linear regressions of the ten measures on charter, school size, and length of time in the school. Standard errors are in parenthesis. All results are averaged over five multiply imputed datasets. The number of observations is 1096.

Appendix

Table A1: Results of Factor Analysis of the Six School Community Measures

	Beginning of School Year Factor Loadings	End of School Year Factor Loadings
Parents Respectful	.552	.861
Parents Responsible	.437	.627
Parents Honest	.522	.832
Teachers Respectful	.524	.153
Teachers Responsible	.394	.195
Teachers Honest	.512	.129
Eigenvalue	2.220	2.859

Reported loadings are results of common factor model with varimax rotation. Reported eigenvalues are from principal components analysis. Number of observations is 984.

Table A2: Results of Probit Models Used for Estimation of Propensity Score

	Coefficient (Standard Error)
White	-1.10 (.22)
Hispanic	-0.33 (.17)
Other Race	-0.27 (.17)
Years Lived in Neighborhood	-0.003 (.01)
Years in DC	0.02 (.01)
Gender	0.20 (.11)
Years of Education	0.01 (.02)
DCPS grade	-0.23 (.04)
Employed	-0.07 (.10)
Church Attendance	0.05 (.02)
Constant	.174 (.31)

Number of Observations = 984

Table A3: Results of Full Models Reported in Table 1

	Beginning of School Year	End of School Year
Parents Respectful		
Charter Enrollment	.307 (.078)***	.353 (.125)***
School Size	-.015 (.017)	-.035 (.036)
Time in School	.005 (.039)	.077 (.089)
Constant	3.02 (.164)***	4.37 (.300)***
Parents Responsible		
Charter Enrollment	.072 (.084)	.212 (.117)*
School Size	.017 (.020)	-.032 (.018)*
Time in School	-.017 (.027)	.010 (.049)
Constant	2.13 (.177)***	2.04 (.138)
Parents Honest		
Charter Enrollment	.211 (.058)***	.107 (.085) [†]
School Size	-.013 (.020)	-.024 (.038)
Time in School	-.022 (.025)	.003 (.067)
Constant	2.05 (.137)***	1.84 (.163)***
Teachers Respectful		
Charter Enrollment	.282 (.061)***	.381 (.140)***
School Size	-.034 (.017)*	-.005 (.015)
Time in School	-.045 (.015)***	.033 (.043)
Constant	2.44 (.106)***	4.81 (.204)***
Teachers Responsible		
Charter Enrollment	.031 (.085)	.164 (.102) [†]
School Size	.013 (.019)	-.021 (.020)
Time in School	.003 (.025)	-.003 (.038)
Constant	2.35 (.136)***	2.26 (.128)***
Teachers Honest		
Charter Enrollment	.236 (.055)***	.153 (.078)**
School Size	-.021 (.014) [†]	-.036 (.015)**
Time in School	-.047 (.021)**	.030 (.025)
Constant	2.33 (.068)***	2.20 (.094)***
School Community Factor		
Charter Enrollment	.244 (.059)***	.135 (.062)***
School Size	-.014 (.020)	-.020 (.023)
Time in School	-.016 (.034)	.021 (.048)
Constant	-.016 (.159)	-.010 (.129)
Trust in Government		
Charter Enrollment	.077 (.079)	-.038 (.106)
School Size	.002 (.015)	.020 (.019)
Time in School	.038 (.019)**	-.023 (.030)
Constant	1.08 (.089)***	1.00 (.173)***
Understand Politics		
Charter Enrollment	.178 (.085)**	.153 (.082)*
School Size	-.030 (.022) [†]	.012 (.031)
Time in School	-.043 (.024)*	-.004 (.035)
Constant	3.28 (.112)***	2.90 (.190)***
Well- Qualified		
Charter Enrollment	.003 (.104)	-.209 (.169)
School Size	.007 (.026)	-.015 (.033)
Time in School	.021 (.029)	-.054 (.035) [†]
Constant	2.31 (.163)***	2.55 (.317)***
Politicians Don't Care		
Charter Enrollment	-.089 (.100)	.080 (.149)
School Size	.011 (.022)	-.019 (.024)
Time in School	.032 (.062)	.001 (.085)
Constant	1.54 (.167)***	2.59 (.220)***

Note to Table A3:

*** $p \leq .01$, two-tailed; ** $p \leq .05$, two-tailed; * $p \leq .10$, two-tailed; † $p \leq .10$, one-tailed. Results presented are the estimated coefficients from independent normal linear regressions. Standard errors are in parenthesis. All results are averaged over five multiply imputed datasets. The number of observations is 1096.