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Preparing the Next Generation for Electoral Engagement: Social Studies and the School Context

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The emergence of the common school in the mid-19th century brought with it a tension between the academic preparation of youth for jobs and skills on the one hand and for civic and political participation on the other. Ideally, an effective school will produce academically *and* politically well-prepared individuals; however, educational policies and political pressures often shift the balance away from the civic and towards the academic (Levine et al. 2008). Accountability policies such as No Child Left Behind (U.S. Department of Education 2001) which emphasize reading and mathematics performance over other content areas reinforce this imbalance. In an era of unprecedented testing and measurement of school and student outcomes, it may be useful to reconsider the other, original aim of schools and schooling. Specifically, we ask, what can schools do to prepare students for electoral engagement, a key dimension of political participation, in civic society?

As public institutions, U.S. schools prepare youth for civic participation in general, and voting in particular (Callahan et al. 2008; Cremin 1951; Tyack 2003). With this in mind, we explore the interplay of individual and institutional factors in shaping youths' political development. We take into account both academic coursework and the school environment in the modern high school as they shape youths' future political involvement. Students in schools are educated via both traditional coursework and informal social processes. In addition, adolescents begin to transition into young adulthood within the larger social and academic contexts of the school. The school context provides the lens through which individual experiences and achievements are filtered. Despite the potential of school context to shape civic involvement, relatively little research regarding political engagement in young adulthood explores the role of the high school environment. It is this need to explore the interaction between individual characteristics and institutional contexts that drives our study.

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In addition to the social studies courses that adolescents take in high school and their social and civic experiences, we investigate the effects of the greater school context as measured by the sense of social connection, social studies achievement and parental resources of the student body, on future political involvement as measured by voting and voter registration in early adulthood.

District and school level educators and administrators must continuously monitor program offerings and efficacy as a means of ensuring efficient program delivery. Our focus in this manuscript is to explore social studies program efficacy in a meaningful way for those involved. We address the concerns of administrators, policy makers, and educators alike by considering the effects of multiple school-level factors—academic, social, and structural—on young adults' electoral engagement. In other words, we consider the effect of high schools' social studies programs and social environments, above and beyond individual factors, on the political development of the next generation of citizens.

Producing Political Engagement: Schools, Social Studies Education and Social Connection

Arguably, U.S. schools are designed to educate students in the academic sense, developing literacies in languages, mathematics and the sciences (Goodlad 1984; Weber 1946). Equally important to our democratic society, however, is the role of schools in the civic education of students; schools prepare students to be active participants in a democracy (Dewey 1900; Durkheim 1977). This is especially critical in a society concerned about growing political apathy across all sectors, but specifically among youth (Putnam 1995; 2000). Dewey and other founding architects of the U.S. schools recognized the promise of the educational system to shape our citizenry; however, relatively little attention has been paid to the school-level factors that may influence the future political engagement of our youth.

School Context: Social Studies Program Effectiveness and Offerings

The high school curriculum encompasses the academic as well as the civic preparation of American youth via a wide range of coursework. High school social studies programs aim not only to teach students basic civic knowledge (Niemi and Junn 1998; Sherrod et al. 2002) but also to prepare them to participate in their communities as young adults by voting and engaging in other civic activities (Galston 2004). Prior research links students' social studies course-taking to voting and registering to vote as young adults among immigrant youth (Callahan et al. 2008). How the curriculum is designed to address these goals is of course important as well; in particular, service learning and learning about problems in the community have been shown to shape future political engagement among high school students (Kahne et al. 2006). The quantity of social studies courses offered and taken, and the quality of student performance in those courses likely varies across schools and across districts.

Social studies performance in particular (Atherton 2000; Chaffee 2000) and academic achievement in general (Nie et al. 1996) have been shown to result in heightened civic awareness. It is this development of civic understanding which in turn influences civic

participation (Niemi and Junn 1998). The IEA Civic Education study which includes over 140,000 14-year-old youth in 28 countries, explores the relationship between the social studies classroom and students' reported intent to participate in civic processes as adults (Torney-Purta et al. 2001). Taking into account the potential role of school context, Torney-Purta (2002) also finds that academic aspirations at the school, the degree to which other students in the school plan to pursue higher education, also contributes to the development of adolescents' civic knowledge. Taken together, these findings suggest a need to explore the connection between school context and the social studies curriculum in shaping young adult electoral engagement. The social studies context of the school then may prove key to the development of political behaviors in young adulthood; holding individual attributes constant, does peers' social studies achievement shape future political behaviors? In the present study, we explore young adults' next steps into active citizenry, namely voting and registering to vote. We model whether social studies course taking and performance at the school level affect electoral engagement during young adulthood net of an individual's own attributes.

The wide range of racial, ethnic and socio-economic diversity in U.S. schools' results in disparate allocation of resources (Cosentino de Cohen et al. 2005). The result of this disparity in resource allocation may be evidenced by what has been termed the 'civic opportunity gap' in high school (Kahne and Middaugh 2008). Differences in the number of courses offered to students in well-funded, well-resourced schools compared to those in schools with few resources suggests a root source of inequity in both the opportunity to develop civic knowledge and understanding and the obstacles that may inhibit the development of such understanding (Atkins and Hart 2003). The allocation of civic opportunity, or lack thereof at the high school level, may be evidenced via the social studies press of a school. Social studies press refers to the climate of the school and the orientation inherent in an emphasis on this type of content. In this study we measure it by aggregate levels of the amount of social studies taken by students and the grades they earn in the subjects, both of which, we argue, tap civic awareness and engagement during adolescence. Attention to the social studies press within a school, to peers' social studies performance, may clarify how schools with limited resources might begin to address if not narrow the existing gap in civic development.

The variation in enrollment and opportunity evident across U.S. schools suggests the potential for variation in social studies course taking and student performance. Social studies achievement and coursework contribute to adolescents' political knowledge, which in turn predicts voting and other political behaviors during young adulthood (Sherrod 2003). The breadth of social studies courses at the school, the frequency with which students enroll, and student performance in these courses may well shape students' future electoral engagement.

A precursor to adult society, the high school provides a context within which adolescents begin to develop a sense of belonging to and participating in a community outside the home. In addition, social studies program effectiveness as an element of school context contributes to students' development as participating citizens in U.S. society. The social context of the school may influence students' civic behaviors and choices in young adulthood. While adult social connection to community influences political participation (Putnam 2000), the

relationship between adolescents' social connection to their school and future electoral engagement remains relatively less well understood. The question for educators and administrators, then, is whether the social studies press of the school influences future electoral engagement above and beyond an individual's own involvement.

School Context: Peers' Social Connection and Parental Resources

Although we know that school context affects students' academic outcomes, often measured by math and reading performance (Entwisle and Alexander 1992; Gamoran 1987; Pong 1998), we know much less about how a school's structure and informal social relationships may influence civic outcomes. Scholars have found that the neighborhood context is linked to parent education level, socioeconomic status and other indicators of young adult electoral engagement; in fact coming of age in a neighborhood context with limited resources may in fact preclude the development of civic competence and knowledge (Atkins and Hart 2003; Hart and Atkins 2002). As adolescents spend the bulk of their waking hours in schools, school environment may potentially outweigh neighborhood context in shaping future political engagement. It is within the context of the school that adolescents begin to develop a sense of community and social connection outside of the home and the family; among adults, such connection to community drives civic engagement (Putnam 2000). Individual social and civic engagement influences future political engagement, specifically voting and registering to vote (Smith 1999), yet we understand little about how the level of social connection at a given school might influence young adults' electoral engagement in particular. The social context of the school and an individual's interaction with that greater social climate merit exploration with respect to their potential role in shaping the future of our civic society.

One's integration within that social context and an awareness of one's responsibility to the larger community can be measured via voluntary engagement in service or volunteer activities. At the individual level, adolescents' participation in service-oriented voluntary activities has been found to influence political socialization in young adulthood, both directly and indirectly when mediated by volunteering during young adulthood (Hanks 1981). This effect of volunteering holds regardless of whether the service-oriented voluntary activity is required or not (McFarland and Thomas 2006; Schmidt et al. 2007). In fact, Niemi, Hepburn, and Chapman (2000) illustrate the relationship between community service as a form of volunteering and the formation of political and civic knowledge, critical for the development of an active citizenry. However, the fact remains that little work explores whether peers' involvement in such activities shapes an individual's future political engagement.

In addition, although an individual's parental education level has been found to be related to subsequent political participation (Brady et al. 1995), few studies have addressed how the overall level of parent education at a school may affect students' civic outcomes. Adolescence occurs at a point in the life course when individuals begin to branch out beyond the family, tapping into resources such as their peers' parents and other adults as models, mentors and guides as they begin to take on the responsibilities of young adulthood (Carbonaro 1998). Little work has explored whether parental resources, specifically parent

education levels, at the school directly or indirectly shape adolescents' political development.

Ultimately, we know little about the influence of the informal aspects of the school context – as measured by peers' social connection and parental resources—on the civic and political development of today's youth. Prior research indicates that on the individual level, and even at the neighborhood level, these factors shape political growth and development, however we are interested in how schools might shape individuals as part of a larger context. We argue it is important to consider school context as a whole to understand how high schools shape students' young adult electoral engagement.

Purpose of the Present Study

We explore the role of schools in the development of an active citizenry to address the question of how schools might make a difference. Our analyses hone in on factors of concern to superintendents and policy makers, namely the formal and informal aspects of schooling as measured by individual and collective social studies achievement and social connection, and their relationships to young adults' future electoral engagement. For example, we are able to distinguish between the number of social studies courses an individual student took and the average number of such courses taken by other students in the same school. The former is a measure of an individual student's engagement in learning social studies, while the latter is an indicator of the social studies press of the school. Likewise, we distinguish between an individual's social connection and peers' aggregate social connection in the school, again accounting for parental resources. Without losing the individual student perspective, we carefully examine how school context may shape future electoral engagement.

Research Questions

Our research questions explore the civic goals of schools, recognizing their place alongside schools' academic preparation foci. In the following sections we attempt to address the concerns of administrators and educators who ask, "*What can schools do to develop an active citizenry?*" Our unique data allow us to estimate the effects of both formal academic and informal social experiences of students *within* the unique contexts of their schools. Specifically, we pose the following research questions:

1. *Formal School Context: Social Studies Press and Achievement* Does an individual's high school social studies achievement (measured by course-taking and performance (GPA)), have a direct effect on his or her future electoral engagement? Does the effectiveness of a school's social studies program (measured by aggregate social studies course taking and GPA), contribute to young adults' electoral engagement? Is the effect of individual social studies achievement on future electoral engagement attenuated by the social studies press of the school? For example, do some schools enhance the effect of individual social studies achievement on later adult electoral engagement?
2. *Informal School Context: Social Connection*: Does an individual adolescent's level of social connection during high school, as measured by a sense of belonging and

community service, shape his or her future electoral engagement? Does the collective sense of peers' social connection during high school shape electoral engagement in young adulthood? Are the effects of individual students' social connection and community service experiences conditioned by the collective sense of connection in the school they attend? For example, do some schools enhance or attenuate the effects of these social connections on later adult political activity?

Methods

Data and Sample

This study uses data from the Adolescent Health and Academic Achievement Study (AHAA) and its partner study, the National Longitudinal Study of Adolescent Health (Add Health), to explore the effects of high school academic and civic training, as well as social integration on young adult voting behaviors. Add Health is a nationally representative longitudinal data set of over 20,000 students in a sample of 81 U.S. high schools, each with one feeder school sampled proportional to its representation of the high school's student body (Bearman et al. 1997). An In-School survey was administered to all students attending school in spring of the 1994–1995 academic year. The survey sample was augmented using school records to draw a representative sample of boys and girls (in equal numbers) in grades 7–12 to participate in the Add Health longitudinal study. Three waves of survey data were collected in 1994–1995 (Wave I), 1996 (Wave II), and 2000–2001 (Wave III); the Wave III sample includes 15,163 young adults.

In 2002–2003, when almost all Add Health respondents were no longer attending high school, the AHAA study collected high school transcripts and other education data from the last high school that Wave III Add Health respondents attended (Muller et al. 2007). Transcripts were collected and coded for 12,250 Wave III respondents, over 80% of the original Wave III sample. Each course that appeared on the transcript was coded with a standard coding scheme, the Classification System for Secondary Courses (CSSC), using information provided by the schools about course offerings. Grades were coded in a standard format and the courses were assigned Carnegie Units for comparability across schools. In order to ensure that Wave I survey information regarding the participants' attachment to school would coincide with the school where high school coursework was taken, we limited the sample to students enrolled in a 9th to 12th grade school in Wave I with a valid sample weight; these respondents then ranged from three to six years beyond 12th grade in Wave III, with the youngest being 18 years old. All analyses are weighted using the longitudinal weight designed for the AHAA study. In addition, our models are limited to Add Health/AHAA respondents who reported being citizens in Wave III because voting behavior outcomes are only available for this group, resulting in our final analytic sample (N=9051).

Student-level Variables

Our dependent variable is a multinomial measure of two of the major forms of *electoral engagement* (registering to vote and voting) for young adults in their late teens and early 20s. The variable indicates whether in Wave III respondents neither registered nor voted (0),

registered, but did not vote (1), or registered and voted in the presidential election in 2000 (2). For these analyses, we classified all participants who reported voting as having been registered. Overall, 77% of respondents reported having at least registered and 48% of respondents reported having both registered and voted in the 2000 presidential election.

We also include standard measures of participants' *social backgrounds* – age at Wave I, gender, race/ethnicity, verbal ability, immigrant status, and religious service attendance as an adolescent. The highest level of education completed by a parent, using parents' reports when available and supplementing them with student reports when needed and possible, is our proxy for socioeconomic status. Verbal ability was measured at Wave I using Add Health's abbreviated version of the Peabody Vocabulary Test (AH-PVT). We also include an indicator for whether the participant reported attending religious services in the 12 months preceding the Wave I survey during high school.

Two aspects of participants' *high school experiences* are reflected in these analyses—academic indicators obtained from high school transcripts and social indicators from surveys. The key academic indicators of interest here are the number of credits earned in social studies courses and the average grade earned in those courses. We include history, government, geography, political science, sociology/psychology and international relations coursework under the social studies label. On average, participants earned 3.48 Carnegie unitsⁱ in social studies and a grade point average of 2.47 on a 4-point scale in those courses, with 4 being the highest level of academic achievement. Earlier, we considered including participants' overall grades or math grades in these analyses; however, preliminary analyses indicated that social studies grades in particular most strongly predict electoral engagementⁱⁱ. We use the highest level math course taken during high school as an indicator of participants' general academic status in their school (Adelman 2004), coded as a continuous variable ranging from 1 (remedial and basic math) to 9 (Calculus), with a mean of 6.12 (Algebra 2). The highly sequential structure of math means that students' schedules are often structured around their course placement in this subject (Hallinan 1994; Riehl et al. 1999; Stevenson et al. 1994).

We include two indicators of participants' social connection during adolescence. The first is a composite variable derived from three Likert-scale questions on the Wave 1 survey related to feeling socially connected to the school ranging from 1=strongly disagree to 5=strongly agree. The measures include: *I feel close to people at this school*; *I feel happy to be at this school*; *I feel like I am a part of this school*. The resulting variable ranges from 1 to 5 with a mean of 3.73 ($\alpha=0.775$). The second indicator is a variable obtained from participants' reports on the Wave III survey of whether, during adolescence, they “regularly participate(d) in volunteer or community service work”ⁱⁱⁱ. In the final analytic sample (N=9051) of citizens in Wave III with valid transcript weights, 45% reported participating in some form of community service as adolescents. Although reported retrospectively, this dichotomous

ⁱOne Carnegie unit is equivalent to three hours of instruction per week for an academic year.

ⁱⁱMathematics grades were included in preliminary analyses, but were dropped when statistically significant positive coefficients for this variable became non-significant and sometimes negative after social studies grades were added to the model.

ⁱⁱⁱThe nature of the survey does not allow identification of which community service activities were undertaken by the participant's own initiative and which were undertaken as a part of activities sponsored by the school or another organization.

variable (1=volunteered regularly during adolescence) is a viable indicator of community service during adolescence because it spans the high school period.

School-level Variables

Our models take key school-level characteristics into account. School sector is a dichotomous variable indicating that the school is private. We also include aggregates of student characteristics at the school level: average parent education, student social connection and social studies performance (GPA). These unique aggregate measures are made possible because the Add Health dataset includes large, representative samples of students in schools (Muller et al., 2007). Table 1 shows the means and standard deviations of school-level variables.

Analytical Approach

We use Hierarchical Linear Modeling (HLM) to simultaneously estimate the effects of individual students' characteristics (Level 1) and those of the schools they attend (Level 2). The advantage of the HLM approach is that it takes into account the clustering of students in schools to provide accurate estimates of both the individual and school-level factors that predict the outcome. In addition, HLM facilitates modeling variation in the effects of individual factors across schools with different characteristics (known as cross-level interaction effects).

Because the dependent variable is multinomial, we predict the likelihood that a student would have each of the three possible outcomes using Hierarchical Generalized Linear Modeling (HGLM) for these analyses (Raudenbush and Bryk 2002). While the three possible outcomes are nested (i.e., a participant was assumed to have registered in order to have voted), preliminary analyses indicated that these two forms of electoral participation are not additive in the sense that factors that influence the likelihood of registering are not the same as those associated with voting once having registered. This pattern most likely reflects that registering is relatively passive (e.g., filling out a form when obtaining a driver's license) while voting involves more purposive action by requiring a trip to the polling place on Election Day and having previously registered. Thus, rather than ordinal model that assumes the same factors influence the transition from one form to the next, we use a multinomial model in order to examine simultaneously the influences of individual and school factors on each form of the outcome^{iv}.

The models we estimated compare the likelihood of each of the two forms of electoral engagement – registering to vote, but not voting (1) and registering to vote and voting (2) – to neither voting, nor registering to vote (0). At Level 1, the coefficients are similar to coefficients from a traditional single-level multinomial logistic regression, but in essence are estimated within each school^v. As all independent variables are grand mean centered, the intercept can be interpreted as the expected log-odds of a given outcome (i.e., registering

^{iv}Another approach we considered was conducting two sequential analyses – the first for registering to vote versus not registering and, after deleting those who did not register, between voting and not voting. However, the changes in sample size and composition between the two analyses are particularly problematic for HLM.

^vThe models are available in equation format from the authors.

only or registering and voting) relative to neither registering nor voting for the average respondent in the average school. The coefficients for the Level 1 variables are estimates of the average differences across schools in log-odds among students within the same school; the coefficients for the Level 2 variables estimate how the Level 1 coefficients are related to characteristics of schools. For example, we examine whether the influence of an adolescent's own feeling of connectedness to their school on later electoral engagement was stronger or weaker in schools with higher levels of social connection (known as cross-level interactions). As with a traditional single-level analysis, the log-odds can be transformed into estimated probabilities of an outcome for a particular type of student.

These analyses were conducted using a series of nested models. First, we developed the student-level model by entering indicators of individuals' social backgrounds, then academic experiences in high school, and finally, social connections during high school. We then estimated two school-level models. In the initial school-level model, we examined overall differences between schools by modeling differences in the intercepts. In the final model, we estimated cross-level interactions to test whether the effects of individuals' social connections or social studies grades differed by attributes of the school context.

Results

Individual Factors and Electoral Engagement

Table 2 displays the coefficients and standard errors for the multinomial models predicting the log-odds of registering but not voting and the log-odds of having registered and voted relative to neither registering nor voting. The intercepts in Model 1 indicate that, for the average adolescent in the average school, the log-odds of voting (.772) were greater than the log-odds of only registering to vote (.360) relative to neither voting nor registering (.772-.360=.421, with $\chi^2 = 76.395$, $p < .001$). Using these coefficients, we can estimate that the average adolescent had a 47% likelihood of voting, 31% of only registering, and 22% of not registering (Figure 1)^{vi}. While adolescents who registered were also likely to exercise that right to vote, we find that different factors influence the likelihood of each form of electoral engagement.

Model 1 also displays the effects of social background characteristics related to electoral engagement. We find no significant differences, controlling for other individual background factors, in the likelihood of either registering or voting between genders or when comparing whites to Latinos and other race/ethnic groups. Both the average white and Latino adolescents had estimated likelihoods of close to 50% for voting, 33% for only registering, and 16% for not registering. In contrast, the log-odds of voting to neither registering nor voting were lower for Asian Americans (who had an estimated likelihood of 44.6% for voting) and higher for African Americans (who had an estimated likelihood of 54.3% for voting) compared to whites. While not statistically significant, the coefficients in Model 1

^{vi}When calculating estimated probabilities of a given outcome from coefficients for a multinomial analysis, the formula takes into account the odds of registering and voting relative to not registering and the odds of only registering, but not voting, relative to not registering. For example, the probability for registering and voting given here was calculated as $.47 = [\exp(.772)/(1+\exp(.772)+\exp(.360))]$. The probability of not registering was obtained by subtracting from 1 the probability of registering, but not voting and both voting and registering.

for only registering versus not registering indicate similar trends, with African Americans more likely and Asian Americans less likely to only register than not register when compared to whites. Taken together with the log-odds of voting, the likelihood of neither registering nor voting was lowest for African Americans (9.8%) and highest for Asian Americans (25.8%). These results suggest that Asian Americans are less likely than other groups to be involved in either form of electoral engagement, while African Americans are more likely to not only participate, but also to participate to the fullest extent by voting.

The coefficients in Model 1 also show that older respondents, those with higher verbal ability, and those who attended church as teenagers were more likely to both only register and to vote than do neither. Similarly, parents' education level positively predicts the likelihood of both only registering to vote and voting. However, the size of the statistically significant coefficient for the interaction between parents' education and immigrant status indicates that parents' education is not associated with voting or only registering to vote among the children of immigrants. Figure 2 illustrates these relationships. Among children of U.S. born parents (top panel), those whose parents did not graduate from high school were almost twice as likely to not have registered to vote as those whose parents held graduate degrees (39% and 17% respectively). Further, while the likelihood of registering but not voting remained fairly constant across parent education levels^{vii}, the likelihood of voting increased dramatically as parents' education rose, from about 26% for those whose parents did not graduate from high school to 49% for those whose parents had graduate degrees. In contrast, the bottom panel of Figure 2 shows that differences in any form of electoral engagement across parental education levels for first- and second-generation children of immigrant parents were relatively small (less than 12%). This lack of variation suggests that even once registered, these young adults were not more likely to vote when their parents had relatively high levels of education. Parental education level in the political engagement process works somewhat differently for the children of U.S.-born parents compared to the children of immigrant parents.

Returning to Table 2, Model 2 expands upon the story by examining how formal schooling during adolescence might influence electoral engagement in early adulthood. We find that the highest level math course taken, our indicator of the academic rigor of the student's high school program, and social studies GPA both positively predict only registering to vote and voting. However, the larger-sized coefficient for social studies GPA predicting "registered and voted" relative to those for "registered, did not vote" ($.341 - .138 = .203$, with $\chi^2 = 18.983$, $p < .001$) suggests that academic experiences may play an especially strong role in shaping young adults' voting behavior. In other words, an average student who earned mostly As in her social studies courses would be 12% more likely to vote and 8% less likely to *not* register than her otherwise identical peer who earned Cs in social studies. Thus, the decrease in the likelihood of *not* registering is due to an increase in both the likelihood of registering and the likelihood of voting. These results illustrate the role that formal educational processes play in shaping our citizenry; the benefits of higher levels of

^{vii}The positive coefficient indicating increasing odds of registering relative to not registering reflects the decreasing probability of neither registering nor voting among parents with higher levels of education among non-immigrants.

adolescent academic achievement are expressed in greater electoral engagement among young adults.

Our final student-level model takes into account the influence of informal educational processes as reflected by adolescents' feeling of school social connection and community service involvement. Model 3 indicates that an adolescent's social connection to the school positively predicts the likelihood of voting as a young adult, but not necessarily only voter registration. As with social studies credits earned, this pattern suggests that adolescents who felt connected to a major institution in their lives are more likely not only to register, but also to vote as young adults. In contrast, community service during adolescence positively relates to both voting and only registering to vote. Model 3 shows that adolescents who performed community service were not only more likely to only register to vote than not, but they were also more likely to actually vote. However, since the coefficient for "voted" was larger than that for "registered, did not vote" (.675-.473 = .202, with $\chi^2 = 6.307$, $p < .05$), the ratio of voters to non-registrants increased more than the ratio of registrants to non-registrants when comparing adolescents who did and did not perform community service. Again, comparing two otherwise average students, the student who did not perform community service had a greater likelihood of not registering (27%) and a lesser likelihood of voting (42%) than her classmate who did report performing community service (not registering 17%; voting 52%). These results highlight the potential impact of the non-academic functions of schooling on the integration of young adults into our political system. It is possible that an adolescent who experiences a stronger connection to school carries that connection over to other societal institutions in young adulthood, notably the political realm.

In addition, our analyses highlight how both the formal and informal realm of schooling may mediate the influence of social background on electoral engagement. For example, comparing the coefficients from Model 1 to Model 3 suggests that schooling—both the formal and informal aspects—partially explains differences in both forms of electoral engagement related to religious participation, verbal ability, parents' education and immigrant status. In contrast, however, the coefficients for race or ethnicity essentially did not change, suggesting that academic achievement and preparation are independent of the overall propensity of different racial groups to be politically active.

School Factors Influencing Electoral Engagement

In addition to the role individuals' formal and informal schooling experiences may play in promoting electoral engagement, we are interested in the potential influence of the school context. In Table 3, Model 4 shows the overall differences in young adults' likelihood of registering and voting by high school sector, socioeconomic composition, social studies performance, and school context. Controlling for individual differences, young adults who attended private schools were less likely to participate in either form of electoral engagement, net of individual factors. Comparing two average adolescents in otherwise similar schools, the one attending a public school would have a likelihood of 51% of voting and 36% of only registering, compared to 48% and 31% respectively for a private school student. However, adolescents who attended schools with higher average levels of parental education were more likely to only register and to vote relative to doing neither. This result

suggests that higher levels of parental education at a school benefit not only parents' own children, but also their schoolmates even when an individual student's parents have lower levels of education.

In addition to a student's individual social connection, the aggregate social connection of schoolmates to the school was positively related to young adults' electoral engagement. An otherwise average adolescent who attended a school with high levels of connection (defined as one standard deviation above the mean for our measure of school connection) had a likelihood of about 53% for voting, 30% for only registering and 17% for not registering. In contrast, an otherwise identical adolescent in a school with low levels of connection (one standard deviation below the mean) had a likelihood of 43% for voting, 33% for registering, and 24% for neither. These differences in the likelihood of electoral engagement are slightly larger than those between highly and weakly connected (one standard deviation above and below the mean for individual social connection) average adolescents in an average school. These results highlight the benefits of creating a communal sense of connection that can promote electoral engagement in young adulthood.

In Model 5, we examine whether the effects of two key individual factors – social studies GPA and social connection – may be influenced by school contexts reflected in aggregate measures of these two variables. As seen earlier, the results from this model indicate that adolescents who had higher GPAs in their social studies courses were more likely to be politically active, especially voting, as young adults. However, the negative cross-level interaction coefficients indicate that the differences between adolescents with higher and lower grades tended to be smaller in schools with higher levels of aggregate social connection. Figure 3 illustrates this cross-level interaction effect through estimated likelihoods of electoral engagement for students who differ in only their social studies grades for two types of schools. The top panel estimates are for a school with average levels of social connection one standard deviation above the mean; the bottom panel estimates are for a school with average levels of social connection one standard deviation below the mean. In a high school with high levels of connectedness, an otherwise average adolescent who received mostly As in social studies courses would have a likelihood of 59% of voting and 25% of only registering compared to 45% and 37% respectively for an adolescent who received mostly Ds. In a school with low levels of connectedness, the adolescent who received mostly As would have a slightly lower likelihood of voting (54%) and higher likelihood of only registering (31%). However, in this school, the adolescent who received mostly Ds would have a likelihood of only 34% of voting and, most striking, a probability of 34% of neither voting nor registering. Thus, high performing students' electoral engagement is not particularly sensitive to school contexts, while being in a school with weak shared sense of belonging tends to dramatically reduce the likelihood of voting as young adults among low performing students.

Similarly, the results in Model 5 indicate that the effects on later electoral engagement of feeling socially connected in high schools was weaker among adolescents who attended high schools with higher average social studies grades. Figure 4 illustrates this cross-level interaction effect through estimated likelihoods of electoral engagement for two types of schools – the top panel estimates are for a school with average social studies GPAs one

standard deviation above the mean; the bottom panel, for a school with average social studies GPAs one standard deviation below the mean. The figure shows that, in schools with high social studies GPAs, the likelihood of voting changes only 10% between the least and most connected adolescents. In contrast, in schools with lower average social studies grades, the likelihood of voting increases by 26% between the least and most connected adolescents. Similarly, the expected difference in the likelihood of not registering to vote between most and least connected students is merely 3% in the high social studies GPA schools, compared to almost 22% in low social studies GPA schools. Thus, although the aggregate measure of school social studies GPA does not predict voting or voter registration directly, we find that it moderates the effects of an individual student's own sense of school connection on electoral engagement. In other words, the estimated effects of a student's sense of connection to the school on registering to vote or voting depends on the academic performance in social studies of the other students in the school.

A different pattern is found for the influence of communal sense of school connection, which both directly affects electoral engagement in young adulthood and amplifies the influence of individuals' own sense of connection. As shown in Figure 5, we estimate that in the high social connection school (one standard deviation above the mean), the least connected adolescents were more than 2.4 times more likely to fail to register to vote, much less vote than the most connected adolescents. In addition, according to Figure 5 we would expect the rate of voting to increase by 71% between the least and most connected adolescents. Thus, an isolated student in a school with high levels of social connection is much less likely to register or to vote than he or she would be in a less socially connected school.

In summary, while the electoral engagement of young adults at the beginning of the 21st Century was influenced by their social backgrounds, select high school experiences also shaped the likelihoods of registering to vote and voting. However, the influence of adolescents' academic success in their social studies courses and sense of connection to their schools were both affected by the type of school they attended. In schools with high levels of social studies performance/ press, individuals' level of social connection mattered *less* in predicting future voting and voter registration than in schools with low levels of performance. In schools with greater communal sense of belonging, individuals' social studies grades mattered *less* and individuals' sense of belonging matter *more* in predicting these forms of electoral engagement than in schools with lower levels of social connection.

Conclusions and Implications

While individual student performance and connection shape young adult electoral engagement, the results from this study suggest that students' experiences in high school shape their political behavior as young adults. Where other studies have provided evidence consistent with this claim, our results emphasize that the social and academic *context* of the high school, and how students experience it, may make a difference. We find both significant direct effects of peers' social connection and significant indirect effects of peers' social studies performance via students' individual characteristics on young adult electoral engagement.

School Context: Peers' Social Connection

Perhaps our most striking finding is that the estimated positive effect of peers' connection to the high school on electoral engagement during young adulthood. As the level of social connection at the school increases, so does an individual's likelihood of participating politically during young adulthood. This finding is net of strong background controls. In fact, we find that the effect of the student's own sense of school connection varies according to the level social connection at the school. The school context measure of peers' social connection appears to intensify the effect of an individual student's feeling of connection. Future qualitative data collection and analysis might build on these findings to more closely explore the processes at play in schools with relatively high and relatively low levels of aggregate social connection. Such research might contribute to an improved understanding of how, as social institutions, schools might facilitate individual social connection.

Specifically, we find that adolescents who feel more connected to their high schools are more likely to vote as young adults, and that this relationship is intensified for students who attended high schools where the average level of connection was higher. Furthermore, connected students attending those schools were also more likely to register to vote. It is possible that this connection during adolescence—the connection to a formal institution (e.g., the school) — encourages future civic connection as well. It is even possible that the stronger high school connectedness creates network-style relationships that endure into early adulthood, and that these relationships encourage political involvement. While investigating the exact mechanism is beyond the scope of this study, these results suggest an important role of high schools in preparing adolescents for adulthood.

School Context: Social Studies Program Performance

Interestingly, while we found no overall effects of higher average social studies grades in schools, we do find that the effect of an individual's social connection to the school on voting and registration is weaker in these schools. In other words, in schools with higher average social studies GPAs, an individual student's feeling of connection to the school matters less than in schools with lower average social studies GPAs. An isolated or unconnected adolescent is more likely to register and to vote in young adulthood if s/he attends a high school with higher average social studies GPA. Peers' social studies grades here buffer against the negative effect of low individual social connection, and improve the likelihood of electoral engagement. If the average social studies GPA in the school is somehow related to the "academic press" of the social studies program, then this may suggest that it is another aspect of the school's context that promotes early adult electoral engagement.

Related to the overall academic press of the school, we also found that schools in which parents have higher levels of education appear to produce students who are more likely to register to vote and to vote in early adulthood, regardless of the student's own family background. It may be that there is a greater emphasis on political engagement and responsibility in these schools. Alternatively, there may be another, unmeasured factor related to access to information or curriculum that shapes political behavior. However, it is important to note that these estimated effects are independent of the individual student's

academic performance and family background. Thus, future research might explore how schools' political and civic contexts differ depending on parental social class.

Individual Social Studies Performance

Although our primary interest is in how schools shape early adult political behavior, it is worthwhile to note that we also find that adolescents themselves differ in the likelihood that they will vote and register. Notably, we find that students who earn higher social studies GPAs are more likely to participate in the political system through voting and registering to vote in young adulthood. One might argue that via social studies GPA we are actually measuring students who are stronger or more focused academically; however, as noted earlier, preliminary analyses contrasted overall and math GPA with social studies GPA. Of the three academic indicators, social studies grades were by far the strongest predictor of future electoral engagement. This and the estimated effect of adolescent social studies GPA on future electoral engagement would seem to suggest then that something in particular about learning in social studies coursework links directly to political behaviors in young adulthood.

Implications for Policy and Practice

Our findings regarding the influence of school context on voting and voter registration inform the development of programs and activities designed by educators and administrators to increase student involvement with and connection to the school. Beyond the benefit of individual and school social connection on overall academic achievement (Brown and Theobald 1998), the estimated effect on electoral engagement suggests that even in an era of accountability, schools continue to prepare citizen voters.

Learning more about social studies and probably putting forth effort in the classes, appears to encourage electoral engagement. This is consistent with previous research showing that the effect of civic knowledge obtained during adolescence is related to later electoral engagement (Galston 2001; Youniss et al. 1997). Social studies engagement appears to contribute to future electoral engagement not only through course-taking (Callahan et al. 2008) but also through performance in these courses, and peers' performance in these courses.

Educators and policy makers alike must not only address the effectiveness of our schools, but also their relevance in our changing society. Our findings suggest that even, if not especially, during an era of heightened accountability focused primarily on reading and mathematics, the importance of schools in developing citizens of the future does not wane. Schools can contribute to students' future electoral engagement, both through promoting a positive social climate and by getting them to engage in social studies and perform well in classes. Although it may be that students drawn to social studies might also be inherently more likely to vote and to register, we argue that by delivering engaging social studies programs, schools and educators can work to improve the electoral engagement of *all* students in the coming generation. Policy makers interested in improving the effectiveness of their districts and local communities in producing electorally engaged young adults would be advised to support strong social studies programs, even when the tide pulls against them.

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Figure 1.

Estimated rates of electoral engagement: Overall and by race/ethnicity, controlling for social backgrounds (Model 1).

Figure 2.
Estimated effects of parent education on rates of electoral engagement: Children of U.S.-born parents and children of immigrants (Model 1)

Figure 3.

Estimated effects of individual social studies GPA on rates of electoral engagement: Schools with high and low levels of peer social connection to school (Model 5).

Figure 4.

Estimated effects of individual social connection on rates of electoral engagement: Schools with high and low average social studies GPAs (Model 5)

Figure 5.
Estimated effects of individual social connection to the school on rates of electoral engagement: Schools with high and low levels of peer social connection to the school

Table 1

Sample Means and (Standard Deviations)

Individual Level (N=9051 Young Adults)	
<i>Background Characteristics</i>	
Immigrant	0.200
Female	0.520
Asian	0.080
African American	0.200
Latino	0.150
Other	0.030
Parent Education	3.570 (1.710)
Age at Wave I	16.130 (1.470)
Add Health PVT Score	102.410 (13.440)
Non-English Speaker, Wave I	0.090
Religious Service Attendance	0.770
<i>Formal Schooling</i>	
Highest Math Course Taken	6.120 (1.950)
Social Studies Credits	3.480 (1.290)
Social Studies GPA	2.470 (0.970)
<i>Informal Schooling</i>	
Social Connection	3.730 (0.870)
Community Service	0.450
<i>Dependent Variables</i>	
Registered to Vote	0.770
Voted in 2000 Election	0.480
School Level (N=81 Schools)	
Sector (Private)	0.110
<i>Average</i>	
Parent Education Level	3.510 (0.790)
Student School Connection	3.700 (0.180)
Social Studies Credits	3.530 (0.540)
Social Studies GPA	2.500 (0.360)

Table 2

Multinomial Models Predicting Voting and Voter Registration in Young Adulthood

<i>Voted</i>	<i>Student Level Characteristics</i>		
	Model 1	Model 2	Model 3
Intercept	0.772 (0.082) ***	0.789 (0.079) ***	0.832 (0.077) ***
<i>Background</i>			
Immigrant	0.705 (0.223) **	0.458 (0.216) *	0.487 (0.228) *
Female	0.096 (0.083)	-0.062 (0.088)	-0.059 (0.094)
Asian	-0.610 (0.249) *	-0.726 (0.237) **	-0.713 (0.247) **
African American	0.553 (0.148) ***	0.605 (0.146) ***	0.610 (0.150) ***
Latino	-0.147 (0.132)	0.002 (0.133)	0.047 (0.140)
Other	-0.148 (0.223)	-0.043 (0.242)	-0.153 (0.234)
Parent Education	0.295 (0.032) ***	0.229 (0.033) ***	0.219 (0.036) ***
Age at Wave I	0.198 (0.028) ***	0.212 (0.029) ***	0.242 (0.030) ***
Add Health Verbal Ability (PVT)	0.022 (0.004) ***	0.009 (0.004) *	0.010 (0.004) *
Religious Service Attendance	0.562 (0.103) ***	0.430 (0.034) *	0.325 (0.035) ~
Immigrant* Parent Education Level	-0.214 (0.053) ***	-0.193 (0.047) ***	-0.200 (0.050) **
<i>Formal Schooling</i>			
Highest Math Course Taken		0.077 (0.035) *	0.059 (0.035)
Social Studies Credits		0.051 (0.046)	0.047 (0.050)
Social Studies GPA		0.341 (0.069) ***	0.284 (0.071) ***
<i>Informal Schooling</i>			
School Social Connection			0.226 (0.055) ***
Community Service			0.675 (0.104) ***

Registered, did not Vote

Intercept	0.360 (0.066) ***	0.382 (0.064) ***	0.422 (0.064) ***
<i>Background</i>			
Immigrant	0.110 (0.236)	-0.034 (0.225)	0.035 (0.234)

<i>Voted</i>	<i>Student Level Characteristics</i>		
	Model 1	Model 2	Model 3
Female	-0.033 (0.073)	-0.113 (0.075)	-0.126 (0.079)
Asian	-0.398 (0.243)	-0.488 (0.229) *	-0.466 (0.243) ~
African American	0.279 (0.169) ~	0.277 (0.165) ~	0.246 (0.169)
Latino	-0.086 (0.171)	-0.039 (0.162)	-0.025 (0.160)
Other	-0.018 (0.202)	0.088 (0.206)	0.037 (0.210)
Parent Education	0.157 (0.029) ***	0.125 (0.031) ***	0.123 (0.033) ***
Age at Wave 1	0.087 (0.030) **	0.087 (0.031) **	0.105 (0.032) ***
Add Health Verbal Ability (PVT)	0.009 (0.003) **	0.001 (0.003)	0.001 (0.003)
Religious Service Attendance	0.245 (0.088) **	0.182 (0.091) *	0.132 (0.100)
Immigrant * Parent Education Level	-0.075 (0.050)	-0.061 (0.049)	-0.078 (0.053)
<i>Formal Schooling</i>			
Highest Math Course Taken		0.056 (0.026) *	0.047 (0.028) ~
Social Studies Credits		0.028 (0.044)	0.017 (0.047)
Social Studies GPA		0.138 (0.063) *	0.107 (0.064) ~
<i>Informal Schooling</i>			
School Social Connection			0.062 (0.055)
Community Service			0.473 (0.105) ***
<i>Variance Component</i>			
Level 2 Variance	0.591	0.305	0.272
df	80	80	80
X ²	434.422	362.981	312.833

Note: Sample size (N=9051 students in 81 schools). Unstandardized coefficients shown with robust standard errors in parentheses.

~ p 0.10

* p 0.05

** p 0.01

*** p 0.001

Table 3**Multinomial Models Predicting Voting and Voter Registration in Young Adulthood**

<i>Voted</i>	<i>School Effects and Cross-level Interactions</i>	
	Model 4	Model 5
Level 2 Intercept	0.850 (0.069) ***	0.839 (0.071) ***
<i>School level variables</i>		
Private	−0.562 (0.276) *	−0.516 (0.276) ~
School Average Parent Education Level	0.372 (0.100) ***	0.360 (0.101) ***
School Average Social Connection	1.548 (0.495) **	1.439 (0.502) **
School Average Social Studies GPA	−0.221 (0.220)	−0.187 (0.242)
<i>Student level variables</i>		
Immigrant	0.500 (0.229) *	0.497 (0.228) *
Female	−0.062 (0.094)	−0.068 (0.094)
Asian	−0.718 (0.247) **	−0.727 (0.245) **
African American	0.611 (0.147) ***	0.609 (0.146) ***
Latino	0.081 (0.141)	0.078 (0.142)
Other	−0.124 (0.238)	−0.124 (0.239)
Parent Education Level	0.210 (0.037) ***	0.211 (0.036) ***
Age at Wave I	0.238 (0.030) ***	0.237 (0.030) ***
Add Health Verbal Ability (PVT)	0.009 (0.004) *	0.009 (0.004) *
Religious Service Attendance	0.328 (0.113) **	0.328 (0.112) **
Immigrant * Parent Education Level	−0.200 (0.057) ***	−0.200 (0.057) ***
Highest Math Course Taken	0.061 (0.035) ~	0.059 (0.034) ~
Social Studies Credits	0.051 (0.049)	0.055 (0.049)
Social Studies GPA	0.283 (0.071) ***	0.263 (0.070) ***
SS GPA * School Social Connection		−0.707 (0.400) ~
SS GPA * School SS GPA		0.175 (0.188)
Social Connection	0.217 (0.054) ***	0.240 (0.049) ***
Social Connection * School Social Connection		1.138 (0.260) ***
Social Connection * School SS GPA		−0.396 (0.158) *
Community Service	0.671 (0.104) ***	0.674 (0.105) ***
<i>Registered, did not vote</i>		
<i>School level variables</i>		
Level 2 Intercept	0.428 (0.059) ***	0.422 (0.061) ***
<i>School level variables</i>		
Private	−0.635 (0.199) **	−0.582 (0.188) **
School Average Parent Education Level	0.249 (0.083) **	0.232 (0.083) **
School Average Social Connection	0.756 (0.415) ~	0.749 (0.420) ~

<i>Voted</i>	<i>School Effects and Cross-level Interactions</i>	
	Model 4	Model 5
School Average Social Studies GPA	−0.066 (0.179)	−0.071 (0.215)
<i>Student level variables</i>		
Immigrant	0.046 (0.237)	0.025 (0.237)
Female	−0.129 (0.079)	−0.133 (0.079) ~
Asian	−0.451 (0.235) ~	−0.459 (0.231) *
African American	0.250 (0.171)	0.253 (0.171)
Latino	0.009 (0.164)	0.005 (0.163)
Other	0.061 (0.212)	0.063 (0.213)
Parent Education Level	0.118 (0.034) ***	0.119 (0.034) ***
Age at Wave I	0.104 (0.031) ***	0.103 (0.031) ***
Add Health Verbal Ability (PVT)	0.001 (0.003)	0.001 (0.003)
Religious Service Attendance	0.138 (0.100)	0.135 (0.100)
Immigrant * Parent Education Level	−0.073 (0.053)	−0.075 (0.054)
Highest Math Course Taken	0.050 (0.028) ~	0.047 (0.027) ~
Social Studies Credits	0.020 (0.047)	0.021 (0.048)
Social Studies GPA	0.108 (0.064) ~	0.077 (0.059)
SS GPA * School Social Connection		−0.921 (0.343) **
SS GPA * School SS GPA		0.104 (0.184)
Social Connection	0.062 (0.055)	0.096 (0.051) ~
Social Connection * School Social Connection		1.338 (0.295) ***
Social Connection * School SS GPA		−0.297 (0.161) ~
Community Service	0.474 (0.105) ***	0.476 (0.105) ***

Note: Sample size (N=9051 students in 81 schools). Unstandardized coefficients are shown with robust standard errors in parentheses.

~ p 0.10

* p 0.05

** p 0.01

*** p 0.001