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**Joining Young, Voting Young: The Effects of Youth  
Voluntary Associations on Early Adult Voting**

Reuben J. Thomas\* and  
Daniel A. McFarland

\* [rthomas@ccny.cuny.edu](mailto:rthomas@ccny.cuny.edu)

**Abstract**

Adolescent voluntary associations are particularly well positioned in the life course to encourage voting as youth become full citizens. Extracurriculars socialize students into voting by habituating them to civic engagement and by connecting them to politically engaged cultures. We establish this argument by testing the effects of high school extracurriculars on voting and the formation of political ideology in young adulthood, using two nationally representative longitudinal datasets and propensity score matching. We find that participation in general promotes voting, though some activities (notably, some sports) decrease it. Specific activities that encourage voting often have no political content, and their effects are not explained by the voting rates of peers in these groups. One of the biggest and most robust effects is for the performing arts: participation in high school performing arts is related to a higher rate of voting in early adulthood. Furthermore, some activities affect political ideology and party membership in adulthood, illustrating socialization into distinct political cultures. The overall pattern is that religious attendance and a few sports steer students to the conservative end of the political spectrum and into the Republican party, while academic clubs, drama clubs, and honor society steer students towards the liberal end and/or into the Democratic party. Schools can create environments that encourage extracurricular involvement through funding and policy. But they can also discourage extracurriculars through neglect. These results demonstrate that which activities thrive and which shrink will have an impact on future voting behaviors of young adults.

Extracurricular activities in U.S. high schools are sometimes dismissed as the resume-padding pursuits of the college bound, or as bribes to entice academically-disengaged teenagers to go to school (Coleman 1961; Merelman 1971; Waller 1932). But voluntary organizations in high school occupy a crucial place in the life course of American citizens: they are the primary mode of community engagement just before youth enter adulthood, and just before minors become citizens with full voting rights (Ziblatt 1965). As inertia and habit can be said to characterize much of human behavior, the extracurriculars of youth can be seen as important switches that place students onto different tracks into adulthood. Those who get in the habit of participating and engaging in their high school community tend to continue those behaviors and kinds of associations into adulthood. Those that find themselves on the track of uninvolved and detachment tend to remain detached. From this theoretical perspective, we should expect extracurriculars to play an important role in socializing young adults into active citizenship. One test of whether they actually affect youth political engagement is whether they encourage the most basic, least time-intensive, and yet far from universal form of political participation in the United States: voting.

Academic attention has been paid to civic education, extracurriculars, voter turnout, and voluntary organizations, but the connection between these is still not well understood. Some recent studies have examined the relationship between youth activities and voting (Glanville 1999; Hart, Youniss and Atkins 2007; Plutzer 2002) in the course of broader investigations, while others have more specifically focused on it (Frisco, Muller and Dodson 2004). But whether the connection between youth voluntary associations and voting is primarily a causal relationship or is mostly a matter of self-selection has not been definitively settled. We attempt here a conservative measure of this relationship that takes into account the role of self-selection and social reproduction. In addition to testing for the effect of extracurriculars in general, we look at the effects of

different categories of extracurriculars and specific activities. We also look for evidence on what may lay behind this relationship, as well as any effects these activities may have on the political ideology of young adults.

### **The Transition into Voting**

The single biggest predictor of whether or not an eligible citizen will vote in any given election is whether or not that citizen voted in previous such elections. Voting is a behavior best characterized as habitual (Gerber, Green and Shachar 2003; Milbrath 1965; Miller and Shanks 1996; Plutzer 2002; Verba and Nie 1972), and citizens are divided into the rough categories of those who vote, and those who do not. But as Plutzer (2002) notes, all voters begin their lives as non-voters, ineligible to vote before coming of legal age, and must overcome the inertia of non-voting to become habitual voters. And yet most who live long enough do overcome that inertia eventually, so that by old age the large majority of eligible citizens have made the transition into habitual voting. Becoming a voter is less a question of "if" than "when." But far too often, voting does not start until after young adulthood.

From this life-course perspective, the perpetually low turnout of young adults and the high turnout of senior citizens is unsurprising. For the young to become regular voters, they first need to develop political knowledge, connections, and commitment (Verba, Schlozman and Brady 1995), which older adults have already had time to accumulate. Political knowledge includes the practical know-how to navigate the voting bureaucracies (of voter registration, polling places, deadlines, etc), but also sufficient knowledge of politics (of candidates, offices, issues, etc) so that potential voters can feel they have some handle on the importance of their votes. Political connections bring the influence of others to bear on voting behavior; this includes not only the influence of politically involved friends and peers, but also connections to political candidates, offices

and organizations, and recruitment by political parties. And political commitment comes from attachment to political parties, issues, and identities, developed over the lifetime, as well as one's tangible stakes in the political process, sometimes developed through business or property ownership, community involvement, and so on. All of these accrue as adults age, but happen more quickly as youth become young adults. Thus the sharpest increases in non-voters becoming voters occur during young adulthood, with more gradual increases afterward.

The rate at which people transition into voting is not, however, evenly distributed across all segments of society. Among the strongest predictors of whether a citizen will vote in young adulthood relate to their parents; in particular, their parents' education and political engagement (Plutzer 2002; Wolfinger and Rosenstone 1980). More educated, politically connected and committed parents can and do pass these attributes to their offspring (intentionally or not). To a large extent, voting behavior is another example of social reproduction. But in addition, a youth's own political engagement, knowledge, and educational achievements all contribute to a faster transition into voting (Powell 1986; Verba, Schlozman and Brady 1995). One could argue that this is also about social reproduction: the young who most closely emulate their educated and politically involved parents are most likely to vote young. But the effects of youths' achievement and engagement on voting independent of parental characteristics suggest that non-family factors can lead the children of non-voters, or late-in-life voters, to take a different path from their parents, and become early voters.

We propose that meaningful political socialization also occurs outside of the home, and can make tangible differences in political outcomes like voting. In particular, we believe the voluntary associations of high school can be significant in the transition to political adulthood.

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## Youth Voluntary Organizations & Political Socialization

The importance of voluntary associations in American democracy is hardly a new insight; it has been ingrained in the national identity since Alexis de Tocqueville's ([1835] 1988) famous characterization of Americans as a nation of joiners. While voluntary associations are still widely viewed as a crucial component of democracy (Putnam 2000; Verba, Schlozman and Brady 1995), others take a more cautious view, finding their role to be more complicated, and not always positive (Kaufman 1999; Paxton 2002; Skocpol 1997). But even the more circumspect scholars of voluntary associations do not doubt that, under the right circumstances, they can greatly improve the political engagement of their members.

Previous research has linked extracurricular participation to later adult civic and political behavior (Frisco, Muller and Dodson 2004; Glanville 1999; Hanks 1981; Hart, Youniss and Atkins 2007; Kirlin 2001; McFarland and Thomas 2006; Marks and Kuss 2001; Tourney-Purta 2002; Verba, Schlozman and Brady 1995; Zaff et al. 2003), but other research has doubted the long term effects of extracurriculars in this regard (Jennings and Niemi 1974; Niemi and Sobieszek 1977; Plutzer 2002). The results below will show more evidence that extracurriculars do have an impact on adult political behavior, specifically in speeding the onset of voting. But beyond mere participation, the nature of the extracurriculars matters as well. Our previous work has shown that some high school activities produce more active civic participation in adulthood than others, and some have no effect at all (McFarland and Thomas 2006).

To examine why some activities are more effective at political socialization than others, let us consider how they affect the three determinants of political engagement according to Verba, Schlozman and Brady (1995): knowledge, connections, and commitment. In other words, do these activities teach youth the skills necessary to vote,

do they provide youth with peers who will influence them to vote, and/or do they instill in youth values that will motivate them to register and show up at the polls?

### *Learning to Vote*

Activities vary in the extent to which civic skills and engagement are learned in them; service clubs and student council may directly do this, while musical groups may seem to have nothing to do with civics or politics. But even less blatantly political activities like the performing arts can be venues for civic learning, by teaching skills in public speaking, and engaging with dramatic material that often has strong civic and political themes. Even when there is no political content at all to the activity, students may still be learning political engagement by developing what Bandura (2001) calls “collective efficacy,” the perception that the members can work together to affect their environment. Any activity that improves students’ sense of being able to make a difference can increase their likelihood of voting, regardless of the overt mission of the activity.

### *Gaining Political Peers*

We also believe activities can socialize youth into civic behaviors without any direct civic learning, by creating influential relationships. Interpersonal networks affect and are affected by these organizations (McPherson, Popielarz and Drobnic 1992), recruiting students into them, and creating new bonds between fellow-participants. The social ties created by these affiliations can be the sources of direct political recruitment (Brady, Schlozman and Verba. 1999; McAdam and Paulsen 1993), and can also be sources of more subtle social influence (Coleman 1988; Friedkin 2001; Haynie 2001). Activities that are completely devoid of political content and impart no skills or culture relevant to voting might still have an effect, if they connect youth to politically motivated

others. But if activities connect youth to peers who place little value on politics or civic engagement, they could have a negative impact on voting.

### *Gateways into Political Cultures*

A third way extracurriculars might encourage youth voting is by changing the political motivations of adolescents. This is not to say extracurriculars increase the actual stakes adolescents have in the political process, but they might alter their perception of having a stake. They can do this by changing the way their members look at the political processes and events (or how they frame them (Goffman 1974, Snow and Benford 1988)), and/or by changing the political and civic values their members hold. Whereas the previous two proposed mechanisms would change students' knowledge, sense of efficacy, and social networks, this mechanism would alter the cultures they are exposed to and ascribe to.

Extracurriculars can be avenues for exposure to new elements of culture; and due to social network dynamics of group membership, voluntary organizations tend to exist in cultural niches that represent specific portions of sociodemographic space (McPherson 1983). Some activities exist in cultural niches that value and promote civic involvement, including voting, but others may exist in parts of the cultural space that give little concern to elections and politics. Students can experience important political socialization in these voluntary organizations, in both positive and negative directions. Just as the first two mechanisms can be thought of broadly as operating on human capital (skills and knowledge) and social capital (peer influences), this proposed mechanism can be thought of as altering students' cultural capital.

There is a long literature linking cultural capital to educational outcomes (Bourdieu and Passeron 1979; Dimaggio 1982; Dumais 2002; Farkas et al. 1990; Kaufman and Gabler 2004; Laureau 1987). The term is not used consistently, sometimes blurring the

boundaries with the other forms of capital (Laureau and Weininger 2003); but according to a classic and popular reading among American sociologists (Lamont and Lareau 1988), cultural capital is essentially about the inheritance and acquisition of cultural markers that others recognize as signaling higher social status. Holders of cultural capital can strategically use it to get what they want, whether that be success in school, a job, access to an exclusive club, etc, though many uses may not be done consciously. But voting lacks the inherent exclusivity of these examples: unlike the classically studied outcomes of cultural capital, whether or not people vote is largely a matter of motivation. Voting should be thought of not as an outcome to be “purchased” with cultural capital, but instead as itself a marker of culture. Failure to participate in high profile elections can be a serious faux pas in certain social circles, while excessive political engagement can be seen as annoying or pretentious in other circles. While American subcultures may not neatly fit into the stereotype that all working class subcultures are politically disinterested and all high-status subcultures are excited to vote, there do exist serious class differences in voter turnout, which cultural capital theory would predict to be mirrored in the values of those cultures. Thus clubs that steer their members towards higher cultural capital will most likely also encourage them to act like good citizens, and vote.

#### *Not Just Whether, But How*

While the acquisition of the skills and sense of efficacy necessary for voting does not influence how youth will vote, the other two mechanisms-- peer and cultural influences--may not only encourage or discourage voting, but may also pull youth towards a particular political ideology or party. If activities are drawing students into a larger politically engaged culture, then it is quite likely that that culture has a more focused political mission than neutrally encouraging engagement. If the political

sympathies of a particular type of club vary randomly across the political spectrum from school to school, then we should expect to see no political differences between its members and non-members on the aggregate, even if individual clubs are quite radical in their views. If, however, a type of club is nationally more tied to one end of the political spectrum, more so than the average political ideology of people like its members, then we should expect to see this difference reflected in the political identifications of its former members.

## **DATA AND MEASURES**

### ***Data***

We use two nationally representative datasets to test the relationships between extracurriculars and youth voting: the National Educational Longitudinal Study (NELS) (U.S. Department of Education 2004) and the National Longitudinal Study of Adolescent Health (Add Health) (Udry 2003).

The first of these, NELS, followed a cohort of students from their eighth grade year in 1988 into young adulthood, with the last follow-up in the year 2000. Intervening follow-ups in 1990, 1992, and 1994 saw these students typically in their 10<sup>th</sup> grade year, 12<sup>th</sup> grade year, and two years after high school graduation. The sample of respondents that participated in all five waves (and attended high school for at least one of the years measured), included 9,575 students from 1476 schools.

The second dataset we use, Add Health, followed a national sample of 7<sup>th</sup>-12<sup>th</sup> graders from Wave 1 in 1994-95 to Wave 3 in 2001-02, when they were between 18 and 26 years old (Wave 2 did not contain the membership questions, so we do not include it). We use a sample of 10,752 students from 154 schools who participated in both Waves 1 and 3. What Add Health lacks in longitudinal length compared to NELS it makes up for in

within-school depth: in many of the schools that participated in Add Health, responses were obtained from most of their students, and some had complete coverage in Wave 1.

## **Measures**

In what follows below, we will characterize the general concepts behind variables used in our predictive models. See Appendix A for a summary of the construction and univariate statistics concerning the measures used in this paper.

### ***Key Dependent Variable: Voting in Presidential Elections***

While voting in general is of interest, we focus on the elections in which youth are by far the most likely to participate: presidential elections. The NELS data captured self-reported voting behavior for two presidential elections, 1992 and 1996. Unfortunately, respondents were not asked about the 1992 election until 1994, and about the 1996 election until 2000. Looking at the averages reported in Table A, we see that 48% of the NELS sample said they voted in 1992, as did 57% in 1996, both well above the means for their age group for those elections. Add Health respondents were asked if they voted in the 2000 presidential election in either 2001 or 2002 (a little better than the NELS survey), and 46% of them reported voting in that election. Actual turnout from 18-24 year olds was an estimated 50% in 1992, but then dropped to 35% in 1996 and 37% in 2000 (compared to 55.1%, 49.1%, and 51.3% of all eligible voters (FEC 2006)). At first glance this suggests that the 1992 responses are most accurate, except that most of the NELS respondents were 18 in 1992, the least likely age among the 18-24 year olds to vote. All of these self-reports should be viewed as inflated, but this does not necessarily render them useless. If the error of inflation is random with respect to the variables of interest, or is uniform across all subsets of students, then there is little threat to the validity of the

findings. On the other hand, if the error is related to the memberships that are the explanatory variables here, then our results will be unreliable. If people who go to church (or other religious services) in high school, for instance, are more likely to misreport voting, then the effect from church attendance may be purely from this. Or, if people who are not involved in anything are more likely to misreport voting, then we may be missing effects that would be statistically significant with a more accurate voting variable. As we do not have a way to measure propensity to misreport voting, these alternative explanations should be considered when reviewing any findings using the voting variables.

***Other Dependent Variables: Political Ideology & Party Identification***

In addition to presidential voting, Add Health asked respondents about their political ideology and which party they identify with (if any), allowing us to test whether political socialization tends towards one end of the spectrum. We do not actually know how they voted, only how they politically identify at the time of the survey. For political ideology, respondents were asked, "In terms of politics, do you consider yourself conservative, liberal, or middle-of-the-road?" They responded on a 5-point scale that included "very conservative," "conservative," "middle-of-the-road," "liberal," and "very liberal." They were then asked if they identify with a political party, and if they answered yes, they were asked to select which one from a list which included "Socialist," "Green," "Reform," "Libertarian," "Independent," and "other," as well as the two major parties. For simplicity's sake, we focus on whether clubs steer youth into the two major political parties.

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**Membership Variables**

In general, Add Health surveyed student's extracurricular involvements in more depth than did NELS, allowing us to analyze effects from a greater range of specific types of clubs. NELS asks about participation in larger categories of clubs, but we constructed similar categorical participation measures from Add Health for direct comparison. Service clubs, however, such as the Key Club, are measured explicitly in the NELS questionnaire, but not by Add Health. Instead, we suspect that the "Other club\organization" variable in Add Health is really capturing the service clubs included in that broader category. Some Vocational clubs may also fall into this category, as the only one specifically identified in Add Health is Future Farmers of America (FFA); thus the effect reported in the mixed models for Vocational clubs in Add Health is the same as the FFA effect, and is only reported once under FFA in the separate Add Health propensity matching tables. Also note that the Performing Arts category includes the subcategory Music.

While NELS captures extracurriculars in broader strokes than Add Health, it does so at more time points, typically students' 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade years. The current analysis does not fully explore differences between students who participate in some but not all years of their schooling; instead, we focused on comparing those who participated in a group at least one of these time points to those who never participated at all.

A few other membership variables were included that are not exactly school extracurricular activities. The first of these is religious service attendance. We could have included many different out-of-school activities, but none garner the attention for their role in political socialization like churches and similar religious groups (Verba, Schlozman and Brady 1995). Religious attendance is also the only out-of-school activity for which we have good information throughout high school in both studies. We classify students as religious-service attendees if they reported attending once or more per month. We also

include a variable indicating whether the respondent had any classes specifically about government or civics. The knowledge and experience obtained from such classes are considered important for politically socializing students (Niemi and Smith 2001), so we compare their effects to those of less pointedly-political and structured extracurriculars. Finally, we include an indicator of whether the student participated in any extracurricular activities at all, to determine whether voluntary participation in a group has an effect regardless of its form.

### **Control Variables**

There are a plethora of factors that are related to voting, and any attempt to isolate the effects of a group membership on voting needs to control for these, to make certain that comparisons are between similar individuals. Ideally, comparisons should only be made between individuals who are similar on every dimension except the factor in question (the group membership). To attempt to approach this ideal, we include a variety of measures of family background, parental involvement, student achievement, behaviors, values, and friendships, and school characteristics. Basic demographic variables include race\ethnicity, age, gender, and whether a language other than English is spoken at home. To further control for family background, we include measures of family income, parents' highest educational degree, and parents' highest occupation (ranked on the Duncan Socioeconomic Index). To capture parental involvement in the students' lives we include measures of parental contact with friends' parents, range of topics students regularly discuss with their parents, whether they live with a mother and/or father, and their parents' civic involvement. The last of these measures includes parental involvement in both PTA and other civic and voluntary organizations in the Add Health data, but only measures parental participation in school meetings and events in NELS. We include many different measures to capture students' attitudes, values, and

psychological qualities that may predispose them to participation in clubs, as well as voting. These include religiosity, composite measures of self esteem and locus of control (whether the student feels in control of his/her life), their educational expectations, their self-reported grades, a composite of their self-reported delinquency, whether they report using illegal drugs, their track in high school (ranked from remedial to honors), the number of years spent at their current high school, and measures of how much they like their neighborhood, teachers, and school. We also control for the total number of activities respondents were involved in (except when testing the effects of no involvement), so that we do not conflate the effects of activities with their ability to recruit highly involved students, who may also vote more. Additionally, the NELS data allows us to control for the cultural capital of students in their 8<sup>th</sup> grade year, prior to most of their opportunities for extracurricular involvement. This index (similar to that used by Dumais (2002)) includes whether the student goes to museums, takes art, music, or dance classes outside of school, goes to musical performances, and whether the student checks books out of the public library, all reported by a parent of the student. We also include measures to control for the effects of sociability on involvement and voting, specifically the academic and participatory orientation of the respondents' friends. In Add Health, we do this by averaging the grades and number of activities self-reported by the students' friends themselves (if these friends were also respondents). In NELS, we can only rely on the respondents' own reporting of their friends' average GPA, and we know nothing of their friend's involvement in activities. Finally, the measures of school characteristics we use are whether the school was public or private, urban, rural, or suburban, the size of the school in terms of enrollment (small, medium, or large), and the number of activities offered in the school. In Add Health, the last of these is derived from the list of activities reported by all the students surveyed in each school; in NELS, there

were only a small number of students surveyed in each school, so this measure instead relies on what the students reported to be available.

## **METHODS**

The heart of voluntary associations, even in adolescence, is self-selection. This greatly complicates any attempt to compare those who participate in them with those who do not. Separating out how much of the differences in outcomes between these two groups is due to a transformative effect of the activity, and how much is due to differences in the kinds of people who choose to participate in the activity, can probably never be fully achieved. Nonetheless, much of this self-selection bias can be controlled by only comparing students between these groups who are also similar on all of the pre-existing factors that may influence their decision to participate. Traditional regression techniques can accomplish this task, but propensity score matching does an even better job of minimizing this bias. The propensity score matching method seeks to emulate the classical experimental design, compensating for a lack of random assignment into treatment and control groups by finding suitable comparison cases for each treated case.

A propensity score (Rosenbaum and Rubin 1983, 1984) is a composite predictor of all of the available factors that influence whether a subject receives the treatment in question. In this study, the treatments are participation in each extracurricular activity (or category of activities); we used probit models with a host of control variables to predict a separate propensity score for each one. Propensity score matching then assigns cases for comparison between the treatment and control groups, based on their similarity. We used kernel matching, so treated cases were compared to a weighted average of the outcome variable for the cases with similar propensity scores, within a .06 bandwidth. Occasionally, there are no untreated cases within this bandwidth, so some treated cases

cannot be matched; these are noted in the tables, along with the sizes of the matched treated and control groups. After cases have been matched, the resulting comparison bears a great deal of resemblance to a simple T-test of differences in means. For instance, to determine if high school band membership influences presidential voting in early adulthood, this method would first use a probit regression model to predict whether each student was in the band, then match students who actually were in the band with those who actually were not but had a similar predicted propensity to be in the band, and then it would compare the rate of presidential voting across those matches.

Additionally, we use multi-level (students within schools) mixed logistic regression models to compare to the propensity score matching results. We also use these models to test for peer effects, using Sobel's (1986) three step method: the first model includes the standard explanatory (membership) and control variables, while the second model adds in the potential mediating variable, in this case the average voting by friends and/or fellow activity members. The degree of mediation is simply the difference in the explanatory variable's coefficients between these two model. In the third model, the mediating variable (peers' voting) becomes the dependent variable; the explanatory variable's effect on this is used to calculate the statistical significance of mediation. (see Table 6).

Both datasets contain enough data missing not at random to cause us concern. To alleviate this, we use a multiple imputation technique (Allison 2002) that predicts missing values from regressions using all of the other available variables. We impute five versions of each dataset to eliminate any bias from random fluctuations in the predictions, and then run the propensity score models and matched separately for each imputation. We then average the resulting estimated effects and hypotheses tests from all imputations.

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## RESULTS & DISCUSSION

For an initial point of comparison for the propensity score results, we first test multi-level logistic regression models predicting presidential voting in adulthood by adolescent variables, which are summarized in Tables 1a and 1b. Each extracurricular activity is modeled separately from the rest, to avoid issues of multi-collinearity; the coefficients for the control variables are reported from a separate model that included no extracurricular variables. Tables 2 and 3 then show the differences in presidential voting between groups of students who did and did not participate in the specified extracurriculars, matched on their propensity to have been in those activities. The performing arts clubs show the strongest relationships to early adult voting, while some sports are actually related to a lower likelihood of voting young. More generally, those who do not participate in anything show less voting than those who participate in at least one activity. In all propensity score models, every control variable in Table 1b is balanced (i.e. not significantly different) between the treatment and control groups, allowing us to make meaningful comparisons between them. Tables 4a, 4b, and 5 explores the effect of these high school activities on whether respondents identified as liberal or conservative, and as Democrats or Republicans, as young adults in 2000 (this information was only available in Add Health). The overall pattern is that religious attendance and a few sports steer students to the conservative end of the political spectrum and into the Republican party, while academic clubs, drama clubs, and honor society steer students towards the liberal end and/or into the Democratic party. Finally, Table 6 returns to the multi-level logistic models to look at whether peer effects mediates any of the effects of extracurriculars on voting, but finds little to no mediation. First, we note the general similarity in effects predicted by both the multi-level regression models and the propensity matching models (Table 1a: Voting Mixed Models, Table 1b: Voting Mixed Models Controls, Table 2: Voting Propensity Score Matches in NELS, and

Table 3: Voting Propensity Score Matches in Add Health). We take this to be evidence of the robustness of the effects of extracurriculars on adult voting, even as more stringent self-selection controls are introduced. Nonetheless, there are some non-trivial differences, particularly in the Add Health data on individual clubs, such as Spanish club and some of the sports, with the propensity models less likely to show effects as significant than the traditional regression models. This suggests that the propensity matching method is providing us with more conservative estimates of effects.

One of the biggest and most robust effects for a category of activities is for the performing arts: in all of models, participation in high school performing arts was related to a higher rate of voting for president in early adulthood, from a 3.6% to 5.1% increase. Music groups, which are also included within performing arts, also have consistently positive significant effects. Individually, drama club has a sizable effect in the Add Health data for the 2000 election, but isn't significant for the NELS 1992 and 1996 elections. Orchestra by itself has a large significant positive effect on 2000 voting, 11.7%.

Service clubs, only really measurable in NELS, have just a marginally significant effect; note that the control group of similar peers vote at a high rate as well. But we also suspect that the 3.8% effect of "Other Club or Organization" in the Add Health data for the 2000 election is driven by the inclusion of service clubs in that catch-all category.

Academic clubs are an activity we should expect to affect voting, as they do in the NELS data, but they do not show an effect at all in the Add Health data, and none of the individual academic clubs have an effect (aside from debate, which has a big effect in Add Health but none in NELS). Some clubs that one would assume to engage students politically, like journalism, also do not show significant effects. Note that members of such clubs are voting at a pretty high rate, but those members are from backgrounds that predisposed them towards voting, so their comparison groups are also voting at high rates.

Another important consideration, when examining the effect of different activities like the performing arts and academic clubs, is the level of commitment required to credibly claim participation. It may be common practice among students who show up to one language club or history club meeting to list it among their activities, particularly on college applications. But participation in a performing art club implies participation in an actual performance, which typically requires many hours of rehearsal beforehand. Competition teams, like sports and debate, also tend to require a large commitment of time, and leave little wiggle room for those who show up once or twice to claim membership. Other clubs, such as those devoted to hobbies and interests or academic areas, can vary from intense commitments to those that rarely meet at all, and have little impact on their members' lives.

The only significant negative effects for a membership are for some sports: in the Add Health data, 4.3% fewer high school basketball players voted in 2000 than did their similar peers, as did 7.2% fewer swimmers and 7.3% fewer volleyball players than their peers. High school athletes in general show no difference from their similar peers in the NELS data. Unfortunately, we are unable to balance the model for the composite sports category for the Add Health data, so only individual sports are considered with that data. But note that sports shows a negative effect on voting in Add Health using a multi-level logistic regression model.

The variable "Not Involved in Any School Club" serves to measure whether participation in any extracurriculars at all makes a difference. In the NELS data it unequivocally does: members of any club had 8.5% more voters in 1992 and 1996 compared to the completely uninvolved. In the Add Health data the effect is smaller, related to 3.8% less voting. This may be partly because the NELS measure is a much stronger indicator of non-involvement, requiring consistent non-participation across multiple grade levels throughout high school, while the Add Health measure only requires

students to not be involved in anything the one year that the study surveyed them about extracurriculars to qualify as a non-participant. Thus 22% of the Add Health respondents were non-participants, compared to only 11% of NELS respondents.

The effect of religious attendance in adolescence on adult voting is consistent in both propensity matching models. Given that religiosity is already controlled for, this is a strong testament to the effectiveness of religious groups in politically engaging youth: if religious service attendance does anything to encourage religiosity among its members, then this effect is compounded. Nonetheless, these results can also be read as a cautious note against overestimating religious institutions as political socializers: given the generous attention politics gives to churches and similar organizations, it is somewhat surprising that many high school clubs can be better predictors of adult voting than church membership. Religious attendance in high school, however, may not be truly voluntary for adolescents, and the voluntary nature of participation may be key to the effects of membership.

Though government and civics classes are not voluntary associations, we included a measure of them as such in the NELS models as a comparison, and another test of their effectiveness in turning adolescents into citizens. In our previous research, we found no effect by them on civic engagement in young adulthood (McFarland and Thomas 2006), nor do we find any effect here on voting.

### *Political Ideology*

Tables 4-5 explore whether these activities are socializing students into a particular political ideology or party. Tables 4a and 4b report the coefficients from multi-level regression models predicting these outcomes (multi-level logistic models for democrat and republican identification) (Table 4a: Ideology Mixed Models, Table 4b: Ideology Mixed Models Controls, and Table 5: Ideology Propensity Matches). As with

voting, the regression models are generally more likely to find significant differences, but we focus our discussion on the more conservative propensity score matching models. Only the high school activities that lead to any significant differences in the propensity score matches are shown in Table 5. The overall pattern is that religious attendance and a few sports steer students to the conservative end of the political spectrum and into the Republican party, while academic clubs, drama clubs, and honor society steer students towards the liberal end and/or into the Democratic party. Religious attendance and honor society are the only two associations that show a significant effect on both party identification and political ideology. As with the general voting results for Add Health, we are unable to balance the models for the sports composite, so we do not know the effect of sports membership in general on political ideology. Also note that the great majority of activities show no effect on political ideology or party affiliation.

### *Mechanisms*

How much of these effects are due to political learning, social capital, or the third category of motivation and cultural capital, we cannot definitively disentangle with this data. But we do have some meaningful evidence. First, the lack of a significant effect for participation in government\civics classes, contrasted with the fact that the strongest effects are for activities without explicit political content, suggests that straightforward learning about politics and voting is not what is primarily behind these effects. But this does not rule out the importance of learning collective efficacy in these activities, nor the importance of habituation to civic engagement.

As for social capital, we are able to gauge the importance of peers using the Add Health data. Returning to the multi-level regression models from Tables 1a & 1b, we added controls for the average voting of fellow club members at the respondents' schools, and the average voting of the fellow students they listed as friends. Table 6

shows these mediation tests only for the activities that showed at least a marginally significant effect in Table 1a, with friend's voting as the mediating variable (Table 6: Peer Effects Mediation). There is some significant mediation of some activities' effects by peer voting, but this mediation is minuscule: the largest difference is for the marginally significant Future Farmers of America effect, but even that only reduces the 1.35 increase in odds of voting for FFA members down to 1.32. However, Sobel's test (1986) makes assumptions about independence of coefficients that do not hold in logistic or multi-level models, so we repeated these tests with standard linear probability model regressions. These were more likely to find significance in the mediated differences, but still only minuscule changes in the coefficients for the extracurricular activities. As linear probability models are suboptimal for hierarchical data and a dichotomous dependent variable, we report only the mixed logistical models' results here. These results vary little when controlling for all of the people the respondents shared activities with, for just those people in the club being tested, for just the respondents' high school friends, or for any combination of these. This suggests that exposure to peers in high school who are more likely to vote later on may be responsible for at most a small amount of the effect of some activities, but most of what makes extracurriculars important for voting is not a direct social network effect. But this does not rule out more indirect network effects as important mechanisms: if these activities are continued into adulthood, in post-high-school organizations, they may lead to different peer networks that are not measured by this study.

For cultural mechanisms, we are not able to directly test these, but do note that those activities traditionally associated with high cultural capital (DiMaggio 1982) are among those with the strongest and most consistent effects on voting. Also note that the NELS results control for a measure of cultural capital prior to high school; if cultural capital is playing a role in those results, it is cultural capital that either is not captured by this

measure, or it is cultural capital acquired during or after high school. This is good evidence that extracurriculars have an impact on voting independent of self-selection by inherited cultural capital.

## CONCLUSION

The general finding of this research is that a number of high school extracurricular activities are positively related to voting in early adulthood, even after self-selection factors are controlled for, and that uninvolved is related to a lower rate of voting. Support is thus found for the thesis that extracurriculars play a role in the political socialization of young citizens into active voters. But the results show that not all extracurriculars are equal in this role, with some showing little or no effect, and a few even seem to be counterproductive for creating young voters. They also demonstrate that even activities that do not involve political content or voting-relevant skills can lead to more active political participation; music is a demonstrative case for this point. Assuming we have sufficiently controlled for self-selection, this must be something gained from participation in these activities. Our evidence suggests that little of this effect is from learning skills needed to vote or gaining peers who will influence students to vote. Instead, we believe it is mostly from engaging in cultures that value civic behaviors like voting, learning collective efficacy, and generally accustoming students to civic participation. Similarly, we believe the negative effects of some sports teams are due to the way they channel students towards parts of American culture that are less interested in political matters.

Most of these effects are not huge, in the range of a few to several percentage points of difference in voting. In terms of voter turnout, however, even a few percentage points difference can change elections. These are thus strong and politically significant differences between participants and non-participants in their transition into voting. We

do not mean to suggest, however, that one could increase the voter turnout among 18-24 year olds by 5% by merely enrolling them all in performing arts clubs. We suspect that part of what makes these clubs effective channels of socialization is their voluntary nature. If so, then universal participation is perhaps unattainable; but this does not mean that schools and public policy do not have an important impact on this kind of socialization. Schools can create environments that encourage extracurricular involvement, and teacher leadership of such activities, through funding and policy. They can also discourage extracurriculars through neglect. We hope these results also demonstrate that which activities survive and which do not will have an impact on future voting behaviors of young adults. While most activities do not socialize students into a particular political ideology, a nationwide shift in school funding away from the arts, for instance, while maintaining funding for sports, could lead to a politically biased outcome.

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Table 1a - Multilevel Model Coefficients for Adolescent Extracurricular Activities:  
Log Odds of Voting in Presidential Elections in Adulthood

|                                 | NELS 1992-1996 |           | AH 2000 |            |
|---------------------------------|----------------|-----------|---------|------------|
|                                 | Est            | SE        | Est     | SE         |
| <i>Clubs by Category</i>        |                |           |         |            |
| Academic                        | .094           | (.035)**  | .016    | (.061)     |
| Vocational                      | .091           | (.047)+   | .299    | (.156) +   |
| Performing Arts                 | .107           | (.029)*** | .172    | (.053) **  |
| Sports                          | -.106          | (.029)*** | -.110   | (.051) *   |
| Journalism                      | .088           | (.043)*   | .030    | (.074)     |
| Music                           | .083           | (.029)**  | .173    | (.055) **  |
| Service                         | .128           | (.054)*   |         |            |
| <i>Specific Clubs</i>           |                |           |         |            |
| French Club                     |                |           | -.095   | (.119)     |
| German Club                     |                |           | .180    | (.200)     |
| Latin Club                      |                |           | .113    | (.190)     |
| Spanish Club                    |                |           | -.263   | (.087) **  |
| Book Club                       |                |           | .213    | (.224)     |
| Computer Club                   |                |           | -.225   | (.146)     |
| Debate Team                     | -.024          | (.127)    | .172    | (.159)     |
| Drama Club                      | .095           | (.040)*   | .229    | (.087) **  |
| Future Farmers of America       |                |           | .299    | (.156) +   |
| History Club                    |                |           | .137    | (.205)     |
| Math Club                       |                |           | .055    | (.127)     |
| Science Club                    |                |           | -.170   | (.123)     |
| Band                            |                |           | .168    | (.064) **  |
| Cheerleading\ Dance Team        |                |           | -.174   | (.082) *   |
| Chorus\ Choir                   |                |           | .093    | (.071)     |
| Orchestra                       |                |           | .475    | (.167) **  |
| Other Club or Organization      |                |           | .113    | (.059) +   |
| Baseball\ Softball              |                |           | -.020   | (.059)     |
| Basketball                      |                |           | -.121   | (.058) *   |
| Field Hockey                    |                |           | -.098   | (.219)     |
| Football                        |                |           | -.055   | (.079)     |
| Ice Hockey                      |                |           | .072    | (.149)     |
| Soccer                          |                |           | -.097   | (.082)     |
| Swimming                        |                |           | -.239   | (.101) *   |
| Tennis                          |                |           | -.121   | (.111)     |
| Track                           |                |           | .031    | (.069)     |
| Volleyball                      |                |           | -.360   | (.083) *** |
| Wrestling                       |                |           | .032    | (.110)     |
| Other Sport                     |                |           | .129    | (.078) +   |
| Newspaper                       |                |           | .096    | (.107)     |
| Honor Society                   | .100           | (.046)*   | .060    | (.080)     |
| Student Council                 | .112           | (.048)*   | .032    | (.084)     |
| Yearbook                        |                |           | -.052   | (.083)     |
| <i>Other</i>                    |                |           |         |            |
| Church                          | .133           | (.036)*** | .086    | (.050) +   |
| Had a Government\ Civics Class  | .066           | (.039)+   |         |            |
| Not Involved in Any School Club | -.392          | (.090)*** | -.097   | (.061)     |

Note: Each activity run in a separate model to avoid multicollinearity; see Table 1b for controls

+p < .1, \*p < .05, \*\*p < .01, \*\*\*p < .001

Table 1b - Multilevel Model Coefficients for Control Variables: Log Odds of Voting in Presidential Elections in Adulthood

|                                                 | NELS 1992-1996 |            | AH 2000  |            |
|-------------------------------------------------|----------------|------------|----------|------------|
|                                                 | Est            | SE         | Est      | SE         |
| <i>School Features</i>                          |                |            |          |            |
| Public school                                   | -.020          | (.135)     | -.414    | (.178) *   |
| #Clubs school offers                            | -.036          | (.026)     | .019     | (.020)     |
| Urban school                                    | .178           | (.093) +   | -.065    | (.110)     |
| Rural school                                    | .010           | (.095)     | -.206    | (.137)     |
| Small Sized School                              | -.001          | (.139)     | -.205    | (.179)     |
| Medium Sized School                             | -.067          | (.090)     | -.069    | (.114)     |
| West                                            | .399           | (.107) *** | -.217    | (.137)     |
| Midwest                                         | .278           | (.097) **  | -.113    | (.121)     |
| Northeast                                       | .057           | (.107)     | -.053    | (.132)     |
| <i>Student Attributes</i>                       |                |            |          |            |
| Age (years)                                     | .094           | (.048)     | .103     | (.018) *** |
| Female                                          | .013           | (.056)     | -.063    | (.045)     |
| Black                                           | -.083          | (.098)     | .380     | (.078) *** |
| Asian                                           | -1.073         | (.137) *** | -.703    | (.137) *** |
| Hispanic                                        | -.320          | (.114) **  | -.123    | (.082)     |
| Native American                                 | .097           | (.286)     | -.063    | (.208)     |
| Other multi-race                                |                |            | .001     | (.085)     |
| Language Minority                               | -.351          | (.105) *** | -.367    | (.115) *** |
| <i>Parental Resources</i>                       |                |            |          |            |
| Parents' education                              | .113           | (.027) *** | .187     | (.025) *** |
| Log of Family income                            | .023           | (.025)     | .038     | (.021)     |
| Parents' highest occupation                     |                |            | .003     | (.001) *   |
| <i>Parent Presence, Attitudes, and Behavior</i> |                |            |          |            |
| No resident mom                                 |                |            | -.043    | (.105)     |
| No resident dad                                 |                |            | -.085    | (.054)     |
| Parental closure                                |                |            | .017     | (.012)     |
| Range of talk with parents                      | .397           | (.076) *** | .052     | (.015) *** |
| Parents' civic involvement                      | .089           | (.025) *** | .093     | (.029) **  |
| <i>Student Attitudes/Values</i>                 |                |            |          |            |
| Importance of religion                          | .172           | (.048) *** | .119     | (.030) *** |
| High self-esteem                                | .140           | (.053) **  | .148     | (.038) *** |
| High Locus of Control                           | -.009          | (.004) *   |          |            |
| Educational expectations                        | .149           | (.025) *** | .058     | (.011) *** |
| Liking of teachers                              | .069           | (.059)     | .051     | (.034)     |
| Liking of school                                |                |            | .014     | (.010)     |
| Liking of neighborhood                          |                |            | .011     | (.010)     |
| Achieved grades                                 | .071           | (.050)     | .199     | (.035) *** |
| 8 <sup>th</sup> Grade Cultural Capital          | .074           | (.015) *** |          |            |
| Delinquency composite                           | -.016          | (.005) **  | .005     | (.005)     |
| Use of Illegal Drugs                            |                |            | -.127    | (.069)     |
| Educational Track in H.S.                       | .241           | (.041) *** |          |            |
| Years at particular school                      | .037           | (.023)     | .020     | (.017)     |
| Total extracurriculars                          | .061           | (.015) *** | -.008    | (.010)     |
| <i>Friends in High School</i>                   |                |            |          |            |
| Friends Achieved Grades                         | -.037          | (.076)     | -.007    | (.430)     |
| Friends Extracurriculars                        |                |            | .112     | (.043) **  |
| <i>Model Statistics</i>                         |                |            |          |            |
| N                                               | 10350          |            | 10752    |            |
| BIC                                             | 43081.9        |            | 54703.2  |            |
| Scaled Chi Square                               | 8372.31        |            | 10626.23 |            |

Note: Coefficients are from model including "No Activities" variable (see Table 1a)

+p &lt; .1, \*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 2 - Percent Voted in 1992 or 1996 Presidential Elections Comparison of NELS Respondents Matched on their Propensity to Belong to Each High School Extra-Curricular Activity

|                                 | Members | Control Group | Difference |           | Treated N<br>(Unmatched) | Control<br>N |
|---------------------------------|---------|---------------|------------|-----------|--------------------------|--------------|
|                                 |         |               | Est        | T         |                          |              |
| <i>Clubs by Category</i>        |         |               |            |           |                          |              |
| Academic                        | .767    | .721          | .046       | 3.36 **   | 2064                     | 8102         |
| Performing Arts                 | .766    | .715          | .051       | 4.44 ***  | 2921                     | 7245         |
| Service                         | .795    | .752          | .043       | 1.72 +    | 547                      | 9619         |
| Journalism                      | .786    | .753          | .033       | 1.71 +    | 946(1)                   | 9219         |
| Vocational                      | .702    | .658          | .044       | 1.69 +    | 653(1)                   | 9512         |
| Sports                          | .719    | .720          | -.001      | -.11      | 5308                     | 4858         |
| Music                           | .767    | .718          | .049       | 3.74 ***  | 2193                     | 7973         |
| <i>Specific Clubs</i>           |         |               |            |           |                          |              |
| Student Council                 | .839    | .769          | .070       | 3.32 **   | 708                      | 9458         |
| Drama                           | .774    | .748          | .026       | 1.38      | 1042(1)                  | 9123         |
| Debate                          | .726    | .703          | .023       | .81       | 496                      | 9670         |
| Honor Society                   | .805    | .781          | .024       | 1.32      | 945                      | 9221         |
| <i>Other</i>                    |         |               |            |           |                          |              |
| Church                          | .745    | .697          | .048       | 4.93 ***  | 4115                     | 6051         |
| Had a Government\Civics Class   | .672    | .666          | .006       | .38       | 1502                     | 8664         |
| Not Involved in Any School Club | .482    | .567          | -.085      | -3.91 *** | 1051                     | 9115         |

+p &lt; .1, \*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 3 - Percent Voted in 2000 Presidential Election Comparison of Add Health Respondents Matched on their Propensity to Belong to Each High School Extra-Curricular Activity

|                                 | Members | Control Group | Difference |          | Treated N (Unmatched) | Control N |
|---------------------------------|---------|---------------|------------|----------|-----------------------|-----------|
|                                 |         |               | Est        | T        |                       |           |
| <i>Clubs by Category</i>        |         |               |            |          |                       |           |
| Academic                        | .519    | .499          | .020       | 1.34     | 2162                  | 8590      |
| Performing Arts                 | .536    | .500          | .036       | 2.68 **  | 2900                  | 7852      |
| Journalism                      | .526    | .513          | .013       | .64      | 1211                  | 9541      |
| Music                           | .534    | .502          | .032       | 2.25 *   | 2467                  | 8285      |
| <i>Specific Clubs</i>           |         |               |            |          |                       |           |
| French Club                     | .510    | .469          | .041       | 1.17     | 418                   | 10334     |
| German Club                     | .511    | .472          | .039       | .64      | 133(4)                | 10615     |
| Latin Club                      | .511    | .439          | .072       | 1.36     | 167(9)                | 10576     |
| Spanish Club                    | .485    | .499          | -.014      | -.53     | 785                   | 9967      |
| Book Club                       | .523    | .419          | .104       | 1.52     | 110(1)                | 10641     |
| Computer Club                   | .398    | .436          | -.038      | -.92     | 289(1)                | 10462     |
| Debate Team                     | .604    | .492          | .112       | 2.56 *   | 255                   | 10497     |
| Drama Club                      | .570    | .510          | .060       | 2.40 *   | 786                   | 9966      |
| Future Farmers of America       | .507    | .465          | .042       | .86      | 207(11)               | 10534     |
| History Club                    | .514    | .501          | .013       | .22      | 137(1)                | 10614     |
| Math Club                       | .513    | .491          | .022       | .61      | 372(17)               | 10363     |
| Science Club                    | .512    | .484          | .028       | .80      | 412                   | 10340     |
| Band                            | .543    | .513          | .030       | 1.62     | 1405(4)               | 9343      |
| Cheerleading\ Dance Team        | .474    | .492          | -.018      | -.83     | 1069                  | 9683      |
| Chorus\ Choir                   | .522    | .501          | .021       | 1.00     | 1155                  | 9597      |
| Orchestra                       | .580    | .463          | .117       | 2.35 *   | 198(9)                | 10545     |
| Other Club or Organization      | .548    | .510          | .038       | 2.50 *   | 2053                  | 8699      |
| Baseball\ Softball              | .468    | .495          | -.027      | -1.63    | 1916                  | 8836      |
| Basketball                      | .461    | .504          | -.043      | -2.89 ** | 2240                  | 8512      |
| Field Hockey                    | .426    | .419          | .007       | .12      | 122                   | 10630     |
| Football                        | .463    | .503          | -.040      | -2.04 *  | 1281                  | 3655      |
| Ice Hockey                      | .478    | .496          | -.018      | -.36     | 209                   | 10543     |
| Soccer                          | .495    | .510          | -.015      | -.62     | 839                   | 9913      |
| Swimming                        | .447    | .519          | -.072      | -2.41 *  | 561                   | 10191     |
| Tennis                          | .493    | .514          | -.021      | -.65     | 505                   | 10247     |
| Track                           | .497    | .526          | -.029      | -1.55    | 1420                  | 9332      |
| Volleyball                      | .442    | .515          | -.073      | -3.05 ** | 884                   | 9868      |
| Wrestling                       | .458    | .481          | -.023      | -.65     | 406                   | 10346     |
| Other Sport                     | .517    | .510          | .007       | .27      | 966                   | 9786      |
| Newspaper                       | .565    | .529          | .036       | 1.16     | 497                   | 10145     |
| Honor Society                   | .591    | .558          | .033       | 1.62     | 1140                  | 9612      |
| Student Council                 | .544    | .545          | -.001      | -.06     | 918                   | 9834      |
| Yearbook                        | .504    | .498          | .006       | .28      | 940                   | 9812      |
| <i>Other</i>                    |         |               |            |          |                       |           |
| Church                          | .486    | .429          | .057       | 6.97 *** | 7359                  | 3393      |
| Not Involved in Any School Club | .363    | .401          | -.038      | -2.65 ** | 2362                  | 8390      |

+p &lt; .1, \*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 4a - Multilevel Model Coefficients for Adolescent Extracurricular Activities: Liberal Ideology  
Scale and Log Odds of Identifying Republican and Democrat

|                                 | Liberal Scale |            | Democrat |           | Republican |            |
|---------------------------------|---------------|------------|----------|-----------|------------|------------|
|                                 | Est           | SE         | Est      | SE        | Est        | SE         |
| <i>Clubs by Category</i>        |               |            |          |           |            |            |
| Academic                        | -.020         | (.021)     | .093     | (.115)    | -.237      | (.117) *   |
| Vocational                      | -.074         | (.054)     | -.481    | (.313)    | .361       | (.308)     |
| Performing Arts                 | .057          | (.019) **  | .098     | (.103)    | -.059      | (.105)     |
| Sports                          | -.009         | (.018)     | .124     | (.100)    | .030       | (.101)     |
| Journalism                      | -.023         | (.026)     | -.193    | (.144)    | .056       | (.148)     |
| Music                           | .048          | (.019) *   | .169     | (.105)    | -.156      | (.107)     |
| <i>Specific Clubs</i>           |               |            |          |           |            |            |
| French Club                     | -.053         | (.042)     | -.033    | (.225)    | .017       | (.230)     |
| German Club                     | -.054         | (.069)     | -.440    | (.358)    | .445       | (.355)     |
| Latin Club                      | .114          | (.067) +   | .774     | (.333) *  | -.790      | (.348) *   |
| Spanish Club                    | -.034         | (.030)     | .326     | (.170) +  | -.345      | (.174) *   |
| Book Club                       | -.134         | (.081) +   | -.183    | (.442)    | -.884      | (.468) +   |
| Computer Club                   | -.074         | (.050)     | -.642    | (.321) *  | -.263      | (.337)     |
| Debate Team                     | .145          | (.054) **  | .400     | (.276)    | -.939      | (.295) **  |
| Drama Club                      | .108          | (.030) *** | -.158    | (.155)    | .107       | (.157)     |
| Future Farmers of America       | -.074         | (.054)     | -.481    | (.313)    | .361       | (.308)     |
| History Club                    | -.086         | (.071)     | -.187    | (.379)    | .562       | (.381)     |
| Math Club                       | -.125         | (.044) **  | -.239    | (.240)    | .306       | (.244)     |
| Science Club                    | .016          | (.043)     | .261     | (.200)    | -.381      | (.204) +   |
| Band                            | .015          | (.022)     | .041     | (.125)    | -.079      | (.126)     |
| Cheerleading\ Dance Team        | -.003         | (.029)     | -.480    | (.159) ** | .533       | (.163) **  |
| Chorus\ Choir                   | .030          | (.025)     | .061     | (.131)    | -.037      | (.133)     |
| Orchestra                       | .121          | (.056) *   | .474     | (.267) +  | -.029      | (.268)     |
| Other Club or Organization      | .031          | (.020)     | -.012    | (.108)    | -.101      | (.110)     |
| Baseball\ Softball              | .000          | (.021)     | -.109    | (.112)    | .159       | (.114)     |
| Basketball                      | -.059         | (.020) **  | .116     | (.112)    | .106       | (.114)     |
| Field Hockey                    | .056          | (.077)     | -.815    | (.455) *  | 1.336      | (.469) **  |
| Football                        | -.084         | (.028) **  | .017     | (.162)    | .020       | (.163)     |
| Ice Hockey                      | .030          | (.051)     | -.186    | (.266)    | .389       | (.272)     |
| Soccer                          | -.038         | (.029)     | .003     | (.152)    | .148       | (.154)     |
| Swimming                        | .083          | (.036) *   | .569     | (.187) ** | -.758      | (.194) *** |
| Tennis                          | .001          | (.038)     | -.446    | (.193) *  | .293       | (.194)     |
| Track                           | -.120         | (.024)     | .036     | (.136)    | .101       | (.138)     |
| Volleyball                      | .009          | (.029)     | .158     | (.154) \  | -.187      | (.157)     |
| Wrestling                       | .030          | (.038)     | .350     | (.221)    | -.160      | (.227)     |
| Other Sport                     | .007          | (.027)     | -.117    | (.151)    | -.003      | (.154)     |
| Newspaper                       | .041          | (.037)     | -.009    | (.201)    | -.295      | (.208)     |
| Honor Society                   | .044          | (.028)     | -.016    | (.140)    | .129       | (.141)     |
| Student Council                 | .077          | (.030) **  | .079     | (.153)    | -.256      | (.157)     |
| Yearbook                        | -.068         | (.029) *   | -.332    | (.165) *  | .317       | (.170) +   |
| <i>Other</i>                    |               |            |          |           |            |            |
| Church                          | -.068         | (.018) *** | -.318    | (.102) ** | .190       | (.104) +   |
| Not Involved in Any School Club | .001          | (.021)     | .311     | (.134) *  | -.184      | (.137)     |

Note: Each activity run in a separate model to avoid multicollinearity; see Table 4b for controls

+p < .1, \*p < .05, \*\*p < .01, \*\*\*p < .001

Table 4b - Multilevel Model Coefficients for Control Variables: Liberal Ideology Scale and Log Odds of Identifying Republican and Democrat

|                                                 | Liberal Scale |            | Democrat |            | Republican |            |
|-------------------------------------------------|---------------|------------|----------|------------|------------|------------|
|                                                 | Est           | SE         | Est      | SE         | Est        | SE         |
| <i>School Features</i>                          |               |            |          |            |            |            |
| Public school                                   | .005          | (.057)     | .164     | (.399)     | -.108      | (.403)     |
| #Clubs school offers                            | .010          | (.007)     | -.007    | (.051)     | -.008      | (.051)     |
| Urban school                                    | -.029         | (.036)     | -.298    | (.250)     | .232       | (.254)     |
| Rural school                                    | -.143         | (.044) **  | -.347    | (.316)     | .295       | (.317)     |
| Small Sized School                              | -.017         | (.059)     | -.356    | (.414)     | .182       | (.422)     |
| Medium Sized School                             | .022          | (.037)     | -.105    | (.257)     | -.033      | (.261)     |
| West                                            | .137          | (.045) **  | .584     | (.311) +   | -.616      | (.315) +   |
| Midwest                                         | .023          | (.039)     | .322     | (.278)     | -.377      | (.282)     |
| Northeast                                       | .078          | (.043) +   | .105     | (.298)     | -.263      | (.301)     |
| <i>Student Attributes</i>                       |               |            |          |            |            |            |
| Age (years)                                     | -.019         | (.006) **  | -.036    | (.037)     | .055       | (.037)     |
| Female                                          | .043          | (.016) **  | .557     | (.089) *** | -.340      | (.090) *** |
| Black                                           | .038          | (.028)     | 3.368    | (.224) *** | -3.444     | (.255) *** |
| Asian                                           | .022          | (.046)     | .986     | (.288) *** | -.719      | (.307) *   |
| Hispanic                                        | .057          | (.029) *   | .805     | (.160) *** | -.760      | (.166) *** |
| Native American                                 | .019          | (.070) **  | -.041    | (.453)     | .168       | (.455)     |
| Other multi-race                                | .094          | (.030) **  | 1.135    | (.169) *** | -1.172     | (.179) *** |
| Language Minority                               | .030          | (.038)     | .469     | (.245) +   | -.568      | (.262) *   |
| <i>Parental Resources</i>                       |               |            |          |            |            |            |
| Parents' education                              | .015          | (.009) +   | .057     | (.049)     | -.092      | (.050) +   |
| Log of Family income                            | .008          | (.007)     | -.091    | (.043) *   | .110       | (.044) *   |
| Parents' highest occupation                     | .000          | (.000)     | -.007    | (.003) *   | .006       | (.003) *   |
| <i>Parent Presence, Attitudes, and Behavior</i> |               |            |          |            |            |            |
| No resident mom                                 | .058          | (.036)     | -.516    | (.222) *   | .207       | (.223)     |
| No resident dad                                 | .068          | (.019) *** | .467     | (.110) *** | -.529      | (.115) *** |
| Parental closure                                | -.012         | (.004) **  | -.038    | (.023)     | .044       | (.024) +   |
| Range of talk with parents                      | -.003         | (.005)     | .052     | (.028) +   | .051       | (.029) +   |
| Parents' civic involvement                      | .036          | (.010) *** | .085     | (.058)     | -.056      | (.059)     |
| <i>Student Attitudes/Values</i>                 |               |            |          |            |            |            |
| Importance of religion                          | -.092         | (.011) *** | -.465    | (.063) *** | .499       | (.065) *** |
| High self-esteem                                | -.031         | (.013) *   | -.047    | (.074)     | .142       | (.075) +   |
| Educational expectations                        | .000          | (.004)     | .017     | (.023)     | .008       | (.023)     |
| Liking of teachers                              | -.020         | (.012) +   | .070     | (.070)     | -.049      | (.071)     |
| Liking of school                                | -.001         | (.003)     | .043     | (.020) *   | -.052      | (.021) *   |
| Liking of neighborhood                          | .000          | (.003)     | -.005    | (.020)     | .016       | (.020)     |
| Achieved grades                                 | .029          | (.012) *   | .018     | (.069)     | -.019      | (.071)     |
| Delinquency composite                           | .000          | (.002)     | -.021    | (.010) *   | .031       | (.010) **  |
| Use of Illegal Drugs                            | .138          | (.024) *** | .350     | (.139) *   | -.550      | (.144) *** |
| Years at particular school                      | .003          | (.006)     | -.023    | (.035)     | .023       | (.036)     |
| Total extracurriculars                          | .006          | (.004)     | .005     | (.021)     | -.010      | (.022)     |
| <i>Friends in High School</i>                   |               |            |          |            |            |            |
| Friends Achieved Grades                         | -.027         | (.015) +   | -.278    | (.090) **  | .253       | (.091) **  |
| Friends Extracurriculars                        | -.004         | (.015)     | -.108    | (.084)     | 0.04       | (.085)     |
| <i>Model Statistics</i>                         |               |            |          |            |            |            |
| N                                               | 9850          |            | 3893     |            | 3893       |            |
| BIC                                             | 28429         |            | 22253.9  |            | 22676.6    |            |
| Chi Square <sup>1</sup>                         | 154.99        |            | 3764.95  |            | 3765.94    |            |

Note: Coefficients are from model including "No Activities" variable (see Table 4a)

<sup>1</sup> Scaled Chi Square for Mixed Logit Models (Democrat & Republican)

+p &lt; .1, \*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 5 – Political Identification as Young Adults: Comparison of Add Health Respondents Matched on their Propensity to Belong to Each High School Extra-Curricular Activity

|                                                            | Members | Control<br>Group | Difference<br>Est    T |            | Treated N<br>(Unmatched) | Control N |
|------------------------------------------------------------|---------|------------------|------------------------|------------|--------------------------|-----------|
| <i>Liberal Scale (1=Very Conservative, 5=Very Liberal)</i> |         |                  |                        |            |                          |           |
| Drama                                                      | 3.11    | 3.01             | .100                   | 2.26 *     | 746                      | 9104      |
| Honor Society                                              | 3.04    | 2.95             | .090                   | 2.80 **    | 1088                     | 8762      |
| Basketball                                                 | 2.91    | 2.97             | -.060                  | -2.63 **   | 2086                     | 7764      |
| Football                                                   | 2.89    | 2.95             | -.060                  | -2.04 *    | 1273                     | 8577      |
| Church                                                     | 2.92    | 3.07             | -.150                  | -11.96 *** | 6752                     | 3098      |
| <i>Percent Identifying as Democrats</i>                    |         |                  |                        |            |                          |           |
| Honor Society                                              | .609    | .529             | .080                   | 2.61 **    | 512                      | 3381      |
| Academic                                                   | .617    | .554             | .063                   | 2.68 **    | 887                      | 3006      |
| Church                                                     | .588    | .672             | -.084                  | -6.54 ***  | 2832(1)                  | 1061      |
| <i>Percent Identifying as Republicans</i>                  |         |                  |                        |            |                          |           |
| Church                                                     | .373    | .282             | .091                   | 7.33 ***   | 2832(1)                  | 1061      |
| Track                                                      | .398    | .335             | .063                   | 2.21 *     | 560                      | 3333      |
| Academic                                                   | .331    | .402             | -.071                  | -3.07 **   | 887                      | 3006      |
| Honor Society                                              | .357    | .433             | -.076                  | -2.48 *    | 512                      | 3381      |

+p &lt; .1, \*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 6 - Peef Effects Mediation in Multilevel Model Coefficients: Log Odds of Voting in 2000 Presidential Election

|                                               | Original Model |            | Original + Mediator <sup>1</sup> |            | Predicting Mediator <sup>1</sup> |            | Mediation  |          |
|-----------------------------------------------|----------------|------------|----------------------------------|------------|----------------------------------|------------|------------|----------|
|                                               | Est            | SE         | Est                              | SE         | Est                              | SE         | Difference | Z        |
| <i>Clubs by Category</i>                      |                |            |                                  |            |                                  |            |            |          |
| Performing Arts                               | .172           | (.053) **  | .171                             | (.054) **  | .015                             | (.042)     | .001       | .355     |
| Sports                                        | -.110          | (.051) *   | -.110                            | (.052) *   | -.007                            | (.039)     | .000       | -.179    |
| Music                                         | .173           | (.055) **  | .172                             | (.055) **  | .012                             | (.043) *** | .001       | .286     |
| <i>Specific Clubs</i>                         |                |            |                                  |            |                                  |            |            |          |
| Spanish Club                                  | -.263          | (.087) **  | -.267                            | (.087) **  | .117                             | (.067) +   | .004       | 1.538    |
| Drama Club                                    | .229           | (.087) **  | .222                             | (.087) *   | .190                             | (.067) **  | .007       | 2.135 *  |
| Future Farmers of America                     | .299           | (.156) +   | .282                             | (.156) +   | .403                             | (.122) **  | .017       | 2.315 *  |
| Band                                          | .168           | (.064) **  | .165                             | (.064) *   | .086                             | (.050) +   | .003       | 1.520    |
| Cheerleading\ Dance Team                      | -.174          | (.082) *   | -.176                            | (.082) *   | .070                             | (.063)     | .002       | 1.051    |
| Orchestra                                     | .475           | (.166) **  | .482                             | (.167) **  | -.116                            | (.124)     | -.007      | -.898    |
| Other Club or Organization                    | .113           | (.059) +   | .107                             | (.059) +   | .153                             | (.046) *** | .006       | 2.323 *  |
| Basketball                                    | -.121          | (.058) *   | -.116                            | (.058) *   | -.112                            | (.045) *   | -.005      | -1.975 * |
| Swimming                                      | -.239          | (.101) *   | -.237                            | (.102) *   | -.102                            | (.078)     | -.002      | -1.213   |
| Volleyball                                    | -.360          | (.083) *** | -.354                            | (.083) *** | -.140                            | (.064) *   | -.006      | -1.814 + |
| Other Sport                                   | .129           | (.078) +   | .128                             | (.078)     | .036                             | (.060)     | .001       | .590     |
| <i>Other</i>                                  |                |            |                                  |            |                                  |            |            |          |
| Church                                        | .086           | (.050) +   | .082                             | (.050)     | .113                             | (.039) **  | .004       | 2.161 *  |
| <i>Peer Effects (average over all models)</i> |                |            |                                  |            |                                  |            |            |          |
| % of High School Friends Who Voted            |                |            | .172                             | (.053) **  |                                  |            |            |          |
| % of Extracurricular Peers Who Voted          |                |            | .010                             | (.270)     |                                  |            |            |          |

Note: Each activity was run in a separate model to avoid multicollinearity; see Table 1b for controls

<sup>1</sup> The mediating variable for these models was % of High School Friends Who Voted

+p < .1, \*p < .05, \*\*p < .01, \*\*\*p < .001

**Table A.** Variable Definitions, with Means and Standard Deviations

| Variable Name                 | Add Health Variable Description                                                                     |       | NELS Variable Description                                                                                                                    |       |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>Dependent Variables</b>    |                                                                                                     |       |                                                                                                                                              |       |
| <b>Voted for President</b>    |                                                                                                     |       |                                                                                                                                              |       |
| 1992                          | Not applicable                                                                                      |       | Self-report voted in 1992 presidential elections (0,1)                                                                                       | .48   |
|                               |                                                                                                     |       |                                                                                                                                              | (.50) |
| 1996                          | Not applicable                                                                                      |       | Self-report voted in 1996 presidential elections (0,1)                                                                                       | .57   |
|                               |                                                                                                     |       |                                                                                                                                              | (.50) |
| Either 92 or 96               | Not applicable                                                                                      |       | Self-report voted in either (0,1)                                                                                                            | .64   |
|                               |                                                                                                     |       |                                                                                                                                              | (.48) |
| 2000                          | Self-report voted in the 2000 presidential election (0,1)                                           | .46   | Not applicable                                                                                                                               |       |
|                               |                                                                                                     | (.50) |                                                                                                                                              |       |
| Conservative-Liberal          | Self reported scale from 1 (very conservative) to 5 (very liberal) of political ideology, in 2001-2 | 2.96  | Not applicable                                                                                                                               |       |
|                               |                                                                                                     | (.76) |                                                                                                                                              |       |
| Democrat                      | R identified as a Democrat in 2001-2                                                                | .60   | Not applicable                                                                                                                               |       |
|                               |                                                                                                     | (.49) |                                                                                                                                              |       |
| Republican                    | R identified as a Republican in 2001-2                                                              | .36   | Not applicable                                                                                                                               |       |
|                               |                                                                                                     | (.48) |                                                                                                                                              |       |
| <b>In-School Affiliations</b> |                                                                                                     |       |                                                                                                                                              |       |
| Not involved                  | Did not participate in any club in 1994.                                                            | .22   | Did not participate in any club in 1990 or 1992.                                                                                             | .11   |
|                               |                                                                                                     | (.41) |                                                                                                                                              | (.31) |
| National Honor Society        | R participated in national honor society in 1994 (0,1)                                              | .10   | R participated in national honor society in 90, 92 (0,1)                                                                                     | .22   |
|                               |                                                                                                     | (.31) |                                                                                                                                              | (.42) |
| Service clubs                 | R participated in “other” club in 1994 (deduced to be service and ethnic pride clubs) (0,1)         | .19   | R participated in service club (key club, AFS, etc) in 90, 92 (0,1)                                                                          | .21   |
|                               |                                                                                                     | (.39) |                                                                                                                                              | (.41) |
| Student council               | R participated in student council in 1994 (0,1)                                                     | .08   | R participated in student council in 90, 92 (0,1)                                                                                            | .18   |
|                               |                                                                                                     | (.28) |                                                                                                                                              | (.39) |
| Drama clubs                   | R participated in drama club in 1994 (0,1)                                                          | .07   | R participated in drama clubs in 90, 92 (0,1)                                                                                                | .20   |
|                               |                                                                                                     | (.26) |                                                                                                                                              | (.40) |
| Music groups                  | R participated in a musical school activity (band, orchestra, choir) in 1994 (0,1)                  | .23   | R participated in a musical school activity (band, orchestra, choir) in 90, 92 (0,1)                                                         | .28   |
|                               |                                                                                                     | (.42) |                                                                                                                                              | (.45) |
| Journalism clubs              | R participated in student newspaper or yearbook in 1994 (0,1)                                       | .11   | R participated in student newspaper or yearbook in 90, 92 (0,1)                                                                              | .23   |
|                               |                                                                                                     | (.32) |                                                                                                                                              | (.43) |
| Academic clubs                | R participated in academic club (language club, computer, math, etc) in 1994 (0,1)                  | .20   | R participated in academic club (language, debate, computer, math, etc) in 90, 92 (0,1)                                                      | .41   |
|                               |                                                                                                     | (.40) |                                                                                                                                              | (.49) |
| Vocational clubs              | R participated in Future Farmers of America in 1994 (0,1)                                           | .02   | R participated in vocational club (Future Farmers of America, Future Homemakers of America, Future Teachers of America, etc) in 90, 92 (0,1) | .21   |
|                               |                                                                                                     | (.14) |                                                                                                                                              | (.41) |
| Sports teams                  | R participated in a school sport in 1994 (0,1)                                                      | .58   | R participated in a school sport (includes cheerleading) in 90, 92 (0,1)                                                                     | .61   |
|                               |                                                                                                     | (.49) |                                                                                                                                              | (.49) |

(continued)

**Table A. Continued**

| Variable Name                  | Add Health Variable Description                                                                             |                  | NELS Variable Description                                                                                                            |                  |
|--------------------------------|-------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Total Extracurriculars         | Number of extracurriculars R reported to belong to                                                          | 2.31<br>(2.56)   | Number of extracurriculars R reported to belong to, averaged across three waves (1988-92)                                            | 3.36<br>(2.44)   |
| Other Affiliations             |                                                                                                             |                  |                                                                                                                                      |                  |
| Religious Attendance           | R attended religious services at least once a month in 1994 (0,1)                                           | .68<br>(.46)     | R attended religious services at least once a month in 90, 92 (0,1)                                                                  | .61<br>(.49)     |
| Government Class               | Not applicable                                                                                              |                  | R had any government or civics courses during high school (0,1)                                                                      | .28<br>(.45)     |
| Student Attributes             |                                                                                                             |                  |                                                                                                                                      |                  |
| Age                            | Age in 1994 (10-19)                                                                                         | 14.93<br>(1.73)  | Age in 1988 (13-16)                                                                                                                  | 14.38<br>(.56)   |
| Born in USA                    | R was born in the United States (0,1)                                                                       | .90<br>(.31)     | R was born in the United States (0,1)                                                                                                | .93<br>(.25)     |
| Language minority              | R's native language is not English (0,1)                                                                    | .11<br>(.31)     | R's native language is not English (0,1)                                                                                             | .16<br>(.33)     |
| Female                         | R is female (0,1)                                                                                           | .54<br>(.50)     | R is female (0,1)                                                                                                                    | .53<br>(.46)     |
| Race (White is reference)      |                                                                                                             |                  |                                                                                                                                      |                  |
| White                          | R is White-only racially, and non-Hispanic (0,1)                                                            | .47<br>(.50)     | R is White-only racially, and non-Hispanic (0,1)                                                                                     | .69<br>(.46)     |
| Black                          | R is Black-only racially, and non-Hispanic (0,1)                                                            | .18<br>(.39)     | R is Black-only racially, and non-Hispanic (0,1)                                                                                     | .10<br>(.27)     |
| Hispanic                       | R is Hispanic, and can be of any race (0,1)                                                                 | .18<br>(.39)     | R is Hispanic, and can be of any race (0,1)                                                                                          | .13<br>(.31)     |
| Asian                          | R is Asian-only racially, and non-Hispanic (0,1)                                                            | .07<br>(.25)     | R is Asian-only racially, and non-Hispanic (0,1)                                                                                     | .07<br>(.23)     |
| Native American                | R is Native American-only racially, and non-Hispanic (0,1)                                                  | .01<br>(.10)     | R is Native American-only racially, and non-Hispanic (0,1)                                                                           | .01<br>(.10)     |
| Other multi-racial             | R is other racially or multi-racial, but non-Hispanic (0,1)                                                 | .07<br>(.26)     | Not applicable                                                                                                                       |                  |
| Parents' education             | 6 pt scale (1-6) of parent's education (no hs diploma, hs grad or ged, some college, college grad, ma, phd) | 3.81<br>(1.23)   | 6 pt scale (1-6) of parent's education (no hs, attended, hs but no diploma, hs grad or ged, some college, college grad, grad school) | 3.05<br>(1.16)   |
| Parents' income                | Family's total income in 1994, from 0 to \$999,000 and up (we divide by 100)                                | .46<br>(.52)     | Family's total income in 1990, from 0 to 200,000 and up (we divide by 100)                                                           | .33<br>(.29)     |
| Parent's occupational prestige | Duncan SEI value for highest parent's occupation.                                                           | 50.75<br>(20.28) | Duncan SEI value for highest parent's occupation.                                                                                    | 46.35<br>(20.65) |
| Parent Practices               |                                                                                                             |                  |                                                                                                                                      |                  |
| No resident mother             | No mother\step-mother\etc in R's household                                                                  | .05<br>(.21)     | No mother\step-mother\etc in R's household                                                                                           | .04<br>(.17)     |
| No resident father             | No father\step-father\etc in R's household                                                                  | .27<br>(.44)     | No father\step-father\etc in R's household                                                                                           | .17<br>(.35)     |

**Table A. Continued**

| Variable Name                                       | Add Health Variable Description                                                                                                                                                                              |                | NELS Variable Description                                                                                                                                                                                                           |                |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Parent Practices (cont.)</b>                     |                                                                                                                                                                                                              |                |                                                                                                                                                                                                                                     |                |
| Parental closure (Parents talk with peers' parents) | Number of R's friends parents R's parent talked to in the last four days (0 to 6 or more)                                                                                                                    | 2.13<br>(1.93) | Number of parents of R's friends R's parent knows, max of 5, averaged from 8 <sup>th</sup> and 12 <sup>th</sup> grades (alpha .88)                                                                                                  | 2.98<br>(1.32) |
| Parents range of talk w/ child                      | Additive scale of whether R has talked to Mother and Father about school, personal problems, and dating/parties in last month (1 to 6, alpha .62)                                                            | 2.02<br>(1.55) | Average of 16 items from 1990 and 1992 of how often R talks to parents about various topics, ranging from 1 (never) to 3 (often) (alpha .87)                                                                                        | 1.99<br>(.37)  |
| Parents' civic involvement                          | A 3-item additive index of parental membership in the (1) PTA; (2) hobby or sports groups; and (3) civic or social organizations. (alpha .38)                                                                | .64<br>(.81)   | A 4-item additive index composed of whether R's parents attended (1) any school events and (2) any school meetings, in 1988 and 90 (alpha .63)                                                                                      | 1.70<br>(1.18) |
| <b>Student-Peer Practices</b>                       |                                                                                                                                                                                                              |                |                                                                                                                                                                                                                                     |                |
| Self esteem                                         | Average of answers to 4 questions in 1994, "You have a lot to be proud of," "You have a lot of good qualities," "You like yourself just the way you are," (1=Strongly Disagree, 5=Strongly Agree, alpha .79) | 4.08<br>(.63)  | Average of 8 <sup>th</sup> , 10 <sup>th</sup> , and 12 <sup>th</sup> grade NELS composites of self esteem, constructed from 7 questions (alpha .93)                                                                                 | .00<br>(.55)   |
| Government Class                                    | Not applicable                                                                                                                                                                                               |                | Number of years of government or civics courses during high school (1-4)                                                                                                                                                            | .40<br>(.84)   |
| Course Track-Level                                  | Not applicable                                                                                                                                                                                               |                | Within-high-school education track (1 = vocational, 2 = general, 3 = college prep)                                                                                                                                                  | 2.30<br>(.63)  |
| Achieved Grades                                     | Composite of R's grades in English, History, Science, and Math, on a 4 pt scale (A = 4, D or less = 1), for 1994                                                                                             | 2.79<br>(.73)  | Composite of R's grades in English, History, Science, and Math, on a 4 pt scale (A = 4, D or less = 1), for 1988 and 90. Where grades for all subjects not available, averages from those that were available                       | 2.89<br>(.62)  |
| 8 <sup>th</sup> Grade Cultural Capital Index        | Not applicable                                                                                                                                                                                               |                | Composite of parental report of whether R: checks books out of the public library, attends musical events, goes to museums (art, history, and/or science), and studies art, music, and/or dance outside of school (0-8 count scale) | 3.4<br>(1.99)  |
| Delinquent behavior                                 | Index of 15 delinquent behaviors engaged in the past 12 months, such as graffiti, property damage, shoplifted, ran away from home, theft, public rowdiness, sold drugs, group fights, & burglary (alpha .84) | 4.03<br>(4.91) | Index of 8 delinquent behaviors engaged in the first half of the school year, from 1990 and 1992, such as skipping class, suspension from school, probation, arrested, & sent to juvenile detention center (alpha .63).             | 8.85<br>(6.33) |

(continued)

**Table A. Continued**

| Variable Name                           | Add Health Variable Description                                                                                                                                                                                                                                                  |        | NELS Variable Description                                                                                                                                                                                                   |        |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Student-Peer Practices ( <i>cont.</i> ) |                                                                                                                                                                                                                                                                                  |        |                                                                                                                                                                                                                             |        |
| Importance of religion                  | How important religion is to R, on a 4 pt scale                                                                                                                                                                                                                                  | 3.37   | How important religion is to R, on a 3 pt scale                                                                                                                                                                             | 1.84   |
|                                         |                                                                                                                                                                                                                                                                                  | (.72)  |                                                                                                                                                                                                                             | (.52)  |
| Delinquent behavior                     | Index of 15 delinquent behaviors engaged in the past 12 months, such as graffiti, property damage, shoplifted, ran away from home, theft, public rowdiness, sold drugs, group fights, & burglary (alpha .84)                                                                     | 4.03   | Index of 8 delinquent behaviors engaged in the first half of the school year, from 1990 and 1992, such as skipping class, suspension from school, probation, arrested, & sent to juvenile detention center (alpha .63).     | 8.85   |
|                                         |                                                                                                                                                                                                                                                                                  | (4.91) |                                                                                                                                                                                                                             | (6.33) |
| Importance of religion                  | How important religion is to R, on a 4 pt scale                                                                                                                                                                                                                                  | 3.37   | How important religion is to R, on a 3 pt scale                                                                                                                                                                             | 1.84   |
|                                         |                                                                                                                                                                                                                                                                                  | (.72)  |                                                                                                                                                                                                                             | (.52)  |
| Educational expectations                | R's 1994 perceived likelihood of graduating from college on a 9 pt scale (0 = no chance, 8 = certainty)                                                                                                                                                                          | 6.39   | 6 pt scale of R's furthest post-secondary education plans in 1988 (1 = won't finish hs, hs grad, post-hs vocational school, attend college, finish college, or 6 = attend grad school)                                      | 4.60   |
|                                         |                                                                                                                                                                                                                                                                                  | (2.24) |                                                                                                                                                                                                                             | (1.18) |
| Teacher attachment                      | Average of attitudes about whether teachers care about R, whether teachers treat students fairly, and how often R has trouble getting along with teachers (reverse coded) (1 to 5, alpha .61)                                                                                    | 3.74   | Average of 8 <sup>th</sup> , 10 <sup>th</sup> , & 12 <sup>th</sup> attitudes of whether teacher's care about students, and whether teachers and students get along. (1 = Strongly Disagree, 4 = Strongly Agree) (alpha .44) | 2.80   |
|                                         |                                                                                                                                                                                                                                                                                  | (.74)  |                                                                                                                                                                                                                             | (.48)  |
| School attachment                       | Composite of how close R feels to people at school, how much R feels a part of the school, and how happy R is to be at school (3 to 15, alpha .78)                                                                                                                               | 11.33  | Not applicable                                                                                                                                                                                                              |        |
|                                         |                                                                                                                                                                                                                                                                                  | (2.56) |                                                                                                                                                                                                                             |        |
| Neighborhood attachment                 | Composite of whether R knows most people in the neighborhood, whether R has stopped and talked to neighbors in the past month, whether R feels neighbors look out for each other, how happy R is living in the neighborhood, and how unhappy R would be to move away (alpha .57) | 9.72   | Not applicable                                                                                                                                                                                                              |        |
|                                         |                                                                                                                                                                                                                                                                                  | (2.35) |                                                                                                                                                                                                                             |        |
| Friends' club involvement               | Average number of affiliations (broadly categorized) of R's friends (0 to 4)                                                                                                                                                                                                     | .64    | Not applicable                                                                                                                                                                                                              |        |
|                                         |                                                                                                                                                                                                                                                                                  | (.55)  |                                                                                                                                                                                                                             |        |
| Friends' achievement level              | Mean of friends' achieved grades.                                                                                                                                                                                                                                                | 2.80   | Reported average GPA of friends.                                                                                                                                                                                            | 2.49   |
|                                         |                                                                                                                                                                                                                                                                                  | (.53)  |                                                                                                                                                                                                                             | (.38)  |
| School Level Variables                  | [Note: All means and s.d.'s are still at the student level]                                                                                                                                                                                                                      |        | [Note: All means and s.d.'s are still at the student level]                                                                                                                                                                 |        |
| Private School                          | This school is private (0,1), or not public.                                                                                                                                                                                                                                     | .09    | This school is private (0,1), or not public.                                                                                                                                                                                | .18    |
|                                         |                                                                                                                                                                                                                                                                                  | (.28)  |                                                                                                                                                                                                                             | (.38)  |

(continued)

**Table A. Continued**

| Variable Name                                | Add Health Variable Description                                                               |        | NELS Variable Description                                                                     |        |
|----------------------------------------------|-----------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------|--------|
| <b>School Level Variables (<i>cont.</i>)</b> |                                                                                               |        |                                                                                               |        |
| #Clubs Offered by School                     | Number of activities in school, by reports of membership by students.                         | 31.38  | Number of activities reported by students as available in their school.                       | 16.21  |
|                                              |                                                                                               | (3.44) |                                                                                               | (2.23) |
| School Setting (Suburban is reference)       |                                                                                               |        |                                                                                               |        |
| Suburban School                              | Area surrounding a central city within a county constituting the MSA. (0,1)                   | .55    | Area surrounding a central city within a county constituting the MSA. (0,1)                   | .42    |
|                                              |                                                                                               | (.50)  |                                                                                               | (.49)  |
| Urban School                                 | Central city (0,1)                                                                            | .30    | Central city (0,1)                                                                            | .34    |
|                                              |                                                                                               | (.46)  |                                                                                               | (.47)  |
| Rural School                                 | Based on U.S. Census classifications: Outside of an MSA (Metropolitan Statistical Area) (0,1) | .24    | Based on U.S. Census classifications: Outside of an MSA (Metropolitan Statistical Area) (0,1) | .24    |
|                                              |                                                                                               | (.43)  |                                                                                               | (.43)  |
| School Size (Large is reference)             |                                                                                               |        |                                                                                               |        |
| Small                                        | 1-400 students                                                                                | .15    | 1-399 students                                                                                | .12    |
|                                              |                                                                                               | (.36)  |                                                                                               | (.33)  |
| Medium                                       | 401-1000 students                                                                             | .38    | 400-999 students                                                                              | .34    |
|                                              |                                                                                               | (.49)  |                                                                                               | (.47)  |
| Large                                        | 1001-4000 students                                                                            | .47    | 1000 or more students                                                                         | .54    |
|                                              |                                                                                               | (.50)  |                                                                                               | (.50)  |
| Region (South is reference)                  | As defined by U.S. Census                                                                     |        | As defined by U.S. Census                                                                     |        |
| West                                         |                                                                                               | .23    |                                                                                               | .20    |
|                                              |                                                                                               | (.42)  |                                                                                               | (.40)  |
| Midwest                                      | Also known as North Central                                                                   | .23    | Also known as North Central                                                                   | .27    |
|                                              |                                                                                               | (.42)  |                                                                                               | (.44)  |
| South                                        |                                                                                               | .40    |                                                                                               | .34    |
|                                              |                                                                                               | (.49)  |                                                                                               | (.47)  |
| Northeast                                    |                                                                                               | .14    |                                                                                               | .19    |
|                                              |                                                                                               | (.35)  |                                                                                               | (.39)  |

CIRCLE (The Center for Information and Research on Civic Learning and Engagement) conducts research on the civic and political engagement of Americans between the ages of 15 and 25.

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