

High School Community Service as a Predictor of Adult Voting and Volunteering

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The influences of high school community service participation, extracurricular involvement, and civic knowledge on voting and volunteering in early adulthood were examined using the National Educational Longitudinal Study. The major finding in this study is that both voluntary and school-required community service in high school were strong predictors of adult voting and volunteering. In addition, involvement in high school extracurricular activities was predictive of voting and volunteering. Civic knowledge was related only to voting. The authors consider the findings for their policy relevance and their contributions to theoretical debates.

KEYWORDS: civics, community service, longitudinal, volunteering, voting

Over the past 50 years in the United States, there has been a decline in many important facets of civic participation. Particularly troubling has been the steady decrease in the percentage of adults voting in local and national elections, a trend that has been extensively documented (e.g., Franklin & de Mino, 1998; Putnam, 2000). As the fraction of adults casting ballots becomes ever smaller, political theorists worry that popular commitment to the democratic process and the government it produces will wane. There is genuine concern about the fate of a society in which political cynicism and detachment reign. Although the decline in voting rates has attracted the most attention from political scientists, there are also suggestions in the literature that other forms of contribution to the public good are moving in the same direction. Putnam (2000) has marshaled a wealth of evidence to demonstrate that adults at the end of the 20th century are much less likely to participate in their communities than were adults 50 years earlier. Putnam and others (e.g., Fukuyama, 1995) believe that these declines portend social unrest and economic decline. Compounding anxiety about the future is the fact that withdrawal from civic participation seems increasingly

common in the youngest cohorts of American adults, a trend that suggests that the emaciation of civic life will only worsen in the future.

In this article, we examine the connection of high school experiences to early adulthood civic participation, and we focus particularly on experiences that can be shaped by school policy such as the number of civics courses, community service, and extracurricular participation. Our goal is to provide reasonable estimates of the effects of different policy choices on later civic engagement. Toward this end, we distinguish between voluntary community service and community service that is required by the school, assess the effects of different types of extracurricular activities on later civic participation, and estimate the relation of number of civics courses taken to increases in civics knowledge. Our study builds upon several decades of research that demonstrates that civic knowledge, extracurricular participation in high school, and volunteering are related to civic participation in adulthood (e.g., Delli Carpini & Keeter, 1996; Kirlin, 2003a; Krampen, 2000). However, our investigation is the first to examine all of these qualities simultaneously, thus allowing an assessment of the relative importance of these qualities on civic engagement. Moreover, because our study uses data from the 1988 National Educational Longitudinal Study (NELS:88), we were able to link high school experiences to adult civic participation measured 8 years later.

The Components of Civic Engagement

Civic engagement has many facets. In the United States, as noted earlier, *voting* is often considered to be the most important of civic duties, and voting, as well as other roles in the electoral process, are frequently viewed as core components of political participation (e.g., Conway, 2000). Political scientists and sociologists have also emphasized the importance of *volunteer community service* as essential for the well-being of civic life in the United States (e.g., Putnam, 2000). In this study, we aim to assess the relation of high school characteristics on voting in local and presidential elections and on two types of community service, all measured in early adulthood.

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The Foundation for Adult Civic Engagement

Three qualities of high school students, each potentially the target for policy and educational intervention, may contribute to civic participation in early adulthood. We review each of these qualities below.

Civic knowledge. Civic knowledge includes information on government functioning, current political issues, and community needs. Such information can be obtained through interactions at home and with friends, participation in community service, reading newspapers and magazines, listening to news on the radio or television, and courses taught in school. As Niemi and Junn (1998) pointed out, "Political knowledge has frequently been considered one of the most important qualifications for self-governance" (p. 1).

Research consistently demonstrates that civic knowledge is related to civic participation (for a review, see Galston, 2001). For example, using data from the National Election Studies (NES), Delli Carpini and Keeter (1996) found that 90% of citizens in the top decile of political knowledge voted in the 1988 presidential election, whereas only 20% of the least knowledgeable individuals (bottom decile) went to the polls. This trend held up even after controlling for demographic factors, efficacy, and political engagement.

If civic knowledge is predictive of voting, then a reasonable hypothesis is that schools can contribute to civic participation by offering civics classes in which students acquire this kind of knowledge. Surprisingly, however, there is little compelling evidence for this hypothesis. For example, Niemi and Junn (1998) analyzed data from the 1988 National Assessment of Educational Progress Civics Assessment. They examined the kinds of civic knowledge high school students retained, the type and structure of civics courses they took, and the factors that were related to their political knowledge. Although Niemi and Junn succeeded in demonstrating that political knowledge is higher among students who had extensive course work in civics than among those who had fewer courses, they also found that the relation was extraordinarily weak: The number of civics courses and the recency of enrollment in them accounted for about 4% of the variation among students in civics knowledge scores. In other words, the number of high school civics courses taken by an individual is positively, but only weakly, related to adolescent civic knowledge.

Community service. Participation in community service may influence one's later civic and political participation for many reasons. By performing service, a participant may become personally involved with political issues, rather than thinking about them abstractly (Youniss & Yates, 1997). Involvement in community service also provides a network of people with whom to discuss civic issues (Crystal & DeBell, 2002). In performing community service, people may also become familiar with social problems of which they were previously unaware (Eyler & Giles, 1999).

The evidence suggests that community service performed during adolescence is related to later civic participation. Astin, Sax, and Avalos (1999) analyzed longitudinal data from college students with outcome measures

collected 9 years after college graduation. They found that volunteering in college positively predicted volunteering 9 years after graduation. For example, 44% of people who were very involved in volunteering in college and also volunteered shortly after college were volunteers 9 years after graduation, whereas only 19% of people who volunteered neither during college nor shortly after college were volunteers 9 years later. Similarly, Wilson and Musick (1997) found in their analysis of the Americans' Changing Lives panel survey that volunteering was predictive of volunteering 3 years later. Most relevant for our study here, Smith (1999) analyzed data from the NELS and found that students who did service in their last year of high school were higher 2 years later on a composite measure of civic participation (combining volunteering and voting) than were peers who had not done service in their senior year.

The benefits of community service for civic development may depend on whether it is *required* or *voluntary*. A number of commentators have suggested that requiring community service of students—either as a condition of high school graduation or as part of a class—produces unthinking, possibly resented, activity that cannot deepen students' commitment to the civic good (see, for example, Stukas, Snyder, & Clary, 1999). Chapman (2002) has asked rhetorically, “Does a student who learns that almost anything counts toward the service requirement [for a school]—so long as he doesn't get paid—develop a keen sense of civil calling? Or does he hone his skill at gaming the system?” (p. 12).

On the other hand, there is some evidence that required service is linked to later volunteering. Metz and Youniss (2003) studied a high school prior to, and following, the introduction of a community service requirement. This allowed them to compare students who were voluntarily involved in community service with those whose community service was mandated. Metz and Youniss found that those whose service was required evidenced the same gains in civic interest and behavior evident in the volunteers following the service activities.

Required and voluntary community service may differ not only in the impetus for entry into service but in frequency of participation as well. As Hart, Atkins, and Donnelly (2006) noted in their review, the failure of many researchers to control for the frequency of participation in service makes it impossible to determine whether the apparent benefit of voluntary service over required service is the consequence of more frequent participation of those involved in the former or resentment regarding those involved in the latter. In this study, we control for frequency of participation in community service and thus eliminate one potential confound in the assessment of the benefits of required service.

Extracurricular activities. Involvement in extracurricular activities also may promote future civic participation. Extracurricular activities provide students with opportunities to learn civic and leadership skills, such as giving speeches, coordinating efforts with others, influencing others, writing formal

documents, and holding meetings (Kirlin, 2003a, 2003b; Youniss & Yates, 1997). Extracurricular activities also may serve as a forum for interactions with people from various backgrounds and with adults who may serve as role models or mentors. These discussions may promote civic knowledge and civic engagement (Zaff, Moore, Papillo, & Williams, 2003).

There is some evidence that involvement in extracurricular activities in high school increases the likelihood of future civic engagement. Analyzing the NELS data, Zaff et al. (2003) found that compared to individuals who only occasionally participated in extracurricular activities, individuals who regularly participated in at least one extracurricular activity in 8th, 10th, and 12th grade had higher levels of both voting and volunteering 2 years after high school.

In a review of the literature, Kirlin (2003a) concluded that the effects of participation in extracurricular activities on civic engagement might depend on the type of activity. For adult organizations, *instrumental activities* have been defined as activities in which the primary objective is to “maintain or to create some normative condition or change . . . to attain goals that lie outside of the organizations themselves,” whereas *expressive activities* are groups which provide activities for members as their primary objective (Gordon & Babchuk, 1959, p. 25). These definitions of adult organizations also have been applied to extracurricular activities in school. Instrumental activities typically include student government, student newspaper, yearbook, debate club, political clubs, and vocational clubs. Expressive activities encompass athletics, cheerleading, academic clubs, band, chorus, drama, and hobby clubs.

Some research findings suggest that in comparison to expressive activities, instrumental activities are more likely to increase civic engagement than expressive activities. For example, in analyzing the High School and Beyond database, Glanville (1999) found that after controlling for demographic, personality, and political variables, individuals who participated in instrumental activities as seniors were more likely to participate in politics 6 years after high school than youth who participated in expressive activities. In fact, individuals in the expressive group were no more likely to participate in politics than individuals who were involved in no activities as seniors in high school. Similarly, M. Hanks (1981) found in his analyses of the National Longitudinal Study of the High School Senior Class of 1972 that involvement in instrumental activities predicted higher levels of political participation 1 to 2 years later than did involvement in expressive activities.

Another potential predictor of civic engagement is leadership of an extracurricular activity (Kirlin, 2003a). Leadership typically involves giving speeches, persuading others, organizing people, and having knowledge of larger issues. Youth who are leaders of activities may be more prepared to engage civically in the future. There is evidence that participation in student government, a prominent leader position, does lead to increased civic participation (e.g., Glanville, 1999).

Comparison of influential factors on civic participation. One important limitation on current knowledge is that the relative importance of each of the influences on civic participation—civic knowledge, community service, and extracurricular participation—is unknown. As a consequence, it is difficult to offer research-based recommendations concerning the kinds of interventions or changes in curriculum appropriate for high schools that will result in heightened civic participation in adulthood. Some have argued that civic knowledge is the cardinal virtue that ought to be addressed by educational systems (e.g., Galston, 2001). Others have suggested that attitudes and community service are particularly potent in fostering political engagement (e.g., Smith, 1999). One goal in this study is to assess all three influences on civic participation, so that the relative importance of each can be determined.

Research Overview

Based on previous research, our study examines the influence of three factors measured in high school—civic knowledge, community service, and extracurricular participation—on young adulthood civic participation. We also estimate the influence of the number of social science courses taken by a student on his or her civic knowledge.

Our examination of high school *community service* seeks to determine whether required and voluntary service in adolescence have equivalent effects on civic participation in adulthood.

In our assessment of the value of high school *extracurricular participation* on adulthood civic engagement, we attempt to disentangle the effects of the type of activity and the individual's role within the activity.

These analyses yield effect sizes that provide insights into the relative importance of each influence measured in high school on civic participation in early adulthood.

Method

Sample and Data

The analyses presented here used data from the NELS:88 public, private, and transcript databases (see Rock, Pollack, & Quinn, 1995, for a description). There were a total of five data collections between 1988 and 2000, a base year survey (BY), and four follow-up surveys (F1-F4). The goal of the study was to conduct a “survey of the school-related experiences and accomplishments of a nationally representative sample of eighth graders” (Spencer, Frankel, Ingels, Rasinski, & Tourangeau, 1990, p. iv). The sampling procedure involved two steps. First, a random sample of schools containing eighth-graders from every U.S. state was formed. Second, a random sample was drawn from each school of approximately 24 eighth graders, augmented where possible with an average of 2 additional Hispanic and Asian/Pacific Islander students to allow precise estimates for these groups. Students unable to participate in the survey due to limited English proficiency or social,

Table 1
Proportions and Contingency Coefficients for Young Adult Civic Participation Indices: Local Voting, Presidential Voting, Civic Volunteering, and Youth Volunteering

Variable	Proportion Participating	1	2	3	4
Outcomes					
1. Local voting	.46	—	.42****	.14****	.15****
2. President voting	.62		—	.10****	.09****
3. Civic volunteer	.24			—	.31****
4. Youth volunteer	.22				—

Note. $n = 6,925$.

**** $p < .05$.

emotional, or intellectual handicaps were excluded from the final sample. Approximately 25,000 students (for methodological details, see Curtin, Ingels, Wu, & Heuer, 2002) were in the original sample.

The follow-up data collections were in 1990, when most students were in 10th grade, and in 1992, when most students were in 12th grade. The 10th- and 12th-grade data collections included new students to make each a national representative sample of 10th and 12th graders, respectively. By 1992, the sample had been reduced in size to approximately 18,000 students; our analyses relate 12th-grade scores to early adulthood indicators of civic engagement.

The last two data collections, in 1994, 2 years after most students graduated high school, and in 2000, 8 years after most students graduated, used subsamples of participants of the previous data collection. This means that those not participating in the third data collection were not interviewed at the fourth testing time. Many participants could not be located at the third and fourth testing times, and some of those who were contacted refused to participate. Consequently, there are data available for 12,144 cases at the last time period. The analyses presented here are based on participants surveyed in 2000, for whom data for the relevant predictor and outcome variables were available (57% of the total sample). Participants for whom there were missing data were slightly lower in socioeconomic status (SES) (1/4 of a standard deviation) and slightly lower in civic knowledge (0.6 of a standard deviation). The effect of sample attrition is to restrict the range of SES and civic knowledge to a small degree, thus biasing our analyses against finding statistically significant effects for these variables.

Measures

Civic participation indices 8 years after high school (Follow-Up 4, F4). Civic participation in early adulthood was measured with two voting indices and

two volunteering indices. In our sample, 46% of the 6,925 participants answered affirmatively to the survey question, “In the last 2 years (1998-2000), have you voted in any local, state, or national election?” For our sample, 62% responded affirmatively to the survey question, “Did you vote in the 1996 presidential election?” For the third measure, 24% of participants indicated they had volunteered in response to the survey question, “Did you volunteer in a civic or community service organization in the past 12 months?” Finally, 22% of participants answered yes to the question, “Did you volunteer in a youth organization in the past 12 months?” The associations among these outcomes are shown in Table 1. The two voting measures are moderately related, the two volunteering measures are moderately related, whereas the relations between the volunteering and voting measures are weaker (note that contingency coefficients are not monotonically related to correlations, and consequently the associations reported in Table 1 ought not be judged to be extremely small; see S. Cohen, 1956, for a discussion).

12th-grade predictors (Follow-Up 2, F2). We examined the influence of three main factors on civic engagement: (a) community service, (b) extracurricular participation, and (c) civic knowledge and courses. In addition, we controlled for civic attitude and demographic variables such as ethnicity, gender, family composition, and SES, all of which were measured in 12th grade during the third data collection. These predictors are described below. All continuous variables were centered in the analyses.

12th-grade community service was represented by three dummy codes: voluntary service (30% of the sample), required service (4%), and mixed service (12%; i.e., performing both strictly voluntary and required service in high school). Those who reported no service (54%) served as the comparison group. These contrasts were derived from responses to four questions: (a) “During the past two years, have you performed any unpaid volunteer or community service work?” (b) “Was the service strictly voluntary?” (c) “Was the service required for class?” and (d) “Was the service required for other reasons?”

The *frequency of community service* was measured in 12th grade on a 4-point scale: *never/rarely* (70%), *less than once a week* (18.7%), *one to two times a week* (9.3%), and *almost every day* (1.6%). We controlled for frequency of community service as it may account for the relation between type of service and civic engagement.

We used four contrasts to represent *extracurricular activities*. The first contrast compared students involved in activities (84.6%) to students not involved (15.3%). The second contrast compared membership in instrumental (50.3%) versus expressive activities (34.3%), as defined below. The third contrast compared instrumental leaders (18.7%) versus members (31.6%). The fourth contrast compared expressive leaders (12.5%) versus members (21.8%). These extracurricular activity contrasts were created following Kirlin’s (2003a) suggested definition of instrumental and expressive

activities. Activities considered instrumental were school government, yearbook/newspaper, service club, and vocational club. Those considered expressive were team sport, individual sport, cheerleading, music, play, academic honor, academic club, hobby club, intramural team sport, and intramural individual sport. Each variable indicated whether students were leaders, members, or nonmembers. If students were involved in both instrumental and expressive activities, they were classified as involved in instrumental activities.

12th-grade civic knowledge was indexed by a standardized test consisting of 8 citizenship (federal government, citizen rights and responsibilities), 15 American history (political and economic), and 3 geographic (patterns of food production and settlement across societies) questions (for psychometric information on this measure, see Rock et al., 1995). *Social science courses* were indexed from transcript data of year-long courses measured in Carnegie units, standardized across schools according to the High School and Beyond subject area codes (see Curtin et al., 2002, for a description).

Demographics were also included in the analyses as controls. *Ethnicity* was dummy coded with Caucasians (73%) as the comparison group versus other ethnicities (African Americans, Hispanics, Asians, and American Indians). *Gender* was dummy coded with females (52%) as the comparison group. *Family composition* was coded as 0 for those living with a mother and father and those in other types of households receiving a code of 1 (31% received this code). *SES* was a composite variable available in the NELS database (see Curtin et al., 2002, for details) created from five variables on the parent questionnaire: father's and mother's education level, father's and mother's occupation, and family income (in this sample, $M = 0.11$, $SD = 0.77$).

Civic attitude was measured by responses on a 3-point scale (*not important*, *some importance*, and *very important*) to the question, "How important is it in your life to help others in your community?" Because there were a small percentage of "not important" responses (about 6% of the full NELS sample), we recoded the variable into two categories: *low* ("not important" or "some importance," 67%) and *high* ("very important," 33%) civic attitude. We control for civic attitude, because it might contribute to civic engagement (Putnam, 2000), although this single-item scale cannot assess fully the various components of social attitudes.

Results

We performed four logistic regressions to examine the extent to which community service, extracurricular involvement, and civic knowledge in 12th grade (Follow-Up 2, F2) are related to voting and volunteering in young adulthood (8 years after high school in 2000 at about age 26, Follow-Up 4, F4), after controlling for demographics and civic attitudes. Sample weights were used to compensate for oversampling of subsamples (described in the Method section). To ensure accurate estimation of standard errors given the

Table 2
Summary of Logistic Regression Analyses Predicting Voting in Local Elections 8 Years After High School

Variables at F2 (12th Grade)	Local Voting at Age 26, Follow-Up 4		
	<i>B</i>	<i>SE</i>	Exp(<i>B</i>)
Intercept	-0.53****	0.10	0.59
Gender (female = 0)	-0.21****	0.08	0.81
Ethnicity (Caucasian = 0)	-0.14	0.10	0.87
Family composition	0.27****	0.09	1.31
Socioeconomic status	-0.04	0.06	0.96
Centered civic knowledge	0.02****	0.00	1.02
Centered civic attitude	0.01	0.09	1.01
Activities: member/not	0.64***	0.33	1.89
Instrumental/expressive	0.15	0.17	1.16
Instrumental: leader/member	0.11	0.12	1.11
Expressive: leader/member	-0.02	0.12	0.98
Service frequency	0.08	0.06	1.08
Voluntary service ^a	0.44****	0.10	1.54
Mixed service ^a	0.53****	0.14	1.70
Required service ^a	0.52****	0.16	1.69

Note. *n* = 6,925.

^aDummy codes with “no service” as comparison group.

****p* = .053. *****p* < .05.

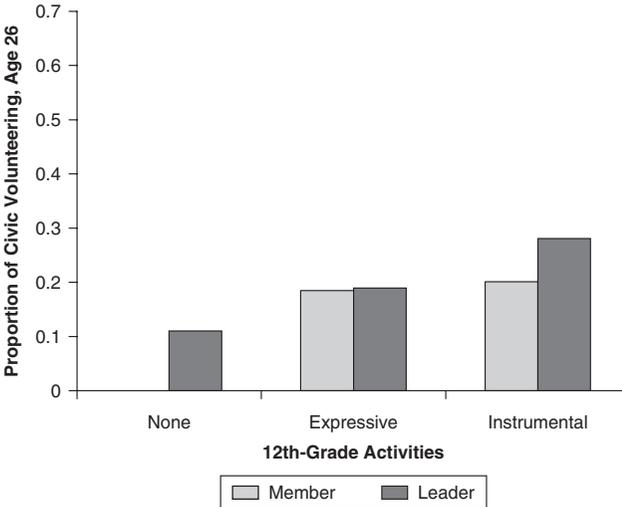


Figure 1. Estimated proportion of 26-year-olds voting in local elections from 1998 to 2000 as a function of the type of community service performed in high school: no service, required service, mixed service (both voluntary and required), and voluntary service.

sampling design, we used the AM software package (American Institutes for Research, 2005), as recommended by the National Center for Educational Statistics for the logistic regression analyses.

Summaries of results of regressing (a) voting in local elections from 1998 to 2000, (b) voting in the 1996 presidential election, (c) volunteering in a civic organization in 2000, and (d) volunteering in a youth organization in 2000 on the predictor variables measured in 1992 are given in Tables 2 through 5, respectively. Each of these analyses is discussed in following sections.

Figures 1 through 4 portray the relationships involving community service and extracurricular activities with adult engagement. All analyses invoked logistic regression (J. Cohen, Cohen, West, & Aiken, 2003). All continuous predictor variables were mean centered, except for the continuous predictor variables illustrated in the four figures.

Local Voting

In the first analysis, reported in Table 2, we regressed local voting on the predictor and demographic variables. Performing community service in high school was a statistically significant predictor of local voting. Dummy variables for the three types of community service—voluntary, required, and mixed—were statistically significant, indicating that those who participated in community service were more likely to vote than were those who were not involved in community service in high school. As shown in Figure 1, performing voluntary, required, or mixed service increased the predicted probability of local voting by .14 when compared to those who did not perform service in high school. Interestingly, the frequency of participation was not a statistically significant predictor; this suggests that variations among high school students in the amount of service performed mattered little for whether they matured into young adults who participated in local elections. Instead, it appears that community service participation of any sort and of any frequency in high school increased voting in early adulthood.

Civic knowledge and demographic factors were also associated with local voting. An increase in one standard deviation of civic knowledge was associated with a .02 proportion increase (for persons with average scores on all other variables) in local voting 8 years after high school. Students living in affluent, well-educated households (high SES) in high school were also more likely to vote in early adulthood, as were those whose households included both mothers and fathers. Finally, women were more likely to vote in early adulthood than were men.

Presidential Voting

The analyses of predictors of presidential voting reveal much the same pattern as that found for local voting. Table 3 presents the regression of voting in the 2000 presidential election on the set of predictors measured in high school. Table 3 reveals that high school community service was once again a statistically significant predictor of voting. Figure 2 depicts the magnitude

Table 3
Summary of Logistic Regression Analyses Predicting the Presidential Election 8 Years After High School

Variables at F2 (12th Grade)	Presidential Voting at Age 26, Follow-Up 4		
	<i>B</i>	<i>SE</i>	Exp(<i>B</i>)
Intercept	0.19*	0.10	1.21
Gender (female = 0)	-0.28****	0.09	0.76
Ethnicity (Caucasian = 0)	-0.06	0.11	0.94
Family composition	0.23****	0.10	1.26
Socioeconomic status	0.27****	0.07	1.32
Civic knowledge	0.02****	0.01	1.02
Civic attitude	-0.16*	0.09	0.85
Activities: member/not	0.88****	0.33	2.41
Instrumental/expressive	0.19	0.19	1.21
Instrumental: leader/member	0.07	0.13	1.07
Expressive: leader/member	0.11	0.13	1.12
Service frequency	0.13*	0.07	1.14
Voluntary service ^a	0.45****	0.10	1.57
Mixed service ^a	0.33****	0.15	1.38
Required service ^a	0.44****	0.16	1.54

Note. *n* = 6,925.

^aDummy codes with “no service” as comparison group.

p* < .10. ***p* < .05.

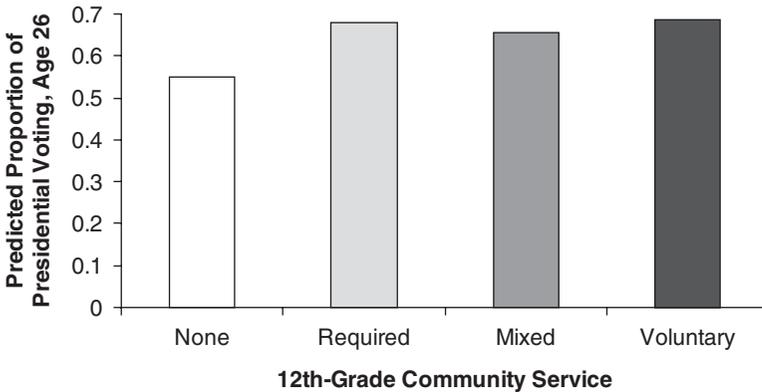


Figure 2. Estimated proportion of 26-year-olds voting in the 2000 presidential election as a function of the type of community service performed in high school: no service, required service, mixed service (both voluntary and required), and voluntary service.

of the influence of the types of community service on voting in the presidential election. All forms of high school community service were associated with elevated levels of voting in the presidential election.

Table 4
Summary of Logistic Regression Analyses Predicting Civic Volunteering 8 Years After High School

Variables at F2 (12th Grade)	Civic Volunteering at Age 26, Follow-Up 4		
	<i>B</i>	<i>SE</i>	Exp(<i>B</i>)
Intercept	-1.44****	0.12	0.24
Gender (female = 0)	-0.20****	0.10	0.82
Ethnicity (Caucasian = 0)	0.08	0.12	1.09
Family composition	-0.13	0.11	0.88
Socioeconomic status	0.16****	0.07	1.17
Civic knowledge	0.01	0.01	1.01
Civic attitude	0.16**	0.09	1.18
Activities: member/not	2.06****	0.43	7.87
Instrumental/expressive	0.62****	0.19	1.85
Instrumental: leader/member	0.44****	0.11	1.55
Expressive: leader/member	0.03	0.16	1.03
Service frequency	0.30****	0.06	1.36
Voluntary service ^a	0.16	0.10	1.17
Mixed service ^a	0.32****	0.14	1.37
Required service ^a	0.03	0.17	1.03

Note. *n* = 6,925.

^aDummy codes with “no service” as comparison group.

p* = .077. **p* < .05.

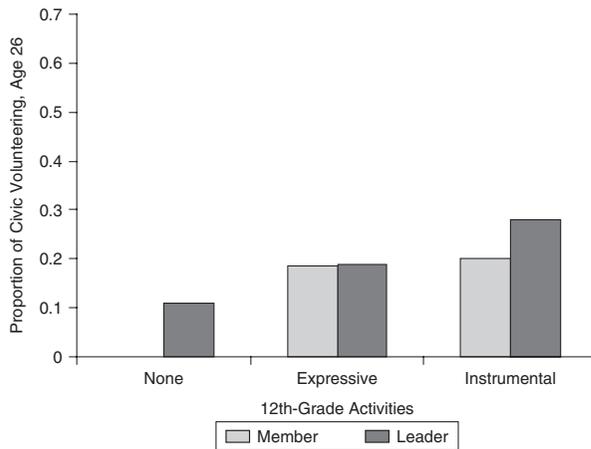


Figure 3. Estimated proportion of 26-year-olds volunteering in a civic or community organization in 2000 as a function of the type of extracurricular activity involvement in high school.

Participation in high school extracurricular activities was also associated with an increase in the odds of presidential voting, although the specific type of extracurricular activity (expressive vs. instrumental) was not.

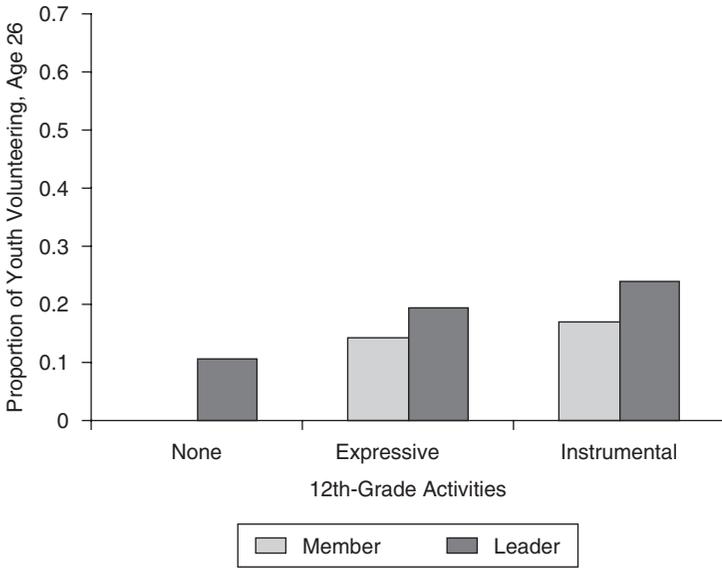


Figure 4. Estimated proportion of 26-year-olds volunteering in a youth organization in 2000 as a function of the type of extracurricular activity involvement in high school.

Civic knowledge in 12th grade was a statistically significant predictor of presidential voting. As with local voting, an increase in one standard deviation of civic knowledge was associated with a proportional increase of .02 in presidential voting 8 years after high school (for participants with centered and zero scores for other predictors).

Females were more likely to vote than males, and those from high-SES families reported more voting than those from low-SES households.

Civic Volunteering

The results in Table 4 indicate that the *frequency* of community service in high school, but not the *type* of high school community service, predicted whether young adults would volunteer in their communities. Those who participated frequently in community service in high school were more likely to volunteer than were those whose community service was nonexistent or infrequent.

Extracurricular involvement in high school was also a statistically significant predictor of civic volunteering, and there were important differences among types of extracurricular activities. These differences are depicted in Figure 3. From Figure 3 and Table 4, it is possible to conclude that leadership in high school instrumental extracurricular activities is associated with the highest levels of civic volunteering in adulthood.

Table 5
Summary of Logistic Regression Analyses Predicting
Youth Volunteering 8 Years After High School

Variables at F2 (12th Grade)	Youth Volunteering at Age 26, Follow-Up 4		
	<i>B</i>	<i>SE</i>	Exp(<i>B</i>)
Intercept	-1.71****	0.11	0.18
Gender (female = 0)	-0.09	0.10	0.92
Ethnicity (Caucasian = 0)	0.14	0.12	1.15
Family composition	0.01	0.10	1.01
Socioeconomic status	0.15****	0.07	1.16
Civic knowledge	-0.02****	0.01	0.99
Civic attitude	0.25****	0.10	1.28
Activities: member/not	1.66****	0.47	5.28
Instrumental/expressive	0.47****	0.20	1.60
Instrumental: leader/member	0.44****	0.12	1.55
Expressive: leader/member	0.38****	0.15	1.45
Service frequency	0.18****	0.06	1.20
Voluntary service ^a	0.45****	0.11	1.57
Mixed service ^a	0.38****	0.16	1.46
Required service ^a	0.17	0.18	1.18

Note. *n* = 6,925.

^aDummy codes with “no service” as comparison group.

*****p* < .05.

Youth Volunteering

The frequency of community service in 12th grade was again a statistically significant predictor of youth volunteering 8 years after high school, as was the type. The odds of youth volunteering in early adulthood were 1.57 greater among those performing voluntary service in high school than in those who did not. A similar effect was obtained for mixed service (in increase of odds of 1.46); no statistically significant effect was observed for required service.

Extracurricular involvement in high school was also a statistically significant predictor of youth volunteering, as shown in Figure 4. The effects reported in Table 5 and depicted in Figure 4 suggest that the relation of high school extracurricular participation to volunteering in early adulthood to work with youth is similar to that observed between high school extracurricular participation and volunteering for civic organizations described in the previous section.

Social class and civic attitude were statistically significant predictors of youth volunteering. Surprisingly, there was a statistically significant, but extremely weak, negative association between high school civic knowledge and volunteering in youth organizations in young adulthood.

Civic Knowledge Multiple Regression Analysis

The logistic regression analyses described in earlier sections were also run, including the number of social science courses taken in high school as a

Table 6
**Summary of Multiple Regression Analyses Predicting
 Civic Knowledge in 12th Grade**

Variables at F2 (12th Grade)	12th Grade Civic Knowledge ($n = 6,434$) at F2		
	<i>B</i>	<i>SE</i>	β
Intercept	-3.10****	0.39	
Gender (female = 0)	2.41****	0.32	.13
Ethnicity (Caucasian = 0)	-3.00****	0.54	-.13
Family composition	0.78****	0.39	.04
Socioeconomic status	3.25****	0.26	.25
Civic attitude	-0.24	0.36	-.01
Number of social science courses	1.34****	0.19	.13
Activities: member/not	2.36****	1.20	.03
Instrumental/expressive	1.36	0.77	.03
Instrumental: leader/member	1.35****	0.48	.05
Expressive: leader/member	0.89	0.56	.03
Service frequency	-0.02	0.30	.00
Voluntary service ^a	4.51****	0.43	.22
Mixed service ^a	4.53****	0.66	.15
Required service ^a	3.21****	0.68	.06

Note. $n = 6,925$.

^aDummy codes with "no service" as comparison group.

**** $p < .05$.

predictor; in none of these analyses was the number of social science courses associated with the measures of civic engagement in early adulthood. However, it is possible that the influence of social science courses on later civic development was fully mediated by civic knowledge, and consequently the inclusion of a measure of civic knowledge in the analyses masks the contribution of coursework on civic development. To assess this possibility, we regressed 12th-grade civic knowledge on the other predictors used in the four logistic regressions, as well as the number of social science courses taken, and found that the number of courses was weakly associated with civics knowledge (see Table 6). On average, students took 3 1/2 social science courses (standard deviation of 0.92) and had a standardized civic knowledge score of 52.5 out of 100 (standard deviation of 9.51). Based on the results (Table 6), our estimate is that students would have to take about seven additional year-long social science courses to increase their civic knowledge by one standard deviation, if all other variables in the equation are held constant.

Discussion

To reiterate, the goal of this study was to assess the relation of civic knowledge, community service, and extracurricular participation—all measured in

high school—to civic participation in young adulthood. Our hope was that this information would be useful to those interested in providing the scaffolding necessary for adolescents to become adults who participate in their communities.

The most striking finding to emerge from our analyses is that high school community service predicted adult voting and volunteering, after controlling for other relevant predictors and demographic variables. Importantly, being required to perform community service in high school was associated with higher rates of voting in adulthood, not lowered civic engagement.

Second, our analyses indicate that high school extracurricular participation was associated with higher rates of volunteering and voting in presidential elections in early adulthood.

Third, although the association of high school civic knowledge with voting in young adulthood is reliable, the magnitude is very small. Controlling for demographic factors, community service, and extracurricular participation, young adults who were one standard deviation apart in civic knowledge in high school were almost equally likely to vote. Moreover, the relation of high school coursework in the social sciences to civic knowledge was surprisingly weak.

These results are relevant to theoretical and policy issues that are currently under debate. Our results strongly suggest that civic participation in adulthood can be increased through community service participation in adolescence, a conclusion contrary to claims by some that service detracts from political involvement. This finding is consistent with other longitudinal results that show that active involvement in addressing social problems during youth is predictive of long-term civic engagement. This relationship has been found for involvement in civil rights (e.g., Fendrich, 1993; McAdam, 1988), antiwar (e.g., Jennings, 2002), and feminist (e.g., Stewart, Settles, & Winter, 1998) movements. Although the typical service activities of high school students do not equate directly with participation in the above movements, they can be seen as a form of “proto-activism” in which young people take steps toward more intense engagement (Jennings, 2002).

Special note is taken of the fact that school-based required service was found to be as efficacious as voluntary service in predicting subsequent civic engagement. Bennett (2003), Finn and Vanourek (1995), and others have hypothesized that mandated service might prove to de-motivate young people because they are forced to help others and address social problems. Stukas et al. (1999) made a similar conjecture based on the notion that adolescents who are striving for autonomy might be especially averse to forced service. Our findings should allay such concerns, as they show that mandated service can motivate high school students' civic engagement.

Why is service, even when mandated, effective, and why might its effects persist through the onset of adulthood? In our view, the most likely explanation is that community service shapes identity. Many students do service at sites that are managed by nonprofit organizations and social service agencies that respond to social problems, such as homelessness, and provide assistance to people in need of food, shelter, and the like (Raskoff & Sundeen, 1999). These

organizations offer assistance in the name of explicit value systems that are communicated to their clients as well as volunteer personnel. For example, Allahyari (2000) described how administrators at a Salvation Army Mission and soup kitchen run by the Catholic Workers educate clients and volunteers in their philosophies of conversion reform and respect with dignity for the poor, respectively.

These philosophies provide rationales for service that volunteers can incorporate into their self-concepts as they come to see themselves as persons capable of contributing to the common good (Hart, 2005; Penner, 2002; Piliavin, Grube, & Callero, 2002). In this regard, young people are not only doing service but also doing it as representatives of a particular value tradition as they serve in the name of a specific tradition. Because organizations and their founding philosophies persist over time, individuals have a referent point to which they can relate as they move ahead in the life cycle. These organizations are an anchoring point for personal as well as social identity (Erikson, 1968). Moreover, because service is done at these sites, students may become members of networks with other persons with whom they did service collectively. Thus, individuals find themselves connected to organizations and networks that afford them lasting resources for civic involvement (McAdam, 1988).

A second interpretation that is compatible with the organizational identity perspective is that adolescents acquire civic skills in the process of doing service. Service done at sites described above involves collective action under a prescribed regimen in which youth and adults work together. Skills such as coordinating one's actions with those of other people toward a mutual end give young people a behavioral basis for viewing themselves as capable volunteers. Verba, Schlozman, and Brady (1995) have described the potency that derives from such experiences, showing that participation in organizational collective action compensates for deficiencies, such as formal education, which might otherwise thwart volunteering.

The skill hypothesis is also relevant for understanding why extracurricular activities in high school contribute to civic participation in adulthood, a finding reported by others who have analyzed the NELS (e.g., Smith, 1999; Zaff et al., 2003). Our finding that instrumental types of activities were more efficacious than were expressive activities for later volunteering is particularly relevant for this hypothesis. Instrumental activities included taking part in school government, working on school publications, and participating in service clubs, among other activities. These activities provide opportunities for acquiring the skills of working collectively for a common purpose, taking a responsible role in one's community, and the like.

It is noteworthy that these high school activities are similar to those found by R. Hanks and Eckland (1987) to predict civic involvement 17 years later when adults were in their early 30s. These activities were found also by Verba et al. (1995) to distinguish civically active from less active adults in retrospective reports of their high school careers and are consonant with findings that former 4-H members, in comparison to nonmembers, have been

found to participate in community voluntary associations at higher rates (Collins & Associates, 1997; Ladewig & Thomas, 1987).

The direct effect of civic knowledge on promoting civic engagement is relatively small. If one wanted to promote civic participation through civic knowledge, the obvious mechanism would be to require more civic courses. However, whereas the number of social science courses is related to civic knowledge, the effect is extremely small, a finding that emerges in other studies as well (e.g., Niemi & Junn, 1998). Because the effect of civic knowledge on civic engagement is weak, it does not seem cost-effective to attempt to promote civic engagement simply by increasing civic knowledge through increasing the number of civics courses taken. It is worth noting that civic knowledge was independent of community service (indeed, in this sample, the two variables are inversely related, although the magnitude of this association is so small as to be meaningless for policy). Being knowledgeable about civics did not lead to increased volunteering in early adulthood. This means that if the goal were to increase volunteering in young adulthood, promoting the acquisition of civics knowledge would be an ineffective strategy. However, as noted in the introduction, most policy makers are centrally concerned with voting, and in this study we replicated the well-established connection of civics knowledge and electoral participation.

Community service activities performed during adolescence are probably not uniform in the influence they have on civic engagement later in life. As we have discussed, community service in adolescence may influence later civic engagement in a number of ways such as providing a network of other individuals to discuss civic concerns (Crystal & DeBell, 2002) and raising social awareness (Eyler & Giles, 1999). It may be the case that certain types of community service performed during adolescence are particularly valuable in generating later civic engagement. Future investigations with more information regarding the quantitative and qualitative elements of community service activities may be better able to explicate how community service participation influences future civic engagement and the public good.

In our view, the most pressing research need is for large, well-designed experimental field studies that assess the relative value of improved civic curricula, community service, and increased extracurricular activity opportunities for transforming adolescents into civically active adults. The study reported in this article relies on the variation existing among students and young adults in civic knowledge, community service participation, and membership in extracurricular activities to infer the influence of these factors on later civic engagement. This kind of analysis is capable of providing insights into developmental processes. However, in this study we were not able to control for factors that are known to influence civic development such as personality (Atkins, Hart, & Donnelly, 2005) and neighborhoods (Hart, Atkins, Markey, & Youniss, 2004). Controlling for such factors—and others—might change the estimates derived in this article. Our inability to control for all factors that might influence both entry into the activities of interest (extracurricular activities, civics classes) and the outcomes (voting, volunteering) is the

problem of *endogeneity* (Duncan, Magnuson, & Ludwig, 2004), a methodological flaw that is best addressed through experimental studies of the type we have suggested here. Moreover, new research can address the possibility that adolescents' perceptions of community service have changed over the past decade; perhaps it was once viewed as contributing to civic welfare and now is seen as an activity prerequisite to admission to college (see Friedland & Morimoto, 2005, for a discussion). If adolescents' beliefs about the motivation for, and benefits from, community service have changed radically over the past decade, then it is possible that the results obtained in this article do not permit accurate estimates of the effects of introducing service programs in schools on later civic development. Only new research can determine whether community service has the same effects in this decade as it did in the past one.

Finally, it remains for future research to determine whether the factors identified in this study as correlates of young adult civic engagement are predictors of successful development in other domains. For example, it is possible that community service in high school is also predictive of successful marriage or entry into specific professions. Testing these and similar hypotheses will cast light on the specificity of the relation of community service to later development.

Although our findings are in need of additional confirmation through experimental investigations, in advance of the completion of such studies, our research provides the best available estimates of the effects of high school policies on the development of citizenship. We suspect that Tocqueville (1835/2004) overstated the case when he wrote that "the citizen of the United States does not acquire his practical science and his positive notions from books; the instruction he has acquired may have prepared him for receiving those ideas but did not furnish them" (p. 351). Indeed, our findings indicate that high school civic knowledge is important for later voting. However, our findings do suggest that providing opportunities for community service and extracurricular activities are particularly good choices for policy makers interested in grooming adolescents for citizenship.

Note

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