

Are Anti-Engagement Male Peer Cultures Causing Male Underperformance in School?

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*“...less than 5 percent of all students are members of a high-achieving crowd that defines itself mainly on the basis of academic excellence...
Of all the crowds, the ‘brains’ were the least happy with who they are—
nearly half wished they were in a different crowd (Steinberg et al, 1996, 145-146).”*

Male adolescents are less engaged with academic learning than their female counterparts. Boys are more likely to be discipline problems, more likely to drop out of high school and less likely to enter and complete college. The Monitoring the Future: 2009 survey of 12th graders documents big differences in school engagement. Asked how frequently you “Tried to do your best work”, only 58 percent of males said ‘often’ or ‘almost always’ compared to 78 percent of females (Q # A07C). Asked how frequently you “Fool around in class” 40 percent of males said ‘often’ or ‘almost always’ only 20.4 percent of females (Q # A06E). To the question about “Failing to complete or turn in assignments,” ‘often’ or ‘almost always’ was selected by 14.2 percent of males and only 8.4 percent of females (Q # A06F).¹ Thirty-five percent of males said they had been punished for misbehavior this school year; only 16.6 percent of females (Q # A06H). Not surprisingly grades suffer. Parents interviewed in the National Household Survey of 1999 reported that 47 percent of their daughters were getting mostly A’s in school but only one-third of their sons. The proportion getting D’s or F’s was 6.2 percent for boys and 2.4 percent for girls. (Digest of Education Statistics, 2002 Table 138, p. 159).

Why are boys so much more likely to be academically disengaged in secondary school? It’s not because school is too difficult for them. Standardized test scores are comparable and they are less likely to say they “Find the school work too hard to understand” (Q # A06D). It’s not because they believe that ‘the things’ they ‘are learning in school’ are less important “for your later life” (Q. A05). Answers to this question are unrelated to gender. They also enjoy “being at school” just as much as girls (Q # A06A, Johnson et al, 2010). So what is the cause? This paper will attempt to answer this question and then suggest school policies that can improve peer support for effort and engagement.

We began our study of peer norms in secondary school by reading the extensive quantitative literature on peer cultures in sociology, psychology and education. We also read as many teacher memoirs and ethnographic studies of student peer culture as we could find (Adler and Adler, 2003, Anderson 1999, Baldacci 2004, Blanco 2003, Cusick 1973, Eder 1995, Eckert 1989, Everhart 1983, Foley 1990, Freedman 1990, Gabarino and deLara 2002, Grant 1988, Hersch 1999, Johnson 1992, and 1995, Landau 1988, Larkin 1978, McCourt 2005, Metz 1978, Ogbu 2005, Pollack and Schuster 2000, Powell,

Farrar and Cohen 1985, Sacher 1991, Simmons 2002, 2004, Sizer 1984, Wiseman 2002). In the fall of 1998 we recruited and trained seven Cornell students to conduct interviews during winter break of 10th graders in eight secondary schools serving predominantly white upper-middle class suburbs in New York State.² We matched interviewers and respondents on gender. A short description of the high schools and middle schools included in the qualitative data collection is available in the Appendix.

The next stage of the investigation was devising a four-page questionnaire on the attitudes and behavior of secondary school students and recruiting schools to administer it to their students. Over the course of the last nine years over 110,000 middle school and high school students in about 325 schools have completed one of three versions of the peer culture survey.³ The analysis presented in this paper uses data collected after January 2000 from 75,000 students using the second and third version of the Educational Excellence Alliance's Student Culture survey reprinted in Appendix B.

The stories and descriptions from the ethnographies and previous quantitative studies allowed us to develop a theory of why student crowds have the norms that they have, how students choose their crowd, how norms are enforced by harassment and social exclusion and how the norms influence the school's academic climate, student engagement and study effort.⁴ Our theory's predictions about how norms vary by gender will now be tested in the data from nearly 25 thousand white students who completed the Educational Excellence Alliance's Survey of Student Culture. We begin by presenting raw data from the EEA survey on the norms, beliefs and behaviors of the respondent's six closest friends (same gender) about academic engagement at school.

The second section shows that anti-engagement attitudes and work habits have a strong negative relationship with the grades students receive. Our measures of attitudes, engagement and homework completion are more important determinants of GPA than family background. A major share of the gender differential in high school GPA can be accounted for by gender differences in attitudes, academic effort and engagement.

The rest of the paper examines the more challenging question of why these anti-academic engagement attitudes and behaviors are so common in schools that serve well-to-do middle class communities with college attendance rates that are typically over 85 percent and why the norms prevailing among males are often in direct opposition to the school's academic goals. We show that most of these schools have an oppositional sub-culture that permits and encourages harassment and intimidation of male students who publicly violate peer norms against trying too hard academically and saying you enjoy school work. The result is that many academic strivers have been induced to hide their studying and commitment to learning from their peers. The result in most schools is school-wide peer norms that discourage most students—low ability boys most powerfully—from trying to be all that they can be academically.

We found that norms applying to male adolescents are very different from the norms that apply to female adolescents. In most secondary schools, peer norms specify that while it's OK for girls to be friendly with teachers, it's not OK for boys. Boys who make friends with academic teachers are tagged as “suck ups.” These anti-engagement peer norms are enforced by harassment and social exclusion of classmates who are visible about their commitment to academic achievement.⁵ This phenomenon is in our view the primary cause of the large gender differentials in discipline, study habits, school grades and graduation rates between males and females.

Conclusions and recommended approaches for inducing student peer cultures to end their anti-engagement bias are presented in a final section.

I. Anti-Engagement Norms and Attitudes are more common among boys than girls.

We begin by presenting evidence from the Educational Excellence Alliance's Survey of Student Culture of substantial differences between the attitudes and engagement of the white male and white female middle and high school students.

<u>“My friends think:</u>	White Males <u>% Agree</u>	White Females <u>% Agree</u>
<i>“It's not cool to frequently volunteer answers or comments in class.”</i>	19 %	9 %
<i>“It's not cool to study real hard for tests and quizzes.”</i>	16 %	6 %
<i>“It's annoying when other students talk or joke around in class.”</i>	31 %	40 %
<i>“My friends make fun of people who try to do really well in school”</i>	19 %	9 %
<i>“My friends DO NOT want me to study harder than they do.”</i>	20 %	13 %

On this last question about pressure not to study harder than friends, the gender differential is particularly large for less able students—24% versus 15%. The share of low ability males who on a weekly or more frequent basis “*didn't try as hard as I could at school because I worried about what my friends would think*” was 13 percent for males and 6.5 percent for females.

<i>“Members of the most popular crowd (your gender) were ...attentive in class”</i>	13.6%	22.4%
<u>I think”</u>		
<i>“If I didn't need good grades I'd put little effort into my classes”</i>	49 %	38 %
<i>“I don't like to do any more school work than I have to”</i>	78.6%	70.7%
<i>“Slacking off in HS wouldn't make college more difficult for me”</i>	16 %	8 %
‘I Like School’ scale (standardized)	-.06	+ .10
‘I Like Learning’ Scale (standardized)	-.107	-.016
Future Extrinsic Motivation--(standardized)	-.114	.073
Alienated Goof-Off Scale (Standardized)	+.10	- .10

Multivariate analyses of EEA data finds strong associations between norms/attitudes and student effort and engagement. Gender differences in norms appear to result in males doing less homework, disrupting class more frequently and talking less with friends about what they learned in school.

<i>“I could do a lot better in school than I do.”</i>	70.1%	59.7%
Tutored another student	16.4%	25.5%
Hours spent doing homework per day	1.4 hrs/day	1.9 hrs/day
Percent doing NONE or only SOME of assigned English homework	22 %	11 %
How often do you joke around in class? (Standardized scale)	+ .22	- .22
<i>“My friends and I talked outside of class about things we learned in school”</i>	45 days/yr	56 days/yr
Grade Point Average	3.04	3.27

II. Anti-Engagement Attitudes and Behaviors are associated with lowered GPAs

Table 1 presents regressions predicting grade point averages of 24,484 white students as a function of gender, family background, course rigor and anti-engagement attitudes and behaviors. We are interested in how the male-female GPA differential presented in the first row changes as controls are added for pro/anti-engagement attitudes and study habits. The baseline model controlling only for grade attended, middle school and a standard set of family background variables—books in the home, parent’s schooling, computer in the home, number of siblings and family structure is presented in the first column. When only family background is controlled, the gender differential in GPA is .219. Column 2 presents a model where twelve indicators of the rigor and character of course work and participation in special educational programs are added to the baseline model.⁶ The estimated gender differential falls to .182. Column 3 adds nine scales describing the student’s motivation to learn and this reduces the unexplained gender differential to .123. Column 4 adds eight variables measuring classroom disengagement, absenteeism and homework completion and column 5 adds a self-assessment of effort based on responses to: “I could do a lot better in school.” Adding the full complement of attitudes and study habits variables reduces unexplained gender differential to .085. The standard interpretation of such a pattern is that 61 percent of the gross effect of gender on GPA operates through differences in Pro/Anti-engagement attitudes and behaviors measured by the EEA survey.⁷

Which of the anti-engagement indicators contributed the most to the gender differential in grades? Predicted effects are calculated by multiplying the coefficient given in column 3, 4 or 5 by the gender differential on the variable tabulated in Column 6. All nine of the attitude variables had statistically significant substantively important relationships with GPA. In many cases, however, male and female attitudes are very similar. We, therefore, set aside four indicators—“*Intrinsic motivation,*”

“*Teachers are interesting,*” “*I don’t feel close to any of my teachers,*” and “*If others study hard, it’s harder to get good grades*” ---where gender differences are tiny. The attitudes that appear to be the most implicated in gender differentials in GPA are: **Alienated Goof-off Scale** (Alpha=.628, M-F = .22), “*My friends and I talked outside of class about what we learned in school*” (M-F is .34 on a variable with a SD of 1.32), **Working Hard Now is Not Necessary** scale (Alpha=.543, M-F =.25) and **Future Extrinsic Motivation**,scale (Alpha=.604, M –F=.187). The most powerful explainer of gender differentials in GPA, the Alienation scale was constructed from answers to: “*Think of the times you did not study for a test or did not complete homework during the last year. Which of the following reasons were most important for you? ANSWER AS MANY AS APPLY TO YOU.*” The responses included in this scale were: “*Assignment was boring or pointless*”, “*Preferred to party or hang-out,*” “*Didn’t care about the grade in that course,*” “*Friends wanted me to do something else,*” or “*I disliked the teacher.*” The greater alienation of males apparently lowers GPA by .024 [= $-.107*(.159 - (-.063))$] and accounts for more than 10 percent of the original .219 point gender differential on GPA.⁸

The lower propensity of males to talk with friends about what they are learning in class accounts for almost as large a share [$0.0156 = .046*.34$] of the gender differential in GPA as the Alienation scale. The **Working Hard Now is Not Necessary** scale measures the student’s perception of how critical studying in high school is to success as an adult. The normalized scale had a reliability of .540 and was derived from the following Agree-disagree questions.

1. Q05.16—*What I don’t learn in high school, I can always pick up later.*
2. Q05.17—*Slacking off in high school wouldn’t make college more difficult for me.*
3. Q41.03—*Good luck is more important than hard work for success*
4. Q41.07---*Even if I don’t work hard in school, I can make future plans come true.*

The **Future Extrinsic Motivation** Scale measures whether motivation to study hard comes from the anticipation of future extrinsic rewards. The normalized three-item scale has a reliability of .604. It was derived from answers to: “*When you work really hard in school, which of the following reasons are most important for you? ANSWER AS MANY AS APPLY TO YOU.*” The responses included in this scale were “*Help me get a better job,*” “*I need the grades to get into college*” and “*Prepare myself for tough college courses.*” The **Working Hard Now is Not Necessary** scale accounts for .0136 of the gender differential in GPA and the **Future Extrinsic Motivation** Scale accounts for another .0103 of the differential. These are the effects of the attitude constructs when indicators of good study habits (that have probably been influenced by the attitudes) are not controlled.

When pro/anti-engagement behaviors--classroom disengagement, time use indicators indicating commitment to learning and a response to a direct question about effort level--are added, much of the explanatory power of the attitude variables is taken over by the behaviors (compare column 5 to column 3). Just two variables—share of homework done and “I could do a lot better in school”—are responsible

for the big increase in model 5's ability to explain the lower grades received by male students. The lower propensity of males to complete homework apparently reduces their GPA by an average of .053 points. The poorer study habits that are indicated by responses to '*I could do a lot better in school*' appear to be responsible for another .042 point reduction in male GPAs.

III. **Anti-Engagement Attitudes and Poor Study Habits are Normative---
Males who Advertise they Enjoy School Subjects and Study Hard are Sanctioned.**

“To children in school, the most important people in the classroom are the other children. It is their status among their peers that matters most to them—that makes the school day tolerable or turns it into a living hell.”

--Judith Rich Harris, The Nurture Assumption, 1998, p. 241

Students entering middle school will spend up to 2000 hours annually for seven years in the company of their school peers. Not surprisingly they are strongly motivated to fit in and to gain a respected role in the school's social system. The academic norms of middle school peer cultures are often different from the norms that prevail in elementary school.⁹ Sixth graders learn their new school's norms by noting and trying to copy the traits and behaviors of students who are respected by older students and avoiding the traits and behaviors of students who are frequently harassed. The norms of the peer culture have two functions: promoting peer solidarity [often in opposition to adult leadership] and defining who has high status and who does not [the “we're cool, so honor us, not them” norms].

Peer Solidarity Norms (Sanctioning “Anti-Peer” Behavior):

One of the first norms new arrivals are taught is ‘don't ask adults for protection.’

“I ask them why they tease and they start giggling. My mother has already tried to call their parents... I don't tell her to call anybody because the next day they call me a narc. The way we figured it out is that narc probably means like a tattletale or a squealer (Les quoted by Merten 1996 p. 14).”

Verbal harassment and bullying occurs outside the earshot of adults. It is now so pervasive and hard to define that most schools are not able to protect individual kids from it.¹⁰

In many schools they are also taught: “No alliances with teachers.” Ethnographer, Don Mertens, asked William and Scott, two 7th grade outcasts at Cronkite Junior High why they and their friend Les were being singled out for harassment:

“One thing, he [Les] is more like a teacher's pet. He always hangs around teachers. That I don't like. I don't know how to say this but it looks like you look at teachers as your friends. They [one's peers] got to think that a teacher is not your friend (Scott during 8th grade in Merten p. 19).

William knew what it took to be popular. As he saw it, one needs to: *“pay no attention and talk [in class]. Don't listen to the teacher and tell jokes all day.... Yeah, really not pay attention and goof around.”* Despite having recognized some of the elements that made a person cool... William still preferred to be the sort of person he valued... *“Les Renault is my friend.... Nobody ever really liked us because we like to stay straight. There's Mr. Muscular and Mr. Cool. We don't like doing that—we're acting how we want to act.... Why can't anyone act themselves in school? I'm a goodie-goodie. I want to be straight—I want to do good things in my life. I don't want to be bad. (William in the second semester of 7th grade in Merten p. 16).”*

At the beginning of 8th grade, however, William decided that he didn't "*want to be the little kid pushed around any more*" and tried to change. He abandoned his friend Scott: "*I act like I don't know him. I don't sit with him on the bus...*(p. 20)." "*I've been taking a lot of people's punishments, to get them out of trouble. Or say they flunk a test. I grade it 100%. It's how everybody does it. Everybody fits in better. I don't tattle like I used to* (Mertens p 19)." Les had a different view of William's transformation:

"This year he [William] does not want to be teased. So what he is doing is challenging kids who are younger than him to fight. I think it is super stupid because he didn't like it when everybody was bugging him, so why is he going around bugging everyone else. (Les in 8th grade in Merten p. 18)"

William's strategy worked. "*Now everybody likes me... I would say I'm in the top 10. I mean everything has changed. I know it's the best I've ever felt in my life* (William at the end of 8th grade, p. 21)." Les and Scott's efforts to escape their outcast status were fruitless.

The anti-teacher norms that prevailed at Cronkite Junior High School are not unusual. At a middle school in Ithaca New York, where children of college faculty were well represented in the school's leading crowds, boys (but not girls) were not supposed to "*suck up*" to teachers. One student told us, you avoid being perceived as a "*suck up*" by:

- "*avoiding eye contact with teachers*",
- "*not handing in homework early for extra credit*",
- "*not raising one's hand in class too frequently, and*"
- "*talking or passing notes to friends during class*" [this demonstrates you value relationships with friends more than you reputation with the teacher],

Sarah Gordon, a student at Newton North High School described a similar gender gap at her school:

"I have felt that being a smart girl has been not only accepted...but encouraged...by peers....Boys on the other hand, are expected to be somewhat intelligent, but a really stressed out boy who is always working and talking about school is not exactly 'attractive'....

"Boys who are truly interested in what they are learning in school are considered geeky, but girls who are truly interested...are considered smart and cool.

I believe this double standard plays a large role...in the achievement of boys and girls."

(email to Sara Rimer, reporter at NY Times On Line, April 1, 2007)

Grounded in the ethnographies, our 1998 interviews and preliminary analyses of data collected between 1998 and 2005, we built a simple model of why peer norms arise, how they are taught to new students and how they are enforced. Most large schools have multiple high status crowd (eg. jocks, preps, populars) exemplifying somewhat different normative orientations and many popular individuals have friendships in more than one of the leading crowds. As a result, school wide norms are typically consensus norms that honor all of the activities and signals (achievement in sports, popularity with the opposite sex, partying, drinking, grades good enough to get into college) that are characteristic of the school's high status crowds. For most types of achievement—being athletic, funny, friendly, outgoing,

popular and attractive—more is always better. When, however, it comes to academic engagement, peer culture sets a target—an optimal level or range of academic effort—that if adhered to prevents many students from achieving all they are capable of academically. All-rounders who lead the team on Friday night, party on Saturday night and get good enough grades during the rest of the week typically sit at the top of the prestige hierarchy. At the bottom of the prestige hierarchy one finds those who reject and ridicule consensus norms (Freaks) and those not perceived as successful along the dimensions—eg. attractiveness, social and athletic skills-- valued by consensus norms and who also deviate from the “Try but not too hard” norm with respect to academic engagement (Burnouts, Nerds and Dorks).

Since cooperative hard working classmates assist my learning¹¹ and disruptive classmates block my learning,¹² one might, on *a priori* grounds, expect that norms would arise sanctioning classroom disruptions and efforts to get the teacher off track. The EEA data suggests, however, that only a minority of the white students in our sample of upper-middle class schools got annoyed when classmates disrupted classes. Roughly, two-thirds told us that their closest friends did not consider it annoying when other students “try to get teachers off track” or “talk or joke around in class.”

James Coleman has observed that: “students who get especially high grades create negative externalities for other students, insofar as the teacher grades on the curve... Often a norm arises in this case...; students impose a norm that restricts the amount of effort put into schoolwork (1990 p. 251).” The zero sum nature of academic competition also results from using class rank as a criterion for awarding scholarships and college admission.¹³ A second reason why peers often discourage studying by classmates is *rate busting*--the fear that teachers will become more demanding if they sense they can get the class to work harder (Sizer 1984; Powell, Ferrar and Cohen 1985).

Many of the norms—no informing on classmates, no sucking up to teachers, no rate busting, let others copy your homework, hangout and socialize—can be characterized as peer solidarity norms designed to deflect or moderate pressures for academic engagement and achievement coming from adults. Peer solidarity norms attempt to deter actions that students perceive as creating negative externalities and to encourage actions (e.g. interscholastic sports, tutoring and sharing homework) that generate positive externalities. The empirical work we are about to report suggests that to some degree, this happens—disruptive students are frequently harassed and athletes are honored. But other groups of students who generate positive externalities—tutors, thespians, band members—face above average amounts of harassment. This differential treatment implies that caste and status norms are also important and sometimes trump the ‘internalize externalities’ motive for peer norms. The key role of leading crowds in setting and enforcing norms results in the school’s caste/status norms honoring activities and traits that are characteristic of these crowds. The caste/status norms signal: **“OUR Talents and Activities are Cool, so Honor us, Not the nerds, Not the disruptors, Not the slackers.”**

Those who break the norms are harassed sometimes by leaders of the popular crowds but more frequently by student ‘vigilantes’ who aspire to be admitted to one of the leading crowds. Robyn, one of the students we interviewed, described Harbor Edge’s popular crowd as *“the loud ones. Some of them make fun of the dorks and the nerds, and then the rest of them hang out with the meaner people. They’re known to act like this; no one will make fun of them, because [they] are afraid they’ll be totally abused* (Gelbwasser p. 5).” Robyn is saying that the leading crowds are maintaining their status and the hegemony of their norms, in part, by admitting into their ranks some enforcers who intimidate the rest of the students. Developmental psychologists studying verbal bullying have found that bullies are often among the most popular students in a school and that bullying behavior is positively associated with within group status (Pellegrini, Bartini and Brooks 1999; Rodkin, Farmer, Pearl and Van Archer 2000, Olweus 1993, Juvonen, Graham and Schuster 2003). Video tapes of playground bullying incidents in Canada found that there were bystanders in 84 percent of incidents. Bystanders were coded as respectful of the bully 74 percent of the time and respectful of the victim in 23 percent of the incidents (Craig and Pepler, 1997). When the “meaner people” from high status crowds pick on someone for violating a school-wide norm, the victim typically gets little effective support from their friends—even when the friends share their opposition to the school wide norm that is being enforced. Pollack and Shuster interviewed one student who complained about the lack of support he received from his friends:

“I get mad at my friends because sometimes they’re...afraid that they will be made fun of, too, if they don’t follow what the person with all the power does. I really don’t care what people think of me, but it makes me mad when my friends just sit there, not standing up for me....They should stand up and say, “No, I don’t know why you’re saying that about Nick.” (Nick quoted in Pollack and Schuster 2000, p. 119).

Their association with the dominant crowds gives the vigilantes such a prestige and power advantage, they do not need to outnumber the nerd clique (or other victimized group) at the point of a mocking interaction. Consequently, norm enforcement can be achieved even when the number of vigilantes is small.

Excluding norm violators from the social group is both an effective deterrent (Frank, Gilovich and Regan 1993; Kitcher 1993) and an effective way of preventing dissent from undermining the group’s norms (Hirshleifer and Rasmusen 1989, Riedl and Ule 2002). The salience of school wide norms is maintained by sanctioning in public and giving publicity to sanctioning incidents (Elster 1999, Xiao and Houser 2006). Singling out a few nerds and disruptor/slackers for public harassment and social exclusion sends powerful normative signals to the rest of the student body about the behaviors that will make you unpopular. Since violating school norms generates harassment and social exclusion, we can infer the norms by analyzing who gets harassed and who does not. Micro data on the incidence of peer harassment, intimidation and violence is available and its analysis is the final test of our theory.

IV. The Peer Harassment Consequences of Pro-Engagement Attitudes and Behaviors An Analysis of data on White Students from the Educational Excellence Alliance's Survey of Student Culture

We now present an analysis of the individual level correlates of peer victimization and harassment for a sample of 37,069 white secondary school students. The measure of peer harassment is the student's estimate of the number of times he is teased, verbally harassed or physically harassed by peers at school over the course of a year. It is the sum of four different kinds of harassment incidents—"I was pushed, tripped or hurt," "Someone threatened me at school," "I was insulted, teased or made fun of to my face," and "I was insulted or made fun of behind my back." The mean is 84 for white males and 49 for white females. The variable is highly skewed. Sixteen percent said they were never harassed. Forty-five percent said they were harassed but less than once a week. Eighteen percent said they were harassed at least 180 times in the school year and 7 percent said they received two different types of harassment at least daily.¹⁴

We hypothesize that social skills, athletic ability and academic ability—all three—assist students to gain popularity and avoid harassment. Verbal skills help one excel at the insult game that was an important part of social interaction among males at the predominantly middle class schools in our sample. High IQ makes homework easier to complete generating extra time for socializing. Hanging out with students in honors classes may also reduce the incidence of harassment. Conditional on academic ability, however, we hypothesize there will be a curvilinear relationship between pro-engagement attitudes and visible indicators of academic engagement, on the one hand, and peer harassment on the other. Some of the students who substantially deviate from the school's effort and engagement norm on the down side will experience high levels of harassment—"Disruptor/Slacker harassment" it might be called. Students who have strong pro-engagement attitudes and exhibit high levels of academic effort also face much higher risks of severe harassment. Nerd/Geek harassment is the traditional name for this phenomenon.

School Grades and Harassment

Our theory of peer norms makes no prediction about the relationship between GPA and peer harassment. Why? It says nerd harassment has evolved to deter what classmates view as "anti-social" (and economists call negative externality creating) behaviors and attitudes most of which are **visible to classmates**—such as asking or answering lots of questions in class, studying during free periods, saying that science is fascinating and hanging out with teachers too much.

Harassment that responds rapidly to these actions sends much clearer signals to other students and is thus a more effective deterrent of 'anti-peer' behavior. Behavioral experiments have found that altruistic punishers are responding to perceptions of 'unfair' intentions not 'unfair' outcomes (Falk, Fehr and Fischbacher 2002). Grades are a poor signal of intentions. Getting good grades by "sucking up" or

visibly studying extremely hard is typically perceived as unfair and sanctioned. But getting good grades because of a high IQ is not viewed as intentional and is seldom sanctioned. Consequently, high GPA students often avoid peer harassment by claiming not to study, keeping their grades secret and eschewing public displays of interest in academic learning. Many high GPA students achieve popularity by pursuing the *incognito* strategy. Gail's description of how she and Sarah were treated at her Kentucky high school illustrates the strategy.

Sarah joined my class after skipping 7th grade. From that point on she was labeled a nerd, and her active membership in the high school band did not do anything to counteract this stereotype....She was a "weirdo," someone who was ignored by the "popular, important" students, unless of course, they had not done their homework the night before. She never had any boyfriends; in fact, boys stayed far away from her. ...She was isolated, the butt of many jokes, and a social suicide object for cool people....Even as a member of the Scholastic Superstars, a competitive club that competed academically against other schools in Scholastic meets, [she] was not accepted.

I was of equivalent academic ability as Sarah, but was not perceived by my peers to be "extremely smart." I had never [gotten a B or less] in my whole life, but I was able to hide my "nerdiness" by surrounding myself with average student girls.... Although my friends knew I did well in school, I always felt guilty that school came naturally to me. Therefore, I never shared my test scores, and if the subject came up, I avoided it.... I was asked to be in the Scholastic Superstars by Sarah and the coach, but that would have been social suicide, so I politely declined the invitation and never said a word to my friends.... I dumbed myself down to get along with others. My grades did not suffer, but I kept them very private. You never saw my papers hanging on the refrigerator door when my friends came over. In essence, I presented myself as less intelligent than I was in order to belong. (Gail [pseudonym] Peer Culture Paper 2005).

Jon Elster observed in The Cement of Society, "To violate a norm in public shows a disdain for public opinion that is often more severely disapproved of than the norm violation itself (Elster 1999, p. 109)." By hiding her academic achievements from friends, Gail respected and upheld her classmates' norms against exhibiting and taking pride in academic achievement. Many of the students we interviewed seemed to be pursuing some version of Gail's 'incognito' self-presentation strategy. They privately disliked the populars but avoided challenging the norms they promulgated. They avoided, for example, hanging out with stigmatized groups—Freaks, Nerds, Geeks, etc--and thus contributed to the power of the ostracism sanction. Hiding ones effort level also serves the goal of establishing an image of high ability and "effortless perfection," something that is respected by peers and parents.

There are also political reasons why norms denigrating (and recommending the harassment of) everyone with good grades should be rare. Such a norm would be strenuously opposed by the school's smartest kids, many of whom participate actively in sports, are very-skilled socially and are members of leading crowds. The political power of these very smart kids within the leading crowds that publicize and

enforce peer norms generally insures that norms are defined in a way that focuses sanctioning on students who are not core members of leading crowds—the nerds, dorks, geeks, burnouts, slackers and disruptors.

Nevertheless, previous studies testing the hypothesis of oppositional peer cultures have used school grades (or membership in the honors society) to identify who is likely to suffer a social penalty for trying too hard in school. These studies typically find a positive relationship between school grades and popularity and have interpreted this finding as evidence against the oppositional culture hypothesis, at least, for white students. Cook and Ludwig (1997) found that white sophomores in NELS-88 getting ‘mostly A’s in math’ were less likely to be threatened by classmates. Members of the honor society were also less likely to be threatened and more likely to describe themselves as popular. In Ainsworth-Darnell and Downey’s (1998) study, those who reported “other students see him/her as a...very good...student” were much more likely to report that they were popular. Using an improved measure of popularity—the number of classmates selecting one as a friend weighted by the friend’s popularity--Fryer and Torelli (2005) also find a positive relationship between grades and popularity for white students in AddHealth data..

Cross-tabulations of our data yield similar findings. Figure 1a and 1b depict how peer harassment of white students varies by the self-reported ability, GPA and gender.¹⁵ In this and subsequent figures dashed lines describe relationships for students from the bottom thirty percent of the ability distribution. Solid lines represent relationships for students of average and above average self-reported ability. Girls experience less harassment than boys. As predicted, students in the top seven deciles of ability get harassed less often than those in the bottom three deciles. For female students (regardless of ability), GPA has a steeply negative relationship with harassment when grades are below B and a flat relationship for grades above B. This characterization of the relationship is also true for boys of average and above average ability. However, for less able males, the graph of harassment on GPA has a very pronounced U shape. For these students, harassment appears to be minimized when GPA is between a C minus and a B minus. Eighty-four percent have GPAs of C or above, so most male students in the bottom three ability deciles are on the upward sloping part of the relationship between grades and peer harassment. This suggests social penalties for academic engagement may be greatest for less able boys, the very group that needs to study particularly hard to keep up. In the female sub-culture, students with low grades (or more likely behaviors and attitudes associated with low grades) experience more harassment.

In our view, high grades are not the way to identify students likely to be the object of harassment for holding and advocating pro-engagement and pro-learning views. Our theory predicts sanctioning will be focused on a small number of individuals who have clearly and significantly violated norms. It will be advertised widely and copycat vigilantes will ensure that harassment is very frequent even in the face of counter measures designed to reduce vulnerability. Consequently, a better way to test the ‘oppositional culture’ hypothesis is to identify students who hold strong pro-engagement attitudes or whose public

actions signal a strong desire to excel academically and determine whether they are more likely to suffer the high levels of harassment that clearly indicate victim status. This is what we do in the rest of the paper.

Most people do not realize how the surrounding culture influences their actions. Responses to direct questions about which behaviors are proscribed by peer norms or about why an individual or a group is popular or unpopular are also going to be distorted by “social desirability biases” (Farkas et al 2002). A careful study of who is severely harassed by peers and who is not gives us insight into the shape and character of norms regarding academic engagement prevailing at the secondary schools sampled. With a sample of more than 37,000 students, we have sufficient power to estimate the fine structure of the relationships between social background, academic ability, pro-learning attitudes, academic effort and peer harassment separately for males and females. In our view this approach yields more convincing evidence about norms than directly asking students how their behavior has been influenced by others.

Attitudes: We constructed three normalized attitude scales—*I Like Learning*, *Close Friends have Pro-Learning Attitudes* and *Close Friends are Annoyed by Class Disruptions*—for this analysis. *I Like Learning* is a composite of three questions: “I find the history and science textbooks interesting,” “I like the books and plays we read in English” and “I enjoy doing math problems” (Alpha Reliability = .468). The next two measures describe the attitudes of the student’s closest friends. *Friends are Annoyed by Class Disruptions* is a scale made from two questions: “My friends think... It’s annoying when other students talk or joke around in class” and “My friends think... It’s annoying when other students try to get the teacher off track” (Alpha reliability = .742). The *Friends are Pro-Learning* index (Alpha reliability = .778) is a composite of six normalized questions:

- “My friends think it’s important for me to do well in science at school” {strongly agree, agree, disagree, strongly disagree}
- “My friends think it’s important for me to be placed in a high achieving class” {strongly agree, agree, disagree, strongly disagree}
- “How important do your friends think it is to: {response set was: “Very important,” Somewhat important,” Not too important,” and “Not at all important.”}
 - a. “Study hard to get good grades?”
 - b. “Participate actively in class?”
 - c. “Continue their education beyond high school?”
 - d. “Go to one of the best colleges in the US?”

Figure 4 describes the relationship between the *I Like Learning* index, ability and peer harassment. For both genders peer harassment is higher for the least able students. For most of the range of the *I Like Learning* Index—from 2 SDs below the mean to 1.5 SDs above the mean—the relationship is flat. However, the 4.5 percent of students who answered ‘strongly disagree’ for all three questions

experienced ten to 20 extra incidents of harassment per year. The nine percent of students at the top of the *I Like Learning* scale experienced an extra 30 to 60 incidents of harassment per year.

Figure 5 describes the relationship between the *Friends are Pro-Learning* index and peer harassment. In the middle of the scale—between -1.5 SD and $+1.5$ SD-- the relationship appears pretty flat. However, the 3.1 percent of students whose friends were very low on the pro-learning index—below -2 SDs—experienced twice as much harassment as those in the middle. For girls harassment rises only modestly as the pro-learning index starts to exceed $+1.5$ SDs above the mean. For boys harassment shoots up once the 1.5 SD threshold is exceeded.

Figure 6 describes the relationship between the *Friends are Annoyed by Class Disruptions* index and peer harassment. Right in the middle of the scale—between -1 SD and $+1$ SD-- the relationship is pretty flat. However, the 10 percent of the sample whose friends strongly disagreed in both questions that disruptions were annoying experienced 50 percent more harassment than those in the middle on the scale. The five percent who strongly agreed that disruptions were annoying on both questions experienced twice as much harassment as those in the middle.

Studying and Class Participation Figure 7 displays the association between ‘contributing to class discussions’ and peer harassment. Once again the relationship is concave. The most alienated students—the 2.6 percent who say they ‘never participate’—face 50 percent higher rates of harassment than those who ‘seldom’ contribute to class discussion. At the other end of the continuum, the 16 percent who ‘Always’ participate in class discussions also face 50 percent higher rates of harassment than those who only participate ‘fairly often.’

Figure 8 displays the relationship between time spent doing homework and harassment. For males harassment is minimized at 1 hour of homework a night. The small group of males (3.3 percent) who report doing more than four hours of homework a night are harassed at 50 to 100 percent higher rates. Low ability girls also face a sharp increase in harassment if they do a lot of homework.

The disengagement index is a composite of three normalized questions: “*How often do you really pay attention in class?*”, “*How often does your mind wander?*” and “*How often do you joke around in class?*” Figure 9 displays the relationship between disengagement and peer harassment. Over most of the range of the disengagement index peer harassment grows as disengagement grows. However, among less able students there is also a pronounced tendency for the students with extremely high levels of engagement to experience substantially higher rates of peer harassment.

The six indicators of pro-engagement attitudes and behavior just analyzed are positively correlated. How do relationships change when all six indicators compete to predict harassment? Do relationships retain their U shaped character? We represented the effect of each indicator by a linear and a quadratic term and estimated multivariate models. The U shape documented in figure 4 through 9

means the quadratic terms should have positive coefficients. The square terms for Ability, GPA, hours studying and class participation are defined as deviations from an integer value close to the mean. The attitude and disengagement scales are normalized (mean=0 and SD=1). Consequently, the coefficients on the linear terms characterize the slope of relationships for students near the middle of the distribution of pro-learning attitudes and behavior. The final attitude variable is an indicator of beliefs that “it’s harder to get good grades when others study hard.” Students who believe academic learning is a zero sum game are expected to suffer higher rates of harassment. Separate analyses are conducted for white males and white females. (Comparisons by ethnicity are addressed in other papers).

Table 2 presents regressions predicting the annual number of incidents of peer harassment of any kind. [Logistic models predicting the likelihood of being harassed at least daily yield almost identical findings.] Column 1M and 1W present a very simple model containing indicators of pro-learning attitudes, self reported ability, GPA, books in the home, parent’s education, grade in school and a dummy for middle school estimated in the full sample of white students who completed the EEA survey after January 2000 (32,525 students after observations are excluded because of missing data). Harassment declines as students progress through school (not shown). The least able students and those with low GPAs experience the most harassment.

The effects of pro-learning attitudes on peer harassment are non-linear. Students who enjoy their reading assignments (*Like learning*) and who hang out with friends who have strong pro-learning attitudes and who get annoyed when others disrupt class tend to be harassed more than others. The quadratic terms for the three indicators of pro-learning attitudes, time spent on homework and classroom participation are all significantly positive. These concave relationships mean that the risk of harassment are minimized by making sure one is not seen as a part of a clique that has strong pro-engagement attitudes or one that has strong anti-engagement attitudes.

The social costs of taking a strong pro-engagement stand are particularly great for boys. Holding everything else constant, boys who are 1.5 standard deviations above the mean on the three attitude scales are harassed nearly twice as frequently as students who are at the mean on these scales. Compared to those with mean attitudes, girls who are 1.5 SDs above the mean are harassed 50 percent more.

Columns 2M and 2W present results obtained when we add three indicators of academic effort and interactions between ability and attitudes to our model. Secondary school peer cultures sanction those who fail to conform to a “Try, but not too hard” norm for academic effort. These results are remarkably consistent with the theory and our interviews. One interviewee described the unpopular Nerds as “*being very involved with school, asking a million questions in class, and not having much fun in their spare time.*” The statistical analysis found that the two visible indicators of academic engagement that increased the risk of nerd harassment the most were **talking a lot in class** and **spending**

a lot of time on homework. Certain forms of cooperation with teachers--paying attention in class, not joking around—do not stimulate nerd harassment, until it becomes so extreme peers see it as “sucking up.” The predictor of “Slacker/disruptor harassment” was high levels of ‘disengagement’---seldom “paying attention in class” and frequently “joking around.” Thus visible indicators of effort had substantial effects on both types of harassment.

Which kind of deviations from the “Try, but not too hard” norm—positive deviations or negative deviations-- provoke the most harassment? The linear terms of the pro-learning attitude scales, the class participation scale and hours spent doing homework give us the answer. Positive coefficients on these variables imply that nerds tend to suffer the most harassment. Negative coefficients imply that slackers/disruptors suffer the most harassment. For males of average and above average ability, four of the five linear terms are significantly positive implying that peer harassment is more severe at the pro-learning end of the spectrum. Graphs of these relationships are presented in figures 10 through 15. The spline variables allow the slope of the attitude scales for the less able students to become steeper above the critical value of +1 standard deviation. All three of the spline variables are positive and two are significantly positive. This suggests that boys in the bottom three deciles of ability get a large extra dose of harassment when they hang out with friends who have a strong pro-learning culture. Girls of below average ability also get a large extra dose of peer harassment when they are high on the ‘*I like learning*’ index.

Females of average and above average ability, however, are a different story. Only two of the five linear terms are significantly positive and a few are significantly negative. Furthermore, the linear term on classroom disengagement (which is scaled in the opposite direction) is significantly positive. This means that for these girls harassment is greater at the disruptor/slacker end of the engagement spectrum than the “pro-engagement” end.

When attitudes, engagement and effort are held constant, grade point average becomes a good indicator of IQ. That is probably the reason GPA and ability have a negative relationship with harassment in the multivariate model (see Figure 16). The negative relationship is particularly strong for females. Apparently, “It’s fine to be smart,” “It’s OK to get good grades,” but “It is not OK to try very hard to get good grades.”

Since boys face stronger peer sanctions for nerdy attitudes and behavior than girls, it would be reasonable to predict that they are less likely to have friends with pro-learning attitudes, less engaged in class and spend less time on homework. In EEA data girls were .33 SDs higher on the “Friends are Pro-learning” index, .23 SDs higher on the ‘Friends are Annoyed by Disruptions’ index, .35 SDs lower on the Disengagement index and spent more than a half hour extra on homework.

Effects of Adding More Controls for Behavior: Do these concave relationships survive the addition of a large set of control variables? Peer harassment does not depend solely on how classmates react to (sanctioning versus honoring) pro-learning attitudes and classroom engagement. Other qualities such as hanging out and participation in sports generate protective social networks that are important determinants of popularity and harassment. The frequency of harassment may also depend on which clique you are in and how much time you spend with them. Kids are labeled by their crowd assignment and some of these labels generate harassment. In some cliques, teasing and insults are discouraged. In other cliques, teasing, physical aggression and disruptive behavior victimize some members and/or provoke others to retaliate in kind.

The multivariate models in column 3M and 3W, therefore include variables (some of which may be endogenous) designed to measure other influences on rates of peer harassment such as time devoted to extracurricular activities and hanging out, socio-economic background, teacher behavior and indicators of a student's crowd such as participation in band, theatre, honors classes and special education programs that our theory hypothesizes influences the likelihood of peer harassment.

Some bullies seem to be looking for someone to dominate and humiliate. Their victims tend to be physically weaker, more anxious, more passive, more introverted and socially unskilled and often friendless. Lack of self-confidence and self-esteem signals to bullies that abuse will not provoke effective retaliation (Olweus 1993). Many of these correlates of victimization, however, are just another proxy for unpopularity or are as much an effect of being bullied as its cause. Consequently, variables like self-esteem and the number of reciprocated friendships were not included in the models presented.¹⁶

The new controls for student background are parent's education, books in the home index, number of siblings, dummy variables for parents speak a foreign language at home, having a personal computer at home, living in a single-parent family, living in a blended family [having a step-parent], living with no parent [with relative or a friend] and descriptions of how teachers manage their classrooms. The means and standard deviations of all variables are presented in Appendix Table A. Coefficients on the control variables can be found in part 2 of Table 2. The effects of adding these controls on the estimated impacts of pro-learning attitudes and behavior can be assessed by comparing column 3M to 2M (and 3W to 2W) in Table 1. R Squares increase but the coefficients on the pro-learning attitude and behavior scales change very little. As before, the key relationships are U shaped.

Why these Norms? Earlier we hypothesized that school wide norms enforced by peer harassment have two purposes: (1) **Deter Actions Creating Negative Externalities for Peers** and/or (2) **to enhance the prestige of the group(s) that signal the norms and sanction those who violate them.** We hypothesize that the central role of popular crowds in establishing and enforcing peer norms results in school wide norms honoring activities and traits that are characteristic of these crowds. The struggle by

the school's crowd for prestige and popularity yields a winner in the '**OUR Talents and Activities are cool, so Honor us, not them**' competition that sets the norms for the school. Does the empirical analysis provide us any tests of relative importance of these two explanations?

Both of these stories predict concave academic engagement norms as depicted in figures 1 through 15, so the concavity findings do not yield a differentiating test. The 'Deter actions creating negative externalities' theory implies that anti-engagement norms and nerd harassment are more likely to develop among students when they perceive academic classrooms to be zero sum games that pick winners and losers but cannot make everyone better off. "Honor us, not them" makes no such prediction. As predicted by the "deter negative externalities theory" the belief that school is a rat race is a strong correlate to peer harassment. Males (females) who strongly agree that "if others study hard, it is harder for me to get good grades," experience 34 percent (51 percent) more harassment than those who strongly disagree. The school is a rat race belief is also the single most powerful predictor of our most direct measure of peer pressure against studying--student reports that "My friends DO NOT want me to study harder than they do (not shown)." Consequently, the strong positive effect of such perceptions on one's likelihood of being harassed supports the 'deter negative externalities' story. The large linear effect of disengagement in the multivariate regressions also supports the externalities story.

Discrete Indicators of Being Different and of Academic Orientation: On the other hand, students who are generating positive externalities by tutoring, playing in the band, or putting on plays are not harassed less; they are harassed more (see Figure 17). Band courses were associated with significantly greater harassment for boys. The fourteen percent of boys who had taken a theatre course had a 16 percent higher rate of harassment. The twenty-three percent of girls who had taken a theatre course had 10 percent higher risk of harassment. Tutoring other students was also associated with a 4 to 10 percent higher rate of harassment. These results all contradict the 'deter negative externalities' explanation for harassment.

The "Honor us, Not them" theory predicts that students in groups that are not part of the popular/leading crowds will experience more harassment. Consistent with that hypothesis, the 5.9 percent of males who were in special education were about 14 percent more likely to be harassed than other students. Boys and girls being mentored by an adult were also experiencing about 14 percent more harassment. At the other end of the ability distribution, the fifteen percent of boys who were in gifted programs were harassed about 12 percent more than other students. Boys who took accelerated courses in middle school also experienced significantly more harassment but the effect was small if the number of accelerated courses was small. Current participation in honors and AP courses had no statistically significant effects on harassment.

Family Background: The fourth most important predictor of peer harassment was the number of books in the home, a traditional measure of family cultural capital. Holding attitudes, engagement, ability, time use and other measures of family background constant, boys from families with over 250 books in the home experience 56 percent more harassment than boys from homes with fewer than 10 books. Girls from homes with over 250 books experience 64 percent more harassment than girls from families with hardly any books. The five percent without a personal computer at the home were experiencing 25 percent higher rates of harassment. Parent's education had a negative relationship with harassment for girls but not for boys. Students from single parent families and those living with relatives or friends were significantly more likely to be harassed. These results are consistent with the "Honor us, not them" story not the "deter negative externalities" explanation.

Time use: Students who spend a good deal of time "watching TV, playing video games and listening to music alone or with family" get harassed a lot more than the students who stay after school to socialize and participate in extracurricular activities. Time spent "hanging out and talking on the phone with friends" significantly reduces harassment of boys but has no effect on the harassment of girls. These patterns are all the more remarkable when one considers that students who spend more hours socializing or in extra-curricular activities have a longer exposure to peers who might harass them. Harassment is positively correlated with time spent at home alone and negatively correlated with time spent with peers for two reasons. Spending more time with peers enhances popularity and lowers hourly risks of harassment. Unpopular students try to avoid harassment by heading for home as soon as school lets out.¹⁷

Student-Teacher Relationships: Students who said their teachers were 'disorganized', 'didn't care' and/or 'did not collect homework' experienced significantly more harassment as did males who said they did not do homework because they could get a good grade without studying. A two standard deviation increase in this index is associated with a 20 percent increase in harassment. These modest relationships might reflect causal effects of teacher behavior on school climate or a tendency for students with negative attitudes toward teachers to hang out with classmates who do a lot of insulting and teasing. Dropping these variables from the model does not significantly change the estimated effects of indicators of academic engagement and student background.

These patterns are what one would expect to be generated by student cultures where:

1. Peer Norms and sanctioning behavior have different objectives at the two ends of the distribution of academic engagement. They seek to persuade the most engaged students to stop sucking up to teachers and be less enthusiastic about learning. They also seek to punish students who disrupt the learning of others. These are the norms that are intended to 'deter actions that create negative externalities for peers.'
2. Peer harassment is also one of the mechanisms by which leading crowds try to enhance their prestige by claiming: "OUR Talents and Activities are cool, so Honor us, **not them.**" Since the

core members of leading crowds are at neither extreme of the engagement distribution, “Honor us, not them” norms also tend to generate concave relationships between engagement and harassment.

3. Peer pressures focus on visible indicators of effort and engagement (and public expressions of attitudes) that can be deterred rather than on exogenous traits like IQ or hard to measure characteristics like GPA. Sanctioning is conducted in front of other students (often friends of the victim) in order to maximize their deterrent effect.
4. Norms and the propensity to sanction those who violate them vary by gender, across crowds and from classroom to classroom. Boys in lower track classes who exhibit pro-learning attitudes and behaviors experience the severest nerd harassment.
5. The threat of harassment deters most but not all of the visible behaviors and public expressions of pro-engagement attitudes that many peers consider anti-social. As a result, only a tiny minority of students — those who both publicly violate norms and who lack protective social networks (e.g. respected for participation in sports) or an ability to retaliate physically --are being sanctioned in the equilibrium we observe.
6. The tendency of sanctioning (peer harassment) to concentrate on a small number of students at each extreme of the distribution of engagement is further exaggerated by the decentralized copycat behavior of the altruistic punishers/vigilantes.
7. The peer harassment experienced by ‘burnouts’ and ‘slackers’ increases their sense of isolation and victimization and tends to push them into dropping out altogether.

Summary of Peer Culture Findings:

This paper addresses one of secondary education’s most serious problems—a peer culture that in most schools discourages many students (boys particularly) from trying to be all that they can be academically. We examined the issue by reviewing school ethnographies, by interviewing students in eight suburban high schools and by analyzing data from questionnaires completed by 25,000 white students attending schools serving upper middle class communities. Grounded in these observations, we built a simple model of why peer norms arise, how they are taught to new students and how they are enforced. Many of the norms—no informing on classmates, no ‘sucking up’ to teachers, no rate busting, let others copy your homework, hangout and socialize—can be characterized as peer solidarity norms designed to deflect or moderate pressures for academic engagement and achievement coming from adults.

Peer solidarity norms attempt to deter actions that students perceive as creating negative externalities (sucking up, rate busting, etc.) and to encourage actions (eg. interscholastic sports, playing in the band, tutoring, sharing homework) that generate positive externalities. To some degree this happens— disruptive students are frequently harassed and athletes are honored. But other groups of students who generate positive externalities—tutors, thespians, band members—face above average amounts of harassment. This differential treatment proves that the caste and status norms are important and sometimes trump the ‘internalize externalities’ motive for peer norms. The key role of leading crowds in setting and enforcing norms results in the school’s caste/status norms honoring activities and traits that

are characteristic of these crowds. The caste/status norms signal: “OUR talents and activities are cool, so Honor us, Not the nerds, Not the Geeks, Not the disruptors, Not the slackers.”

Figures 10 through 17 plot the relationships between peer harassment and pro-learning attitudes and behavior. In Figure 15 shows us that classroom disengagement (joking around and not paying attention) has a large positive effect on peer harassment of males but much weaker effects on harassment of females. Thus, disruptive students are getting sanctioned, as hypothesized. But so are students who enjoy their reading assignments (Fig 10), those who hang out with friends who have strong pro-learning attitudes (Fig. 11), those who are annoyed by disruptions (Fig 12), those participating actively in class (Fig 14), and those who spend a great deal of time on homework (Fig. 13). The quadratic terms for the three indicators of pro-learning attitudes, time spent on homework and classroom participation are all significantly positive. These concave relationships mean that the risk of being harassed on a daily basis is minimized by making sure one is not seen as a part of a clique with either strong pro-engagement or strong anti-engagement attitudes.

High IQ students and high GPA students who get all their homework done in less than an hour a day were seldom marked for nerd harassment. The contrast between Figure 16 and Figures 10-15 implies: “its fine to be smart and to get good grades,” but “But don’t try very hard to get good grades.” Students who are in the bottom three deciles of the ability distribution suffer a particularly large harassment penalty when they have strong pro-learning attitudes. Yet, these students are exactly the group that needs to study particularly hard just to keep up. Norms that punish “too much” effort put struggling students on the horns of a dilemma. If they try to catch up by spending more time on homework and studying, they risk being labeled and harassed by their classmates as nerds or geeks.

Those who break the norms are publicly harassed sometimes by leaders of the popular crowds but more frequently by student ‘vigilantes’ who aspire to be admitted to one of the leading crowds. Bystanders typically side with the vigilante not the victim (Craig and Pepler 1997). Those who defend a victim or just maintain a friendship with an outcast risk being sanctioned themselves. Singling out a few nerds and disruptor/slackers for public harassment and social exclusion sends powerful normative signals to the rest of the student body about the behaviors that will make you unpopular.

V. Policy Speculations: Outside the Box Thinking about What Happens Inside the Black Box

What insights does this new understanding of student culture and peer norms about academic effort and engagement offer for school leaders? We make the following recommendations.

Schools must vigorously assert that learning comes first and foremost and systematically work to make sure that student culture accepts that principle.

KIPP Academies: The first best solution to the problem is for teachers to take over normative leadership of the school and make working hard the norm. This is what happens at KIPP Academy middle schools.

The cool kids in our school are kids who work hard, because we as adults have made sure that to be "in" you have to work hard. We have an extensive system of rewards and consequences that every teacher in every grade administers the exact same way. The consistency from classroom to classroom and across grade levels is the key, and it has helped us to establish that culture of hard work. We are all working together and have been successful because, to be frank, we haven't allowed kids, who in the past may have gotten away with not doing any work or who may have put other kids down for being nerdy or too studious, the opportunities to become "cool" or "in." Our discipline is firm; if you don't work hard you don't get to sit with your friends at lunch, go on field trips, participate in gym class, attend special events, etc., and we, the adults, are all on the same page with this. It's hard to set the norms when you are not the one participating. On the flip side, if you do work hard, then you will be rewarded in fun ways—pizza parties, skating trips, things like that. So, to have fun and fit in, kids must adapt, they must work hard. You're probably saying to yourself that this doesn't sound like your traditional middle school and why would any kid want to put in such hard work. But the kids love it here, because they are discovering that great things happen to people who work hard. And they want to be included... (Dean of Students of KIPP DC: KEY Academy, 2002).

KIPP academies are non-selective schools of choice that run from 8:00 AM to 5:00 PM during the normal 180 day school year, have compulsory Saturday enrichment programs twice a month and a three week summer school. During the summer prior to entering the school for the first time, new students spend a couple of weeks in skills building exercises, learning the KIPP culture and bonding with their future classmates and teachers. The goal is to develop the skills and knowledge necessary to gain admission to and succeed in a private or charter high school. Students are not competing against each other for a limited number of opportunities to go to a private or charter high school. If they achieve at the required level, they will all make it into good high schools. KIPP academies are islands of discipline and of caring, demanding teachers in a sea of chaotic schools led by dispirited adults. In many cities parents are queuing to enter the lotteries that allocate admission to these schools. Rigorous evaluations of KIPP, Achievement First, and Uncommon Schools that employ this reform model have found significant improvements in achievement. (Angrist et al 2010, Dobbie and Fryer 2009, Hoxby, Muraka & Kang 2009, Teh, McCullough & Gill 2010, Tuttle et al. 2010)).

New York City's Small High Schools of Choice (SSCs). Since 2002 New York City has opened over 200 new small high schools while simultaneously closed 23 under-performing large comprehensive high schools. To select the leadership teams for these new small schools the city established a demanding competitive proposal process that emphasized academic rigor, personalization and community partnerships. The newly established academically non-selective schools of choice (SSCs) received policy protections--amended union contracts, more hiring discretion for the principal and more staff control over requirements. The schools began with just one founding 9th grade of roughly 100 students so that the teachers and students could develop a positive pro-learning culture which would set the tone for subsequent years.

MDRC has just completed a rigorous evaluation of the causal impact of attending these new SSCs. It used data on the 21,085 students who applied to 105 oversubscribed SSC's and who were therefore selected for one of these schools (or not) by lottery. The study concluded that attending this type of school substantially reduced course failure and increased the number of students graduating from high school. "By the fourth year of high school, SSCs increase overall graduation rates by 6.8 percentage points, which is roughly *one-third the size of the gap in graduation rates* between white students and students of color in New York City. SSCs' positive effects are seen for a broad range of students, including male high school students of color, whose educational prospects have been historically difficult to improve" (Bloom et al, 2010, p. *iii*). Many of the SSCs have emphasized creating a positive school culture, longer school days and other innovations found at KIPP and Achievement First schools.

**How can an Anti-Engagement Peer Culture at a traditional public school
Become a Pro-Engagement Peer Culture?**

Schools of choice can say to prospective students, "We are different. If you do not like the "Try Hard; Be Nice" culture and expectations of our school, attend a different school." Most students, however, are attending schools that must take everyone living in the school district or attendance zone. At these schools anti-engagement peer norms are well established and passed from one student generation to the next by the school's leading crowds. The norms of the peer culture are very resistant to change by teachers and school administrators. Despite the obstacles, some character education programs appear to have been successful in pushing the student culture in a pro-engagement direction. Evaluations have frequently reported very positive effects on discipline and learning (<http://ies.ed.gov/ncee/wwc/reports/topic.aspx?tid=12>). The federal government is sponsoring a number of randomized control trials of program effectiveness but statistical power is a perennial problem because evaluations of school-wide interventions require large samples of schools. As a result, only one model, *Positive Action*, gets a "Meets Evidence Standards" rating for absenteeism, disciplinary referrals and

learning from the What Works Clearinghouse funded by The Institute of Education Sciences (Flay et al, 2003, 2006).¹⁸

A special effort needs to be made to convince key members of the school's leading crowds that it is in their interests for peers to support classroom engagement. If the leading crowd is taking learning seriously, peer norms about the optimal level of academic effort will likely shift up and the whole school may be pulled to a higher level. Thus, all of the instruments for persuading individuals to take on academic challenges and study harder—hiring competent and demanding teachers, state or departmental end-of-course exams, minimum competency exam graduation requirements, higher college admissions standards, increases in payoffs to schooling and learning, etc.—will eventually have the similar effects on peer norms that they have on the individual incentives. It may, however, take some time for norms to adapt to changed external circumstances.

We Will All Succeed if We All Work Hard: An anti-engagement peer culture is likely to develop whenever students perceive academic classrooms to be zero-sum games that pick winners and losers but cannot make everyone better off. Common as this belief may be, it is wrong. Learning generates positive real externalities, not negative pecuniary externalities (as the focus on class rank suggests). Students and teachers, however, are not aware of just how important learning multipliers are and this fact needs to be communicated to everyone. The academic enterprise **needs to be and to be perceived** as a positive sum game in which success by one individual helps others succeed. Teachers should not grade on a curve. Grades should be based on student effort (e.g. completing homework assignments), good discipline (not disrupting the learning of others) and absolute achievement (results of quizzes and tests). The school should not publish or call attention to class rank. It is also desirable to use curriculum-based externally set examinations (eg. AP and International Baccalaureate) to evaluate student learning.

State universities should not admit students solely based on rank in their high school graduating class. Unfortunately, three of the four largest states in the nation--California, Florida and Texas--do just that. Graduates with class rank better than a fixed state wide % cutoff are guaranteed admission to at least one (or in the case of Texas any) state university without regard to GPA, the rigor of the courses taken in high school and SAT, ACT or AP scores. Admission decisions should instead be based on absolute measures of effort and achievement such as externally set end-of-course exams (eg. AP, IB and NY State Regents exams) and good measures of the rigor of courses taken. Countries and provinces that base college admission and hiring decisions on externally set end-of-course examinations have significantly higher achievement on international assessments (Bishop 2005, Woesmann 2003).

College Completion as a Common Goal: Almost all middle school students aspire to go to college--even those with very poor basic skills.¹⁹ Middle schools should encourage this universal aspiration by taking their students on trips to local colleges, briefing parents on financial aid options and

inviting former students to talk about the enjoyable aspects of college life and the importance of studying in secondary school so that they are well prepared. Everyone should be presumed to have college as their goal, including children from very disadvantaged families. Many students do not realize that the academic foundation they are developing in high school is critical to success in college.²⁰ The large effect of the “*Future Extrinsic Motivation*” scale and “*Not Necessary Now to Study Hard*” scale on GPA in column 3 of Table 1 suggest that once these mistaken beliefs are corrected, students will develop better study habits.²¹

Teachers should make a special effort to persuade the leaders of influential student crowds to set particularly demanding personal goals (eg. attending the state’s top public university or a competitive private college). If the leadership and core members of the leading crowd are trying to get into competitive colleges, they will need to take honors classes and work hard in them. This will tend to make studying and contributing in class more accepted and will hopefully encourage other students to raise their aspirations and commitment to academics.

Competitions between Schools in the Academic Arena: Band, choir, theater, cheerleading and athletic programs receive enthusiastic support from the community because these organizations represent the school to neighboring communities and student achievements in these arenas are visible to the community and rest of the student body. As James Coleman observed in 1961:

“the athlete gains so much status...[because] he is doing something for the school... leading his team to victory, for it is a school victory.... The outstanding student, by contrast has few ways--if any--to bring glory to the school. His victories...are often at the expense of his classmates, who must work harder to keep up.”²²

Academic extra-curricular activities need to harness the energy and school spirit that inter-school rivalry and public performances generate. Individual states and foundations should establish inter-scholastic team competitions in academic subjects and for activities like debate, constructing robots and the stock market game. As many students as possible should participate and all students who practice regularly should be given a valued role. This can be accomplished by arranging separate competitions for each grade, increasing the minimum size of teams and allowing schools to field larger teams or more than one team.²³ Academic teams should be celebrated in pep rallies, awards ceremonies, homecoming parades, trophy displays and local newspapers along with the school’s sports teams. There should be a sixth grade team that begins training in the first week of middle school. The purpose of starting early is to encourage the creation of large academically oriented friendship networks (where students like William and Les would find support), to give those groups a positive identity and accomplish this while the social order is still fluid.

No Pass-No Play: Eighty-five percent of high schools have no-pass no-play policy for inter-scholastic sports. Clean disciplinary records are also typically required. Students with failing interim grades

in a course are benched on game days and may not attend practice until the work is made up. These policies have both practical and symbolic effects. Academic support is offered and some athletes are induced to study harder. Others either avoid parties where drugs and alcohol will be consumed or attend without imbibing. Since athletes are the nucleus of the popular crowds of most schools, their behavior influences the norms and behavior of everyone else. A third effect of these policies is on the makeup of the team. Students who are unable or unwilling to keep their average above the required minimum are cut from the team. The composition of the popular crowds changes and, as a result, the norms promoted by the leading crowds become more favorable to academic learning. Our final suggestion for school administrators, therefore, is to reinvigorate their no-pass-no-play policy and extend it to cheerleading and possibly to other high prestige extracurricular activities where students represent the school to surrounding communities.

The policy ideas just presented are a sample of the initiatives educators described to us when we asked them about their successful efforts to promote a pro-learning environment. The list is certainly not exhaustive and is intended to stimulate thinking about new initiatives.

Table 1—Determinants of Grade Point Average for White Students

	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>WM - WFmean</i>
Male Student	-.219 (.008)	-.182 (.008)	-.123 (.008)	-.107 (.008)	-.085 (.007)	1 - 0
Number of Books in the Home [0→5] [mean=4.08, SD=1.06]	.101 (.004)	.058 (.004)	.037 (.004)	.033 (.004)	.035 (.004)	3.93 - 4.05
Parent's Mean Schooling [1→ 7] (SD=1.42)	.089 (.006)	.056 (.006)	.055 (.006)	.049 (.005)	.044 (.005)	5.06 - 4.99
Personal Computer at home (mean=.971)	.180 (.023)	.143 (.021)	.120 (.021)	.098 (.020)	.095 (.019)	.96 - .96
Single Parent (mean=.141)	-.225 (.012)	-.184 (.011)	-.161 (.011)	-.127 (.011)	-.110 (.010)	.143 - .152
<i>Attitudes toward Learning</i>						
If I didn't need good grades, I'd put little effort into my classes. [1→4] (SD = .871)			-.028 (.005)	-.003 (.005)	.005 (.005)	2.52 - 2.31
If others study hard, it's harder to get A's [1→4] (SD = .682)			-.038 (.006)	-.033 (.005)	-.023 (.005)	1.99 - 1.96
Teachers are Interesting Index Mean = .063, SD= .944.			.016 (.004)	-.011 (.004)	-.006 (.004)	(-.004) - .058
I don't feel close to any of my teachers this year [1→4] Mean = 2.26. SD=.77			-.022 (.005)	-.014 (.005)	-.013 (.005)	2.29 - 2.23
Extrinsic Motivation (Mean=-.0, SD = .1.0)			.055 (.004)	.027 (.004)	.029 (.004)	(-.114) - .073
Intrinsic Motivation Scale (Mean=0, SD = 1.0)			.016 (.004)	.007 (.004)	.010 (.004)	(-.110) - .067
Alienated Goof Off Scale (SD = 1.0)			-.107 (.004)	-.047 (.004)	-.037 (.004)	.159 - (-.063)
<i>Working Hard Now is Not Necessary</i> scale (SD = .995)			-.038 (.005)	-.009 (.005)	-.008 (.005)	.090 - (-.158)
My Friends & I talked outside of class about what we learned in school. (Mean=3.3, SD=1.32)			.046 (.003)	.035 (.003)	.037 (.003)	3.24 - 3.58
<i>Study Habits and Engagement</i>						
Share Time listen to disk/walkman during free periods at school. (mean=.128, SD=.207)				-.155 (.021)	-.144 (.021)	.126 - .088
Share Time listen to music while doing homework (mean=.473, SD=.351)				-.056 (.011)	-.044 (.010)	.457 - .491
How often I cut class or skipped school. [1→5] (mean=1.67, SD = 1.05)				-.050 (.004)	-.045 (.004)	1.65 - 1.56
Hours per day studying (mean=1.69, SD= 1.41)				.002 (.003)	-.005 (.003)	1.41 - 1.94
Hours per day in Extracurricular Activities (mean= 1.77, SD= 1.68)				.016 (.002)	.018 (.002)	1.86 - 1.75
Proportion of homework Done (mean=.775, SD=.234)				.822 (.022)	.659 (.022)	82.7 - 76.2
SQ of Proportion of homework Done (mean=.05, SD=.07)				.268 (.059)	.077 (.057)	
Contribute to Class Discussion (mean=4.12, SD =1.42)				.010 (.003)	.009 (.003)	4.18 - 4.14
Disengagement (mean = .00, SD= 1.0)				-.010 (.005)	.003 (.005)	.178 - (-.173)
I could do a lot better in school [1→4} (mean=2.78, SD=.80)					-.208 (.005)	2.89 - 2.69
12 indicators of course rigor included		X	X	X	X	
Adjusted R Square	.183	.293	.354	.406	.449	

Table 2—Predicting the Frequency of Physical and Verbal Harassment by Peers

	White Male			White Female		
	1M	2M	3M	1W	2W	3W
<u>Ability and GPA</u>						
Ability Index (SD=1.77)	-1.93 (.77)	- .75 (.80)	-2.09 (.84)	-3.27 (.57)	-3.12 (.60)	-3.22 (.62)
(Ability Index – 1) squared	1.59 (.27)	1.10 (.27)	.68 (.27)	2.17 (.20)	2.00 (.20)	1.96 (.20)
GPA (Mean=3.15, SD = .75)	-.66 (1.87)	- 1.62 (1.91)	- 6.71 (2.00)	-8.04 (1.29)	-7.14 (1.34)	-7.41 (1.44)
(GPA-3) squared	1.95 (1.45)	.23 (1.45)	-1.81 (1.44)	3.80 (1.14)	3.64 (1.15)	2.51 (1.15)
<u>Attitudes toward Learning</u>						
If others study hard, it's harder to get A's	12.6 (1.60)	10.5 (1.60)	9.75 (1.59)	8.22 (1.18)	7.93 (1.18)	8.48 (1.18)
"I Like Learning" Index (Mean=0, Std.Dev. = 1)	4.92 (1.29)	6.02 (1.34)	6.73 (1.40)	.33 (.93)	.34 (.97)	.94 (1.02)
Square of "I Like Learning"	5.41 (.90)	3.84 (.92)	3.17 (.90)	2.19 (.68)	1.56 (.70)	1.35 (.69)
Bottom Ability Quartile * Spline for Like Learning GT 1		32.7 (18.3)	25.1 (18.0)		39.4 (13.0)	33.2 (12.0)
Pro-Learning Attitudes of Friends (Mean=0, Std.Dev.=1)	2.45 (1.48)	.25 (1.57)	.91 (1.56)	-3.45 (.97)	-3.98 (1.03)	-3.59 (1.03)
Square of Pro-Learning Attitudes of friends	7.68 (.82)	5.70 (.85)	5.52 (.84)	4.43 (.69)	3.89 (.71)	3.48 (.71)
Bottom Ability Quartile * Spline for Friends Pro-Learning GT 1		79.3 (21.3)	66.5 (20.9)		7.2 (13.0)	4.00 (12.9)
Friends Annoyed by Class Disruptions (Mean=0, Std.Dev=1)	5.53 (1.29)	7.85 (1.40)	7.45 (1.39)	1.96 (.86)	3.84 (.94)	3.40 (.93)
Sq. of Friends are Annoyed by Classroom Disruptions.	11.37 (.95)	8.75 (1.02)	7.18 (1.00)	5.50 (.64)	5.00 (.70)	4.31 (.70)
Bottom Ability Quartile * Spline for Disruptions Annoying GT 1		27.8 (11.5)	24.5 (11.4)		2.30 (6.20)	2.30 (6.14)
<u>Study Effort and Engagement</u>						
Studying (hrs/day)		4.37 (1.18)	3.75 (1.21)		-1.68 (.79)	-0.09 (.82)
SQ of (Study hr – 1.87)		1.23 (0.41)	1.33 (0.42)		0.88 (0.25)	0.85 (0.25)
Participate in Class		5.49 (0.90)	5.34 (0.92)		5.42 (0.61)	4.83 (0.63)
Sq (Class Participation – 4)		1.97 (0.61)	1.43 (0.60)		1.48 (0.42)	1.22 (0.42)
Disengagement in Class		12.39 (1.53)	11.84 (1.56)		7.57 (1.01)	7.70 (1.05)
Sq of Disengagement		4.36 (0.93)	3.69 (0.92)		-.65 (.76)	-1.24 (.76)
Additional Variables	none	none	24 var.	none	none	24 var.
Adjusted R Square	.037	.054	.087	.046	.055	.075

Table 2 –Continued	Physical + Verbal Harassment / yr	
	White Male 3M	Wh, Female 3W
<i>Time Use--Hours per Day</i>		
TV, video games & music listening alone or with family (hrs/ day)	6.46 (.62)	3.64 (.48)
Working for Pay	.78 (.61)	.12 (.43)
Extra-Curricular Activities	- 1.05 (.70)	-.07 (.51)
Hanging Out and Talking with classmates by phone or computer	- 3.09 (.70)	.30 (.48)
<i>Signals of being Different</i>		
In Gifted Program [mean=.156]	11.34 (3.24)	2.16 (2.17)
Tutored Other Students [mean=2.0]	3.38 (3.10)	4.20 (1.77)
Took Theater Course [mean=.18]	13.55 (3.25)	4.57 (1.80)
Took Band/Orchestra Course [mean=.386]	4.54 (2.37)	2.57 (1.5)
# of Accelerated Courses in middle school [mean=1.07 SD=1.32]	2.58 (1.00)	1.33 (0.68)
# of Honors or AP classes this semester	.17 (1.16)	-1.23 (.76)
Took one or more Honors/AP courses	1.27 (3.61)	1.01 (2.40)
Was Mentored [mean=.142]	10.75 (3.26)	7.31 (2.28)
In Special Education [mean=.05]	11.71 (4.94)	- .83 (4.16)
Number of Books in the Home (0→5) [mean=3.96, SD=1.12]	6.61 (1.14)	4.32 (.82)
Parent's Mean Schooling (1→ 7)	-.06 (1.70)	- 2.44 (1.07)
Personal Computer at home (mean=.952)	- 17.56 (5.48)	- 12.95 (3.69)
<i>Teacher Characteristics</i>		
Share of time Teachers Interesting [0→100] mean=50, SD=21	- .185 (.065)	-.062 (.045)
I don't feel close to any of my teachers this year [1→4} SD=.84	4.38 (1.50)	-1.07 (1.05)
Teacher Disorganized, Does not Collect Homework Index SD=1.0	8.27 (1.13)	4.49 (.78)
Mean Dependent Var.	84.0	49.3
Std. Error of Estimate	138	94
R Square	.087	.075
# of Observations	15,727	16,791

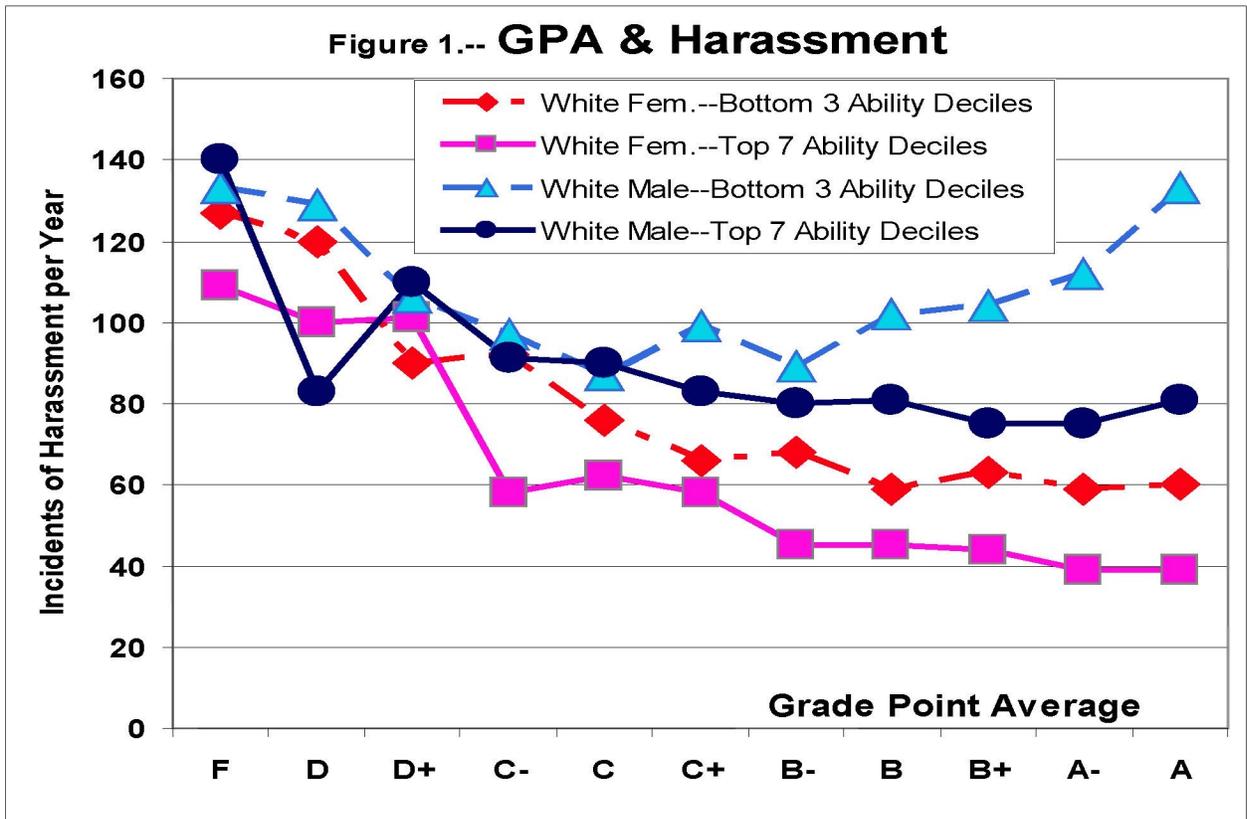
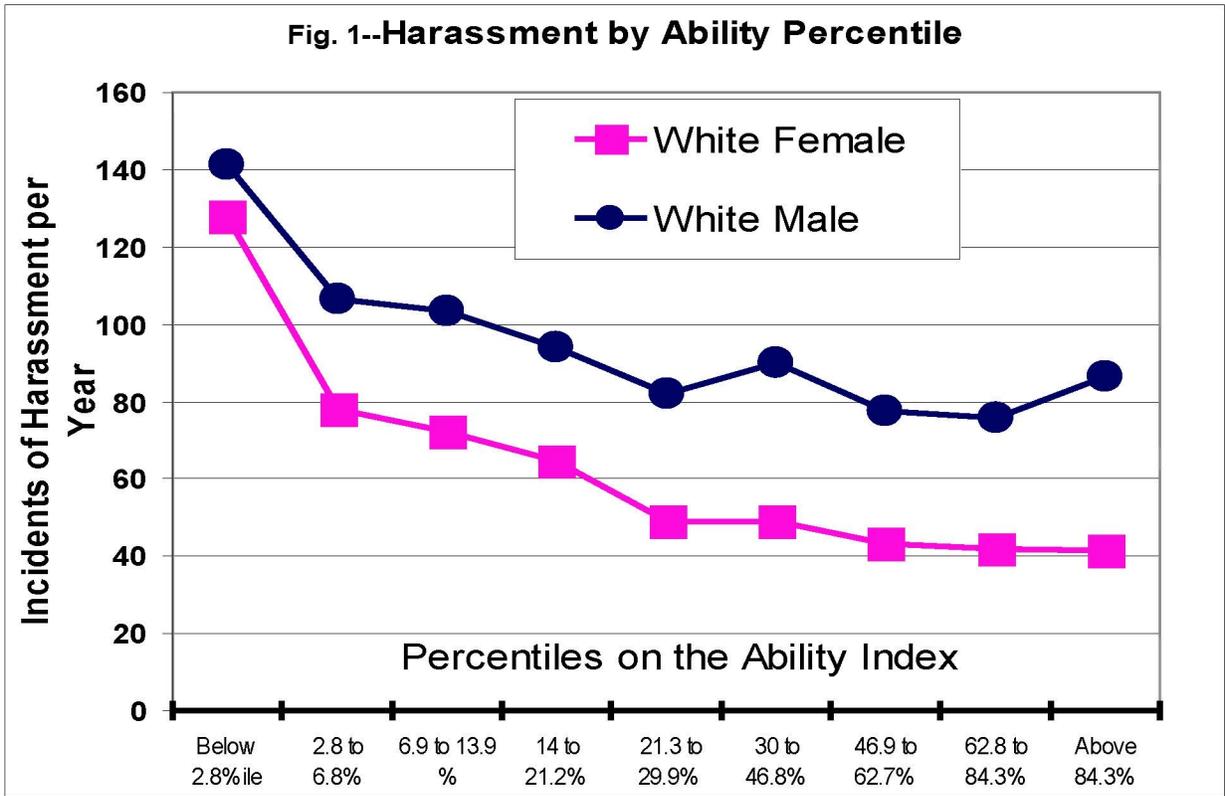


Fig. 3--GPA & "My Friends DO NOT Want Me to Study Harder than They Do"

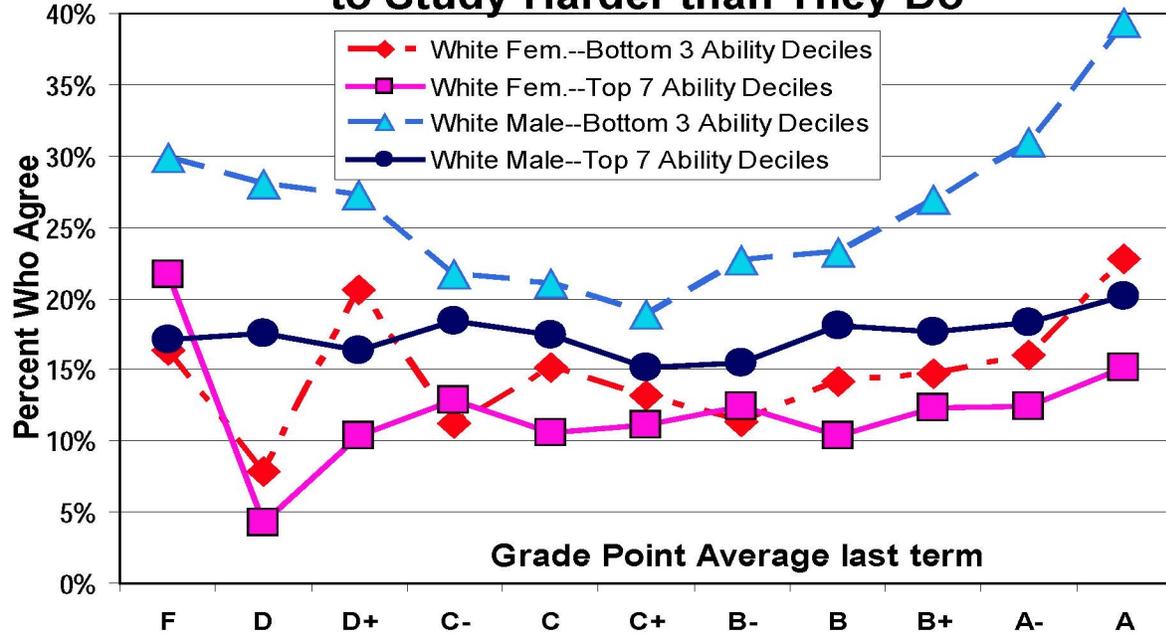
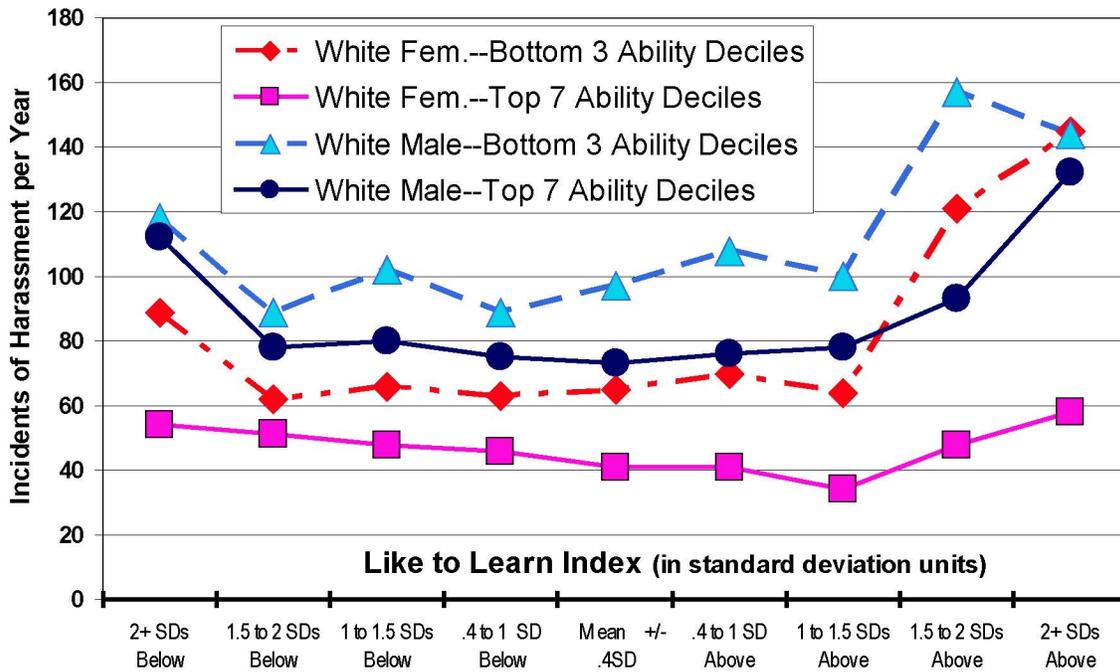


Fig. 4--Effect of Liking to Learn on Harassment



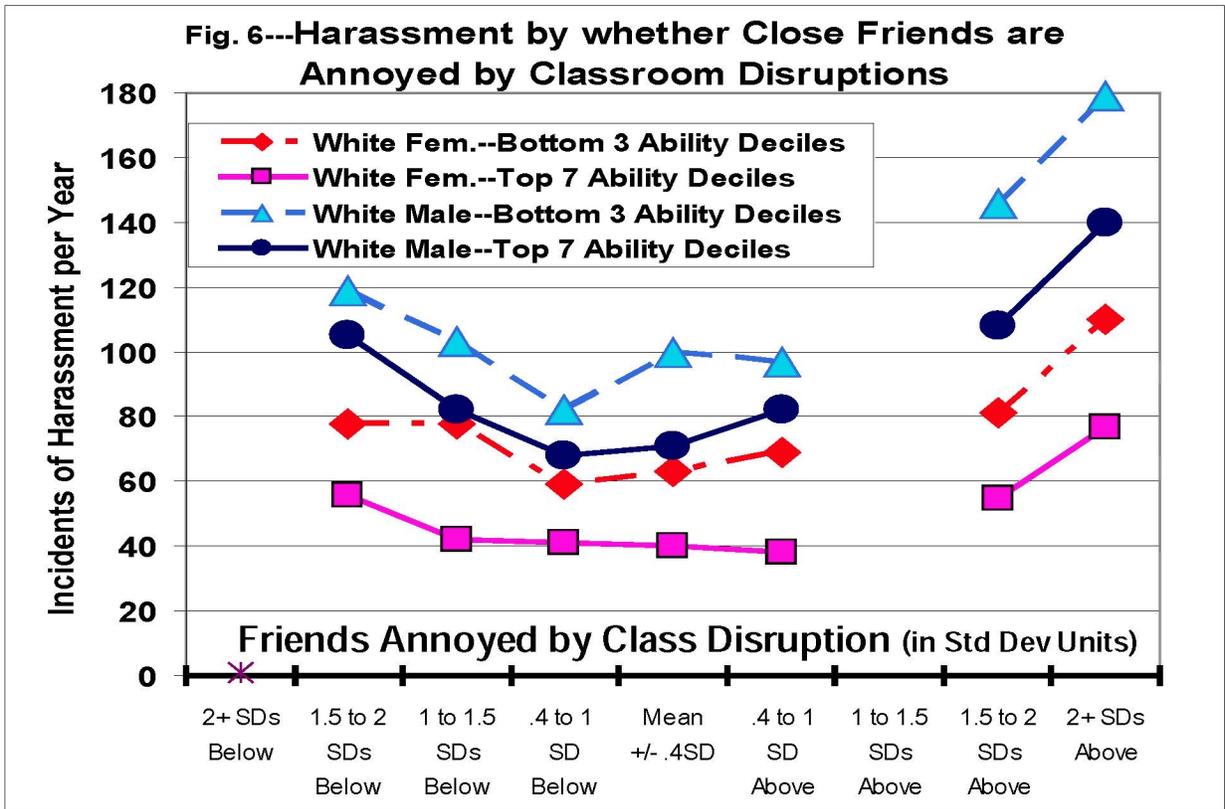
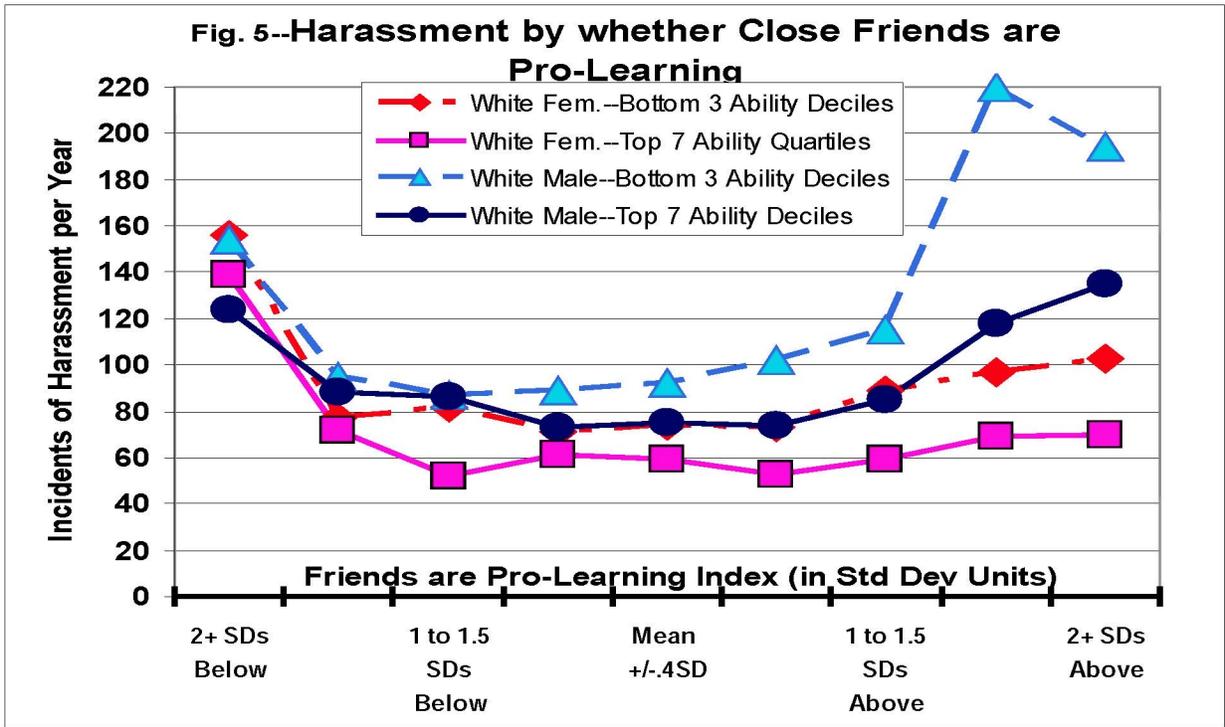


Fig. 7--Peer Harassment by Frequency of Participation in Classroom Discussions

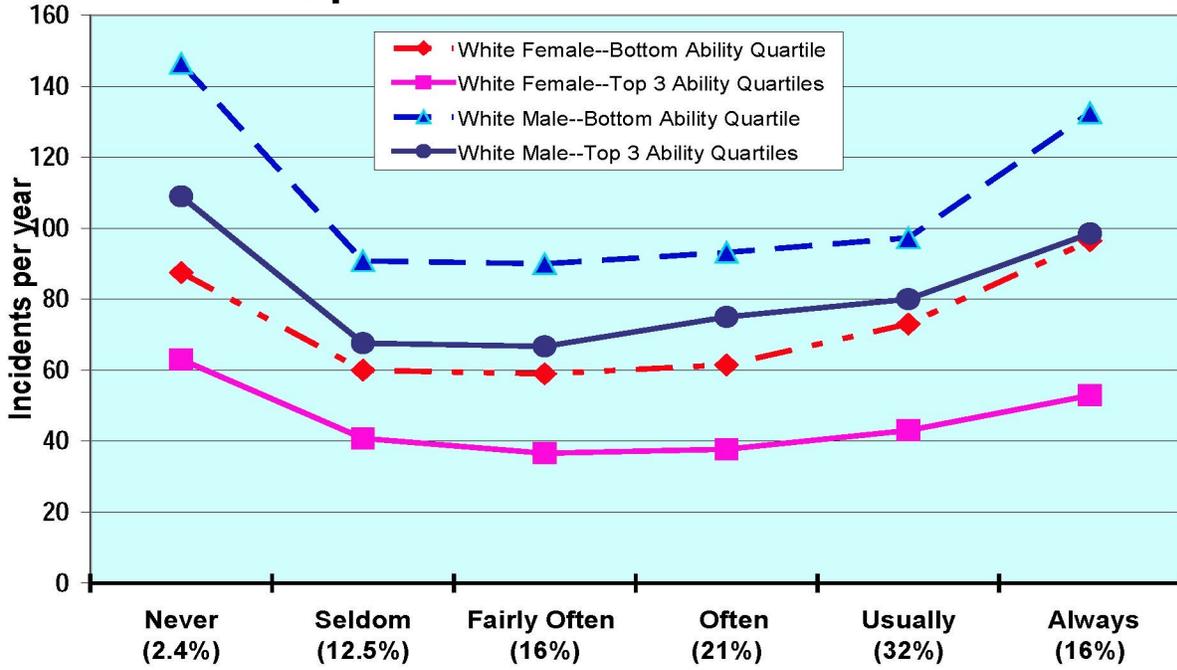
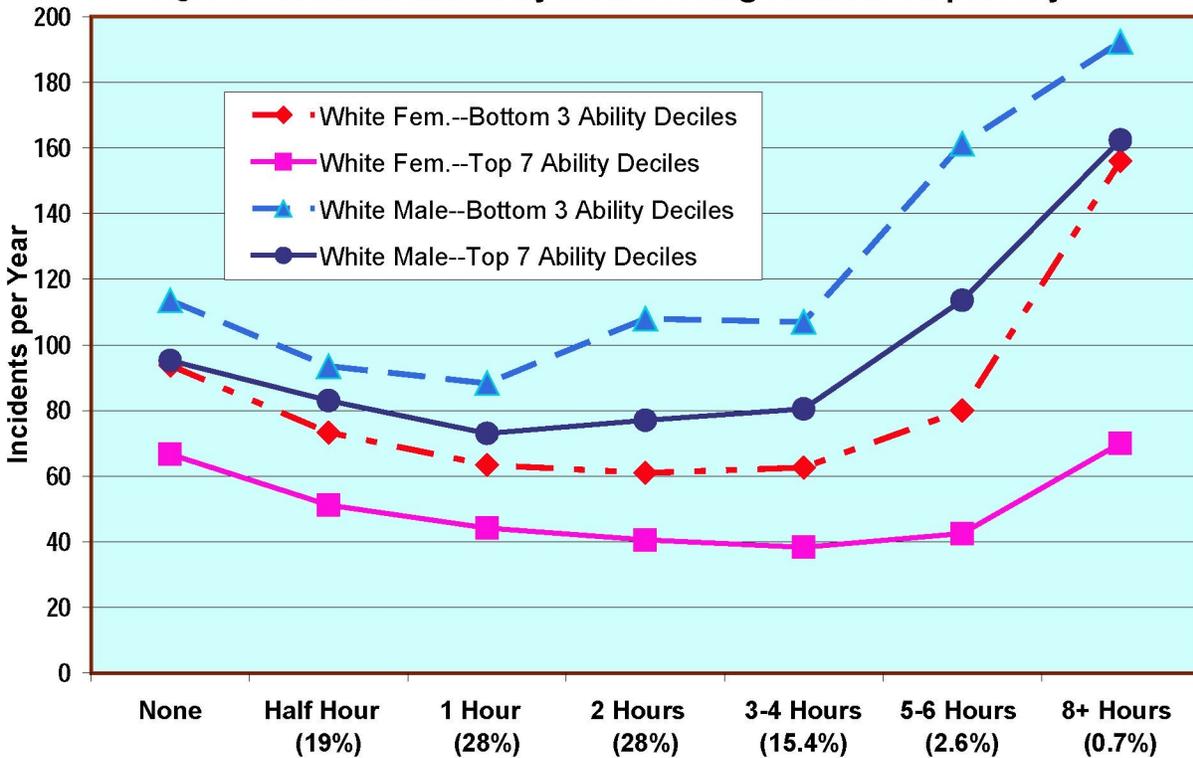


Fig. 8--Peer Harassment by Hours Doing Homework per Day



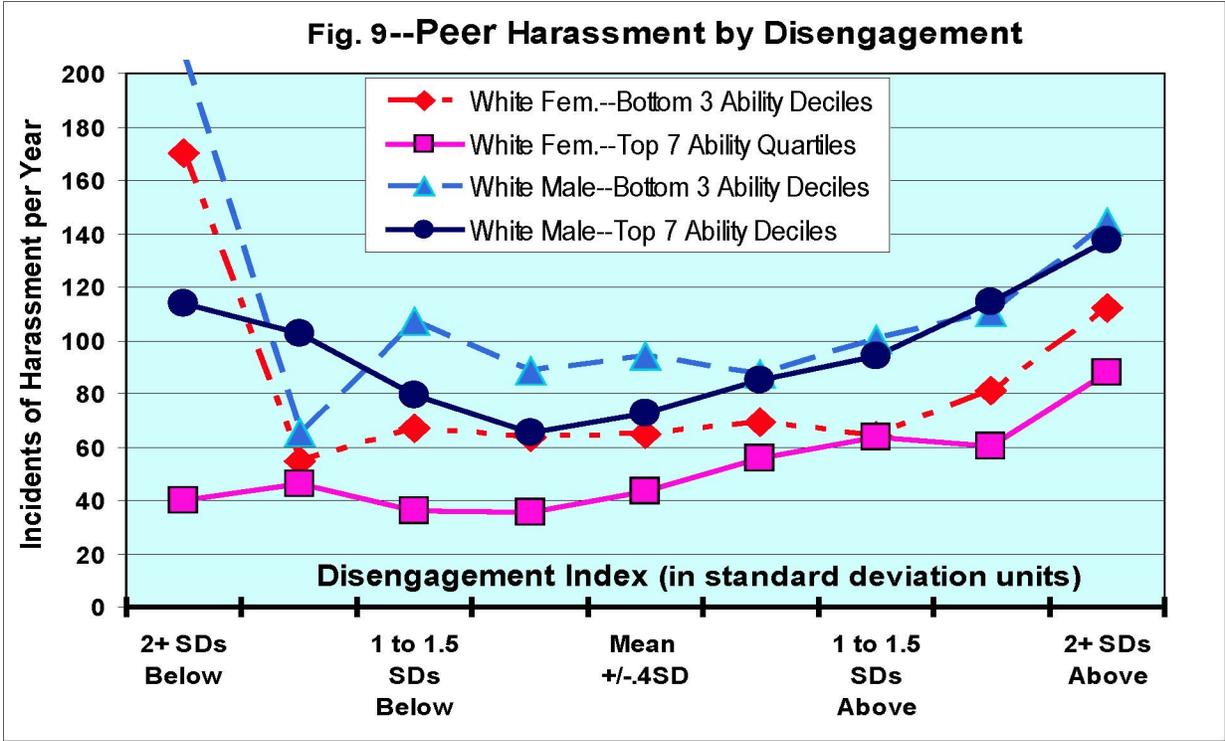
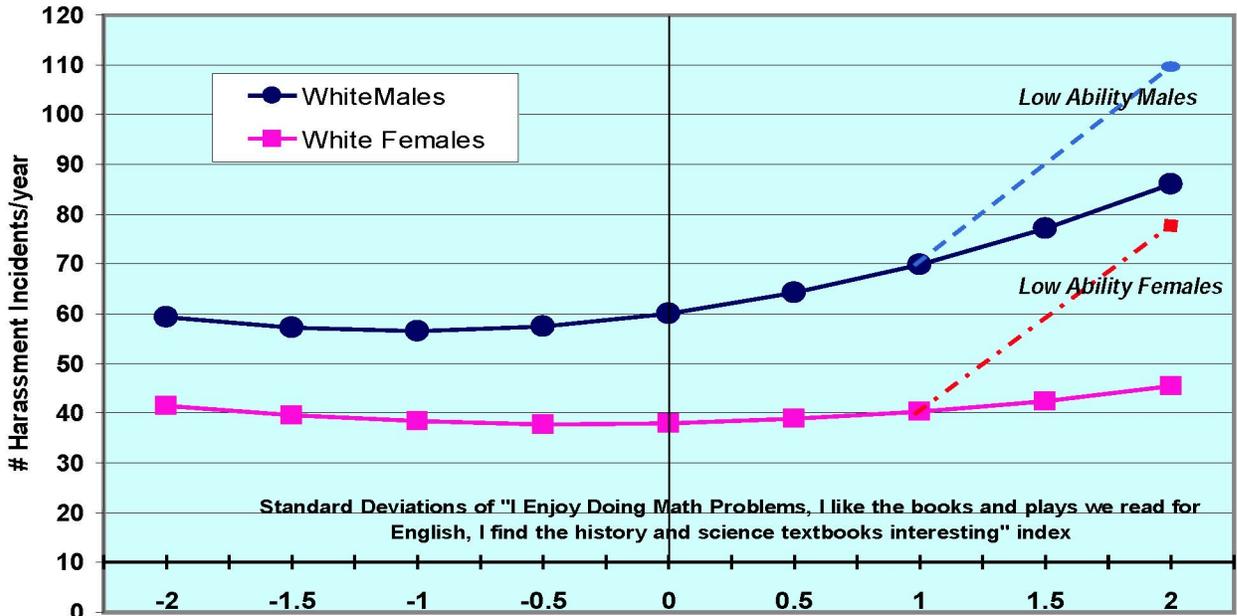
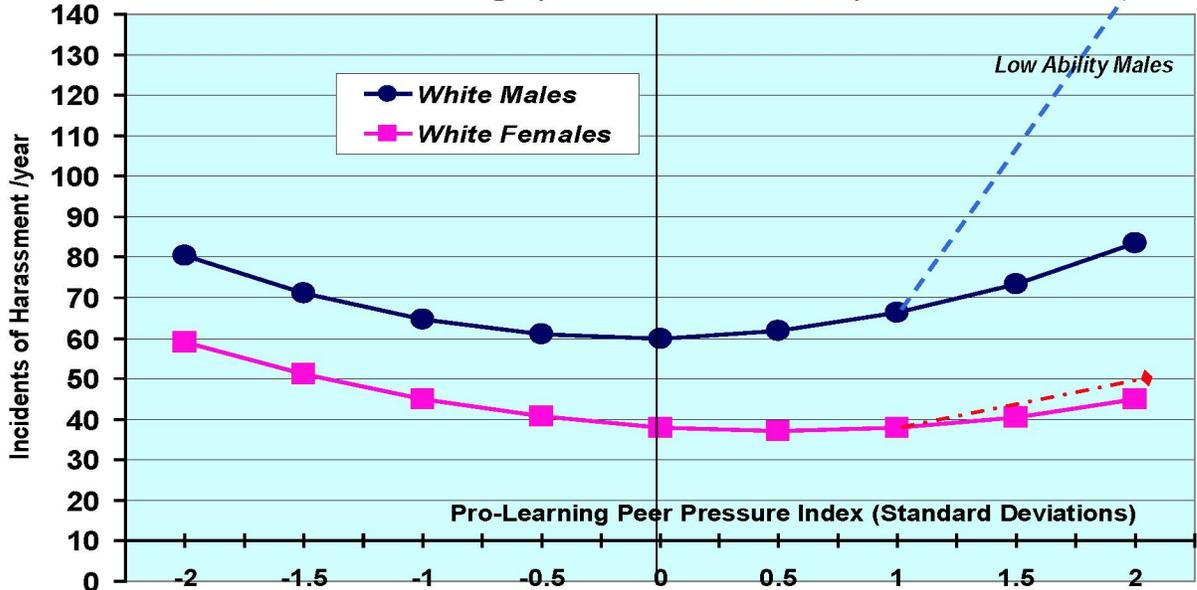


Fig. 10--Peer Harassment by "I Like to Learn" Index (with full controls)



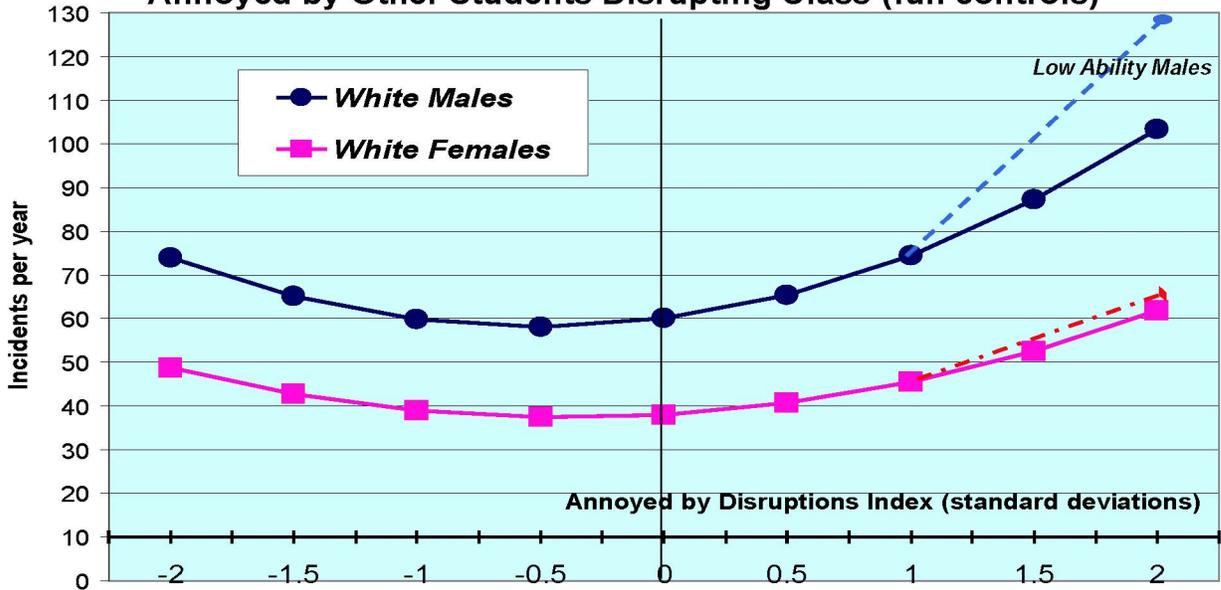
Simulations of the impact of the Like to Learn Index while controlling for Positive Peer Pressure, disengagement, Annoyed by disruption, class discussions, time doing homework, hanging out, in extracurricular activities, in solitary leisure, GPA and a host of other student characteristic and their perceptions of teachers.

Fig. 11--Peer Harassment by Close Friends are Pro-Learning (with full controls)



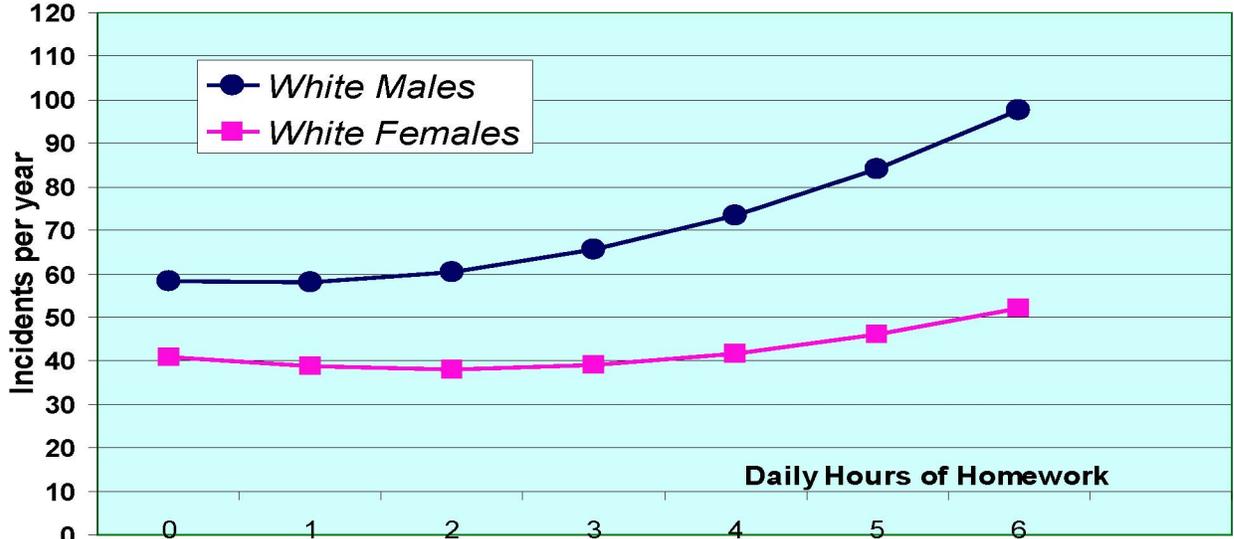
Simulations of the impact of the Positive Peer Pressure while controlling for like to learn, disengagement, Annoyed by disruption, class discussions, time doing homework, hanging out, in extracurricular activities, in solitary leisure, GPA and a host of other student characteristic and their perceptions of teachers.

Fig. 12--Peer Harassment by Whether Best Friends are Annoyed by Other Students Disrupting Class (full controls)



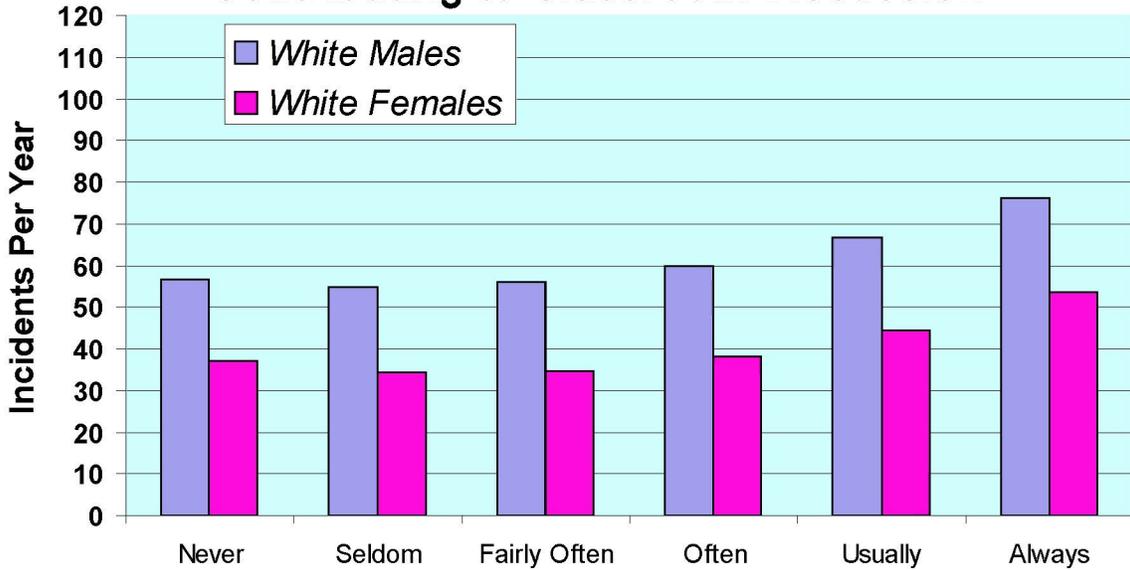
Simulations of the impact of Annoyed by Disruption Index while controlling for like to learn, disengagement, Positive Peer Pressure, class discussions, time doing homework, hanging out, in extracurricular activities, in solitary leisure, GPA and a host of other student characteristic and their perceptions of teachers.

Figure 13--Peer Harassment by Hours Spent Doing Homework per day



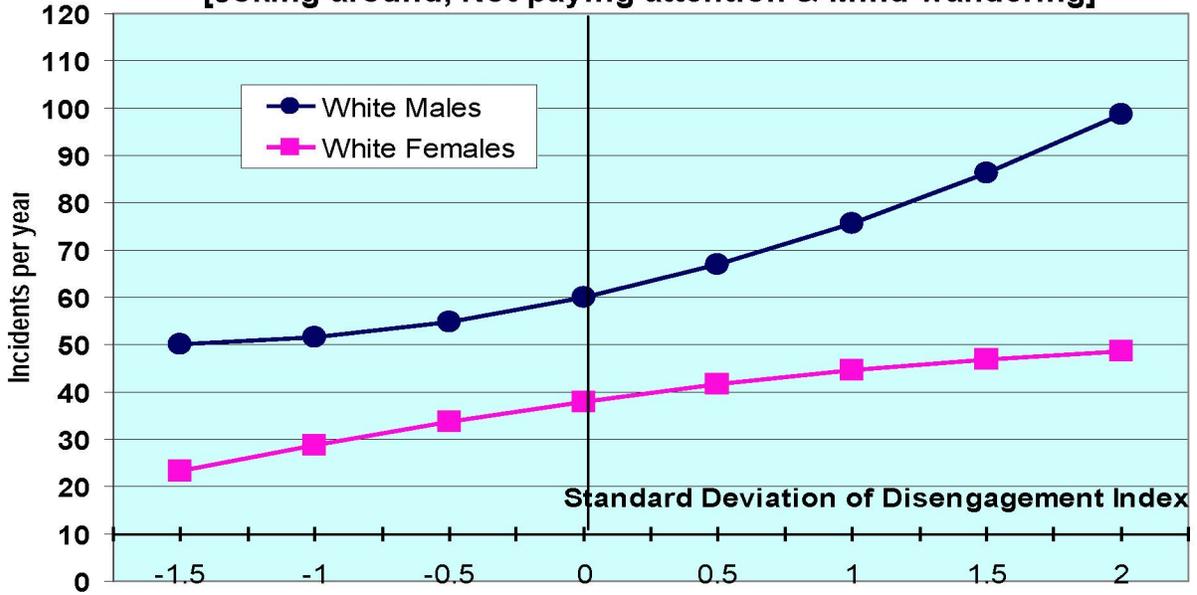
Simulations of the impact of homework time while controlling for disengagement, contributing to class discussions, like to learn, annoyed by disruptions, positive peer pressure, time spent hanging out, in extracurricular activities, in solitary leisure activities and a host of other student characteristic and their perceptions of teachers.

Fig. 14--Peer Harassment by Frequency of "Contributing to Classroom Discussion"



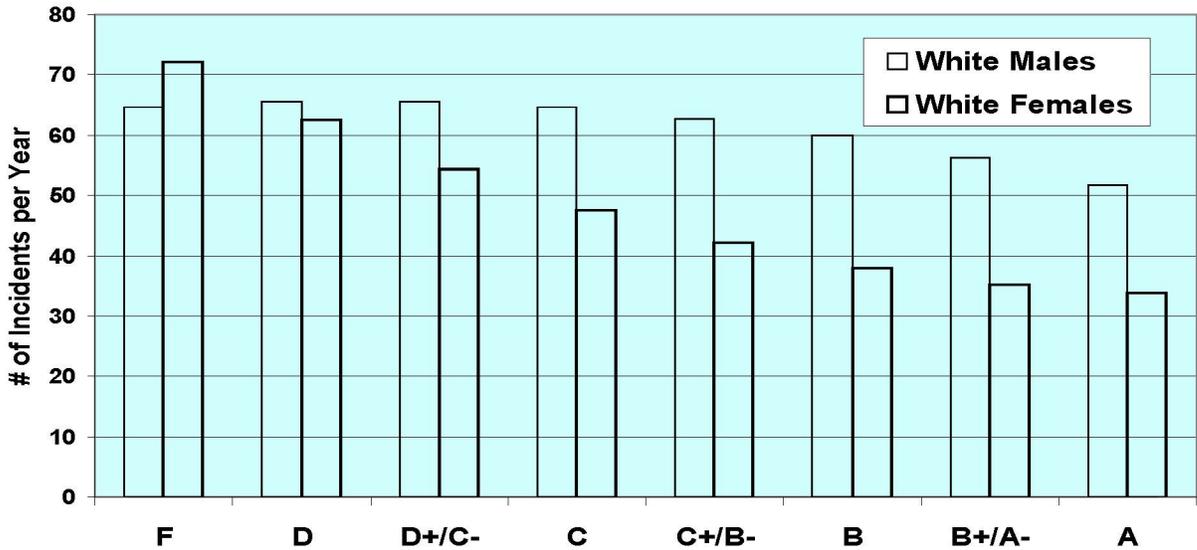
Simulations of the impact of contributing to class discussions while controlling for disengagement, homework time, like to learn, annoyed by disruptions, positive peer pressure, time spent hanging out, in extracurricular activities, in solitary leisure activities and a host of other student characteristic and their perceptions of teachers.

Fig. 15--Peer Harassment by Classroom Disengagement
 [Joking around, Not paying attention & Mind wandering]



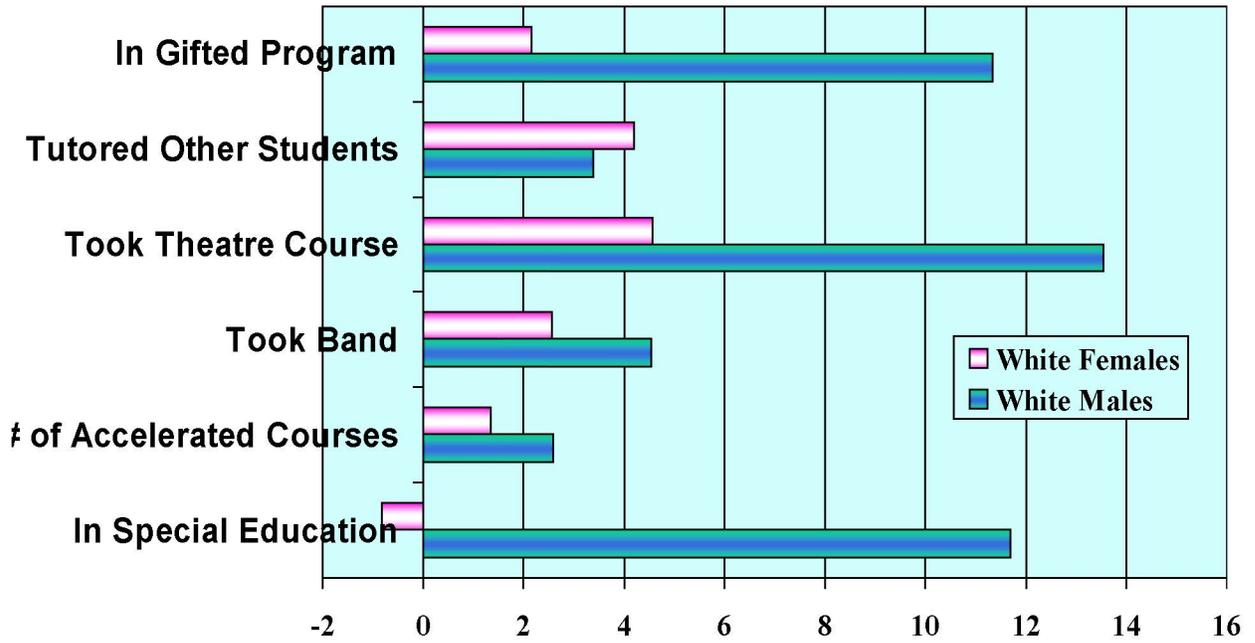
Simulations of the impact of disengagement controlling for like to learn, annoyed by disruptions, positive peer pressure, class discussions, homework time, time spent hanging out, in extracurricular activities, in solitary leisure and a host of student characteristics and their perceptions of teachers.

Fig. 16--Peer Harassment by Grade Point Average



Simulations of the impact of GPA while controlling for 'like learning, positive peer pressure, annoyed by disruptions, disengagement, contributing to class discussions, homework time, time extracurricular activities, hanging out, in solitary leisure and a host of other student characteristic and their perceptions of teachers.

Fig. 17--Effects of Signals of Academic Orientation on Harassment Incidents per year for White Students



Mean # of Incidents was 84 for white males and 49 for white females. Remedial courses had no effect. Models control for disengagement, contributing to class discussions, like to learn index, annoyed by disruptions, positive peer pressure, time spent on home work, hanging out, extracurricular activities, solitary leisure activities and a host of other student characteristics and their perceptions of teachers.

Appendix Table A—Means & Standard Deviations
Second Wave of the EEA Survey of Student Culture

	White Males		White Females	
	Mean	Std. Dev.	Mean	Std. Dev.
Belief School is Zero-Sum				
If others study hard, it's harder to get A's [1→ 4]	1.98	0.77	1.92	0.70
Study Effort & Time Use				
Share Homework done [0→1.25]	.762	.239	.827	.201
Square of (Share of Homework done - .78)	.059	.0917	.043	.057
Studying (hrs/day)	1.41	1.22	1.94	1.4
SQ of (Study hr – 1.87)	1.87	4.00	2.25	4.77
TV, listening to music, video games (hrs/ day)	2.51	2.01	2.22	1.98
Work for Pay (hrs/day)	1.12	1.99	1.04	1.89
Extra-curricular Activity (hrs/day)	1.86	1.63	1.75	1.49
Hanging out (hrs/day)	1.70	1.77	1.93	1.83
High Academic Achievement				
In Gifted Program	.159	.366	.160	.367
Tutored Other Students	.164	.388	.255	.436
Took Theater Course	.150	.357	22.9	.420
Took Band/Orchestra Course	.377	.48	.412	.492
# of Accelerated Courses in middle school	1.0	1.3	1.10	1.3
Taking one or more honors or AP course	0.516	0.50	0.543	0.498
Taking at least one AP course	0.093	0.29	0.107	0.309
# of Honors & AP courses	1.34	1.66	1.47	1.69
Low Academic Achievement				
In Special Education	0.056	0.23	0.035	0.18
Took Remedial Course	0.23	0.42	0.217	0.412
Took a Blue Collar Vocational course	0.097	0.30	0.033	0.18
Ability- Less visible to others				
Share of Teachers' lessons completely understood [0 to 1]	.690	.249	.672	.241
How quickly I Learn Things? [0→1]	.712	.186	.669	.171
Intrinsic Motivation				
Like Learning [SD=1]	-0.10	.99	0.025	0.922

Appendix Table A (cont)—2nd Wave EEA Survey

	Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.
<u>Teacher Characteristics</u>				
Teachers are Interesting Share of time [0→1]	.505	.214	.512	.202
I don't feel close to any of my teachers [1→ 4]	2.29	0.79	2.22	0.76
<u>School Characteristics</u>				
Grade in school	9.32	1.52	<i>9.50</i>	1.40
Middle School Grades (6 to 9)	.287	.452	.225	.418
<u>Demographic Characteristics</u>				
Parents speak a Foreign Language at Home	.050	.201	.044	.189
Living in Single Parent Household	0.143	0.35	0.152	0.36
Blended Family	0.064	0.24	0.076	0.27
Number of Siblings	1.75	1.2	1.79	1.2
Parent's Education—mean of scale	5.05	1.42	5.0	1.5
Father's Education	5.10	1.58	5.05	1.61
In Bilingual Education	.114	0.32	0.107	0.31
In English as 2 nd Lang	.025	0.16	.021	.14
Books in Home Index [range is 1 to 5]	3.93	1.15	4.05	1.05
One or more Computers at Home	0.95	0.22	0.96	0.22
Dependent Variables				
Num of Incidents of Harassment	85.7	145.5	51.9	102.8

Bibliography

- Adler, Patricia and Peter Adler. Peer Power: Preadolescent Culture and Identity. (New Brunswick, NJ, Rutgers Univ. Press, 2003) 1-255.
- Ainsworth-Darnell, James and Douglas Downey. (1998) "Assessing the Oppositional Culture Explanation for Racial/Ethnic Differences in School Performance." *American Sociological Review* 63 (1): 536-553.
- Akerlof, George and Rachel Kranton .(2002) "Identity and Schooling: Some Lessons for the Economics of Schooling." Journal of Economic Literature, Vol. 41, # 4, December, .
- Ammermueller, Andreas and Jörn-Steffen Pischke. "Peer Effects in European Primary Schools: Evidence from PIRLS," Bonn, Germany, IZA Discussion Paper 2077, (April 2006), 1-51
- Angrist, Joshua D. and Keven Lang, (2002) "How important are Classroom Peer Effects? Evidence from Boston's Metco Program," Cambridge Mass, National Bureau of Economic Research, Working Paper 9263, 1-38.
- Angrist, Joshua D., Susan M. Dynarski, Thomas J. Kane, Parag A. Pathak, and Christopher R. Walters. "Who Benefits from KIPP" NBER Working Paper Series No. 15740. Cambridge, MA: National Bureau of Economic Research, February 2010.
- Arcidiacono, Peter, Gigi Foster, Natalie Goodpaster and Josh Kinsler. (2004) "Estimating spillovers in the classroom with Panel Data." Duke University, 1-30.
- Arrow, Kenneth. "Political and Economic Evaluation of Social Effects and Externalities," in Michael Intriligator, ed., *Frontiers of quantitative economics*. Amsterdam: North-Holland, 1971, 3-25.
- Austin-Smith, David and Roland G. Fryer, Jr. (2004) "An Economic Analysis of Acting White." Harvard University, 1-34.
- Axelrod, Robert. "An Evolutionary Approach to Norms." *American Political Science Review* 80, no.4 (Dec. 1986) pp. 1095-1111.
- Baldacci, Leslie. (2004) *Inside Mrs. B's Classroom*. New York, McGraw-Hill, 1-229.
- Bendor, Jonathan and Piotr Swistak. "The Evolution of Norms." *The American Journal of Sociology*, Vol. 106, no. 6, May 2001 , p. 1493.
- Betts, Julian and Andrew Zau. (2003) "Peer Groups and Academic Achievement: Panel Evidence from Administrative Data," Public Policy Institute of California.
- Bishop, John H. and Michael Bishop (2007) "An Economic Theory of Academic Engagement Norms: The Struggle for Popularity and Normative Hegemony in Secondary Schools?" Center for Advanced Human Resource Studies Discussion Paper 07-14, Cornell University. <http://digitalcommons.ilr.cornell.edu/cahrswp/471/>
- Bishop, John, Matthew Bishop, Lara Gelbwasser, Shanna Green and Andrew Zuckerman. "Nerds and Freaks: a Theory of Student Culture and Norms" Brookings Papers on Education Policy: 2003, edited by Diane Ravitch, (Washington, DC: The Brookings Institution, 2003),
- Bishop, John H. (2005) "High School Exit Examinations; When do learning effects generalize?" Uses and Misuses of Data in Accountability Testing, eds. Joan Herman and Ed Haertel. National Society for the Study of Education Yearbook: 2005. Part I, (Chicago: Univ. of Chicago Press) 260-288.
- Blanco, Jodee. (2003). *Please Stop Laughing at Me...* Avon, Mass: Adams Media, 1-274.

- Bloom, Howard S., Saskia Thompson and Rebecca Unterman. *Transforming the High School Experience*. MDRC, June 2010, 1-159.
- Boozer, Michael and Stephen E. Cacciola, (2001) "Inside the 'Black Box' of Project Star: Estimation of Peer Effects Using Experimental Data," Yale University, Economic Growth Center Discussion Paper # 832, 1-__.
- Brown, Bradford, Sue Ann Eicher and Sandra Petrie, "The importance of peer group ('crowd') affiliation in adolescence," *Journal of Adolescence*, 1986, Vol 9, 73-96.
- Brown, B. Bradford. "Peer Groups and Peer Cultures," in S. S. Feldman and G.R. Elliot (Eds) *At the Threshold: the Developing Adolescent*. Cambridge, Mass: Harvard University Press, 1990, p. 177.
- Coleman, James S. *The Adolescent Society*, New York, Free Press, 1961.
- Coleman, James S. *Foundations of Social Theory*. (Cambridge, Mass: Harvard University Press, 1990).
- Cook, Phillip and Jens Ludwig. (1997) "Weighing the Burden of Acting White': Are there Race Differences in Attitudes toward Education." *Journal of Policy Analysis and Management*. 16: 656-78.
- Craig, W. M. and D. J. Pepler, "Observations of bullying and victimization in the school yard," *Canadian Journal of School Psychology*, 1997, 13, 41-59.
- Dobbie, Will, and Roland G. Fryer, Jr. "Are High-Quality Schools Enough to Close the Achievement Gap? Evidence from a Bold Social Experiment in Harlem." Unpublished paper. Cambridge, MA: Harvard University, April 2009.
- Downey, Douglas and James Ainsworth-Darnell. (2002) "The Search for Oppositional Culture among Black Students." *American Sociological Review* 67 (1): 156-64.
- Eckert, Penelope. *Jocks and Burnouts: Social Categories and Identity in the High School*, New York: Teachers College Press, 1989, 1-195
- Eder, Donna et al., *School Talk*, New Brunswick: Rutgers University Press, 1995, 1-198.
- Elster, Jon. (1999) *Alchemies of the Mind: Rationality and the Emotions* (Cambridge Univ. Press)
- Espelage, Dorothy and Christine Asiado, (2003) "Conversations with Middle School Students about Bullying and Victimization: Should we be concerned?" *Journal of Emotional Abuse*.
- Espelage, Dorothy and Melissa Holt. (2004) "Bullying and Victimization during early adolescence: Peer Influence and Psychosocial Correlates," *Journal of Emotional Abuse*, 1-32.
- Everhart, Robert B. (1983) *Reading, Writing and Resistance: Adolescence and Labor in a Junior High School* Boston, Routledge and Kegan Paul, 1-302.
- Falk, Armin, Ernst Fehr and Urs Fischbacher. (2002) "Testing Theories of Fairness and Reciprocity-Intentions Matter." University of Zurich.
- Farkas, George, Christy Lleras and Steve Maczuga. (2002) "Does Oppositional Culture Exist in Minority and Poverty Peer Groups?" *American Sociological Review*, 67 (1): 148-55.
- Figlio, David N. "Boys Named Sue: Disruptive Children and their Peers." University of Florida, Economics Department, 2003.
- Flay, B.R., Acock, A and Vuchinich, S. and Beets, M. (2006, August) *Progress report of the randomized trial of Positive Action in Hawaii: End of third year of intervention*. Positive Action, Inc. Twin Falls, ID 83301.
- Flay, B.R. & Allred, C.G. (2003) "Long-Term Effects of the Positive Action Program." *American Journal of Health Behavior*, 27 (S1), S67-82.

- Foley, Douglas E. (1990) Learning Capitalist Culture: Deep in the Heart of Texas . (Philadelphia: U. Of Pennsylvania Press)
- Freedman, Samuel G. (1990) *Small Victories* New York: Harper Perennial, 1-432.
- Gabarino, James and Ellen deLara. (2002) *And Words Can Hurt Forever*. New York: the Free Press, 1-238.
- Gelbwasser, Lara. "Organizational Culture and the Power of Peers," Cornell University, School of Industrial and Labor Relations, Spring 1998.
- Gordon, C. Wayne, (1957) *The Social System of the High School*. Chicago: the Free Press.
- Grant, Gerald. (1988) The World We Created at Hamilton High . Cambridge, Mass: Harvard Univ. Press.
- Hanushek, Eric A., John Kain and Steven G. Rivkin, (2002) "New Evidence about Brown V. Board of Education: the Complex Effects of School Racial Composition on Achievement," Cambridge Mass, National Bureau of Economic Research, Working Paper 8741, 1-38.
- Hersch, Patricia. A Tribe Apart, New York: Ballantine Books, 1999.
- Hirshleifer, D. and E. Rasmusen (1989) "Cooperation in a Repeated Prisoner's Dilemma with Ostracism." *Journal of Economic Behavior and Organization*, 12: 87-106.
- Hoxby, Caroline. (2000) "Peer Effects in the Classroom: Learning from Gender and Race Variation," Cambridge Mass: National Bureau of Economic Research, Working Paper 7867, 1-62.
- Hoxby, Caroline M., Sonali Murarka, and Jenny Kang. "How New York City's Charter Schools Affect Student Achievement: August 2009 Report." Second report in series. Cambridge, MA: New York City Charter Schools Evaluation Project, September 2009.
- Johnson, Lloyd, Jerald Bachman and Patrick O'Malley. Monitoring the Future: 2009. Institute of Social Research, U. of Michigan., 2010. <http://monitoringthefuture.org/datavolumes/2009/2009dv.pdf>
- Johnson, LouAnne. (1992) *My Posse Don't Do Homework* (reprinted as *Dangerous Minds*). New York: St. Martins Press, 1-278.
- Johnson, LouAnne. (1995) *Girls in the Back of the Class*. New York: St. Martins Press, 1-262.
- Juvonen, Jaana, Sandra Graham and Mark A. Schuster. (2003) "Bullying among young adolescents: the Strong, the weak and the troubled." Pediatrics, vol. 112, 1231-1237.
- Kinney, David A. (1993) "From Nerds to Normals: The Recovery of Identity among Adolescents from Middle School to High School," Sociology of Education, vol. 66 (January).
- Kitcher, P. (1993) "The evolution of human altruism." Journal of Philosophy, 90: 497-516.
- Kremer, Michael and Dan Levy. (2003) "Peer Effects on Alcohol Use among College Students." NBER Working Paper no 9876, Cambridge Mass, 1-50.
- Landau, Elaine. (1988) *Teenagers talk about School*. Englewood Cliffs: Simon & Schuster, 1-107.
- Larkin, Ralph. (1979) *Suburban Youth in Cultural Crisis*. New York: Oxford University Press, 1-259.
- McCourt, Frank (2005) *Teacher Man*. New York: Scribner, 1-237.
- Macy, Michael. (1990) "Learning Theory and the Logic of Critical Mass" *American Sociological Review*, 55:6, December, 809-826.
- Macy, Michael and John Skvoretz. (1998) "The evolution of trust and cooperation between strangers: A computational model." *American Sociological Review*, 63: October, 638-660.
- McFarland, Daniel A. (2005) "Why Work When You Can Play? Dynamics of Formal and Informal Organization in Classrooms." Chapter 8 in *The Social Organization of Schooling*, edited by Larry Hedges and Barbara Schneider (pp. 147-174). New York: Russell Sage Foundation.

- Merten, Don E. (1996a) "Visibility and Vulnerability: Responses to rejection by nonaggressive junior high boys," *Journal of Early Adolescence*, Vol. 16 No. 1, February 1996, 5-26.
- Merten, Don E. (1996b) "Information Versus Meaning: Toward a further understanding of Early Adolescent Rejection," *Journal of Early Adolescence*, Vol. 16 No. 1, February, 41.
- Metz, Mary Haywood. *Classrooms and Corridors*, Berkeley: Univ. of California Press, 1978, 1-275,
- National Center for Education Statistics. *Condition of Education 1972*. US Dept. of Education, Indicator 18, 161-163.
- Oliver, Pamela, Gerald Marwell and Ruy Teixeira. (1985) "A Theory of Critical Mass I: Interdependence, Group Heterogeneity and the Production of Collective Action." *American Journal of Sociology*, 94: 502-534.
- Oliver, Pamela and Gerald Marwell. (1988) "The Paradox of Group Size in Collective Action: A Theory of Critical Mass II." *American Sociological Review*, 53: 1-8.
- Olweus, Dan. *Bullying at School*. Malden, MA: Blackwell, 1993.
- Pellegrini, A. D., Bartini, M. and F. Brooks, "School bullies, victims and aggressive victims: Factors relating to group affiliation and victimization in early adolescence," *Journal of Educational Psychology*, 91, 1999, 216-224.
- Powell, Arthur; Farrar, Eleanor and Cohen, David. *The Shopping Mall High School*. New York, New York: Houghton Mifflin, 1985, 1-360.
- Riedl, Arno and Aljaz Ule. "Exclusion and Cooperation in Network Experiments." CREED, Faculty of Economics and Econometrics, U. of Amsterdam, Netherlands (June 2002), 1-20.
- Rodkin, P. C.; T. W. Farmer; R. Pearl and R. Van Archer. "Heterogeneity of popular boys: Antisocial and prosocial configurations," *Developmental Psychology*, 36, 2000, 14-24.
- Sacerdote, Bruce. (2000) "Peer Effects with Random Assignment: Results for Dartmouth Roommates," Dartmouth College .
- Sacher, Emily. (1991) *Shut Up and Let the Teacher Teach*. New York: Poseiden Press, 1-331.
- Simmons, Rachel. (2002) *Odd Girl Out*, New York, Harcourt, Inc., 1-289.
- Simmons, Rachel. (2004) *Odd Girl Speaks Out*, New York, Harcourt, Inc., 1-199.
- Sizer, Theodore R. *Horace's Compromise: The Dilemma of the American High School*. Boston: Houghton Mifflin, 1984, 1-299.
- Steinberg, Laurence, Brown, Bradford and Dornbusch, Sanford. *Beyond the Classroom*. New York: Simon and Schuster, 1996, 1-223.
- Suskind, Ron. (1999) *Hope in the Unseen*, New York: Broadway, 1-400..
- The, Bing- ru, Moira McCullough and Brian Gill. *Student Achievement in New York City Middle Schools Affiliated with Achievement First and Uncommon Schools*. Mathematica Policy Research, July 2010, 1-24.
- Tuttle , Christina, Bing- ru The, Ira Nichols-Barrer, Brian Gill and Phillip Gleason. (2010) *Student Characteristics and Achievement in 22 KIPP Middle Schools* , Mathematica Policy Research, Washington, DC. June 2010.
- Uribe, Claudia, Richard Murnane and John Willett. "Why do Students Learn more in Some Classrooms than in Others? Evidence from Bogota" February 2003, Harvard Graduate School of Education.
- Vigdor, Jacob and Thomas Nechyba. (2004) "Peer Effects in North Carolina Public Schools." Sanford Institute of Public Policy, Durham, NC, 1-31.

- Willer, Robb and Ko Kuwabara. (2006) "False Enforcement of Unpopular Norms: the Illusion of Sincerity." Department of Sociology, Cornell University, 1-11.
- Willis, Paul. (1977) *Learning to Labor* New York: Columbia University Press, 1-226.
- Willms, J. Douglas and Somers Marie-Andree. (2001) "Family, classroom, and school effects on children's educational outcomes in Latin America." International Journal of School Effectiveness and Improvement, 12(4), 409-445.
- Wiseman, Rosalind. Queenbees and Wannabes, New York: Crown Publishers, 2002, 1-336.
- Wößmann, Ludger. (2003a) "Central Exit Exams and Student Achievement: International Evidence." No Child Left Behind? The Politics and Practice of School Accountability. Eds. Martin West and Paul Peterson, Washington, DC: Brookings Institution Press, 2003. 292-323.
- Xiao, Erte and Daniel Houser "Public Implementation Eliminates Detrimental Effects of Punishment on Human Cooperation" Bonn, Germany, IZA Discussion Paper 1977 (February 2006)
- Zimmerman, David. (1999) "Peer Effects on Academic Outcomes: Evidence from a Natural Experiment" NBER

ENDNOTES

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- ¹ Large gender differentials in attitudes and engagement are not new. In the 1990 survey, students were asked how frequently you “Tried to do your best work.” Only 53 percent of males said ‘often’ or ‘always’ compared to 70 percent of females in 2000. Thirty-six percent of males said they ‘often or always’ “Fool around in class”; only 20.8 percent of females. Sixteen and a half percent of males said they ‘often or always’ “Fail to complete/hand in assignments”; only 6.8 percent of females. (NCES, *Condition of Education*, Indicator 18, data from *Monitoring the Future*)
- ² During the fall of 1997 seven interviewers were hired to collect data for a study of high school peer cultures in eight high performing suburban New York State high schools. The team met frequently during the fall to develop a protocol for the open-ended interviews and a paper and pencil questionnaire that respondents completed just prior to their personal interview. The interviewers were trained in interviewing techniques and used a tape recorder during the interview. We approached high performing high schools that were a short drive from the suburban residences of the Cornell students conducting the interviews during the winter break. Respondents were selected and parental permissions were handled by the cooperating high school. One hundred and thirty-five tenth graders were interviewed (most of them female) during January 1998. The following semester all but one of the interviewers took a seminar exploring qualitative research methodologies and read articles and books discussing student peer culture. The students then wrote an “ethnography” of the school they had studied. Student ethnographies were shared with the principal of the high school studied. A second wave of personal interviewing was undertaken with a convenience sample of male students attending Ithaca area middle schools and high schools.
- ³ The Educational Excellence Alliance is a consortium of schools and school districts that are interested in learning how to more effectively help all their middle and high school students to achieve at higher levels and to respect individual differences. The Alliance offers its members a convenient means of assessing and diagnosing their student peer cultures in a way that allows them to compare themselves to other similar schools and to track changes over time. During the 1998-99 school year, 134 schools in New York, Massachusetts, Connecticut, New Jersey, and Pennsylvania undertook a standardized assessment of the culture of their 10th graders and were sent reports comparing their students’ responses to the responses at other comparable schools. The questionnaire was revised in January 2000 and another 170+ schools (nearly half of them middle schools) have participated since then. Many of the schools participating in this second wave of data collection are located outside of the Northeast. The reports sent back to each school point out areas of concern and have suggested reading materials that might be helpful in planning interventions designed to build a student culture that honors academic achievement and respects individual differences.
- ⁴ Since our interviews and surveys were conducted in public schools serving racially integrated or predominantly white upper-middle class suburbs, small cities and rural areas, findings should not be extrapolated to central city high schools serving predominantly disadvantaged neighborhoods. .
- ⁵ Employing evolutionary game theory, Bendor and Swistak (2001) have shown that social norms enforcing cooperation in prisoner’s dilemma games have a very robust ability to repel invasions by non cooperating intruders only when third parties (not just the victim of non-cooperation) are obligated to impose sanctions on deviant actors.
- ⁶ The variables describing educational program were Special Education, Bilingual, School-to-Work, gifted and blue-collar vocational. The special activity variables were Band, English as a 2nd language and tutored other students. The course rigor variables were currently taking an AP course, currently taking one or more honors courses, Number of AP and honors courses being taken, number of accelerated courses taken in middle school.
- ⁷ Note that adding the variables measuring pro/anti-engagement attitudes and behaviors to the baseline model has similar effects on coefficients on the four demographic variables in the top panel of Table 1. Our pro/anti-engagement indicators explain 66 percent of the effect of *books in the*

home and about half of the effect of parent's schooling, personal computer at home and being from a single parent family.

- ⁸ The estimates of the contribution of a particular variable to the total gender differential are an accounting exercise, not results from structural models of the determinants of grade-point average. Measurement error, omitted variables, selection bias and possible reverse causation mean that it would be quite hazardous to treat the coefficients in Table 1 as unbiased estimates of the structural model of GPA. That is why we use phrases like 'account for,' 'apparently', and 'appear to.'
- ⁹ Academic and peer status are highly aligned in elementary classrooms but not in middle school classrooms (Cohen and Lotan 1997a, 1997b; Lloyd and Cohen 1999; Chiu 2000)
- ¹⁰ Harassment is hard to define because insulting words are a pervasive part of peer interactions even among close friends where there is no intention to humiliate. Students told us that conversations with close friends are often sprinkled with insulting words. Insults intended to hurt and humiliate are different, they said, coming from kids outside their group or said in a different tone of voice or picking on a real (not fanciful) feature of the victim's persona. This makes it difficult though not impossible to define and enforce a prohibition against peer harassment.
- ¹¹ A number of recent studies have shown that non-random sorting of students into schools and classrooms is not the sole explanation of peer effects on learning (see Ammermueller and Pischke, 2006, Angrist and Lang 2002, Arcidiacono et al 2004, Betts and Zau 2003, Boozer and Cacciola 2001, Hanushek, Kain and Rivkin 2002, Hoxby 2000, Sacerdote 2000, Uribe, Murnane and Willett 2003, Vigdor and Nechyba 2004, Wilms and Somers 2001, Zimmerman 1998). The causal peer effects found by these studies imply that an increase in everyone's engagement is likely to boost learning more than an equivalent increase in ones own engagement.
- ¹² Figlio's (2003) study of the effect of disruptive children on peers is particularly persuasive. He shows that boys with feminine sounding names are much more likely to become disruptive during middle school. He then measures the effect of disruptive students on annual learning gains of classmates in longitudinal data from a large Florida school district. Using the number of boys with feminine names in a classroom as an instrument for disruptive students, he concluded that "Adding one more disruptive child to the classroom... lead to 2.7 to 4.0 national percentiles lower mathematics performance and 2.9 to 3.3 percentage points increased likelihood that peers will be suspended at least once for five or more days."
- ¹³ In California, Florida and Texas, students with high school class rank above a fixed statewide cutoff are guaranteed admission to at least one (or in the case of Texas any) state university without regard to SAT, ACT scores or the rigor of the high school curriculum. This policy pits those near the statewide cutoff for their school into direct competition with each other.
- ¹⁴ The dependent variable is the arithmetic sum of the number of incidents of harassment (not the log of the number of incidents or some other non-linear function of the count of incidents) because the utility function (eq. 9 above) specified a linear relationship. A couple of incidents per year are not consequential. Daily or weekly harassment will have much bigger effects on well being, so we are primarily interested in the prediction of frequent harassment.
- ¹⁵ The self-reported academic ability index is derived from two questions. The first is "How quickly do you learn things?" with a ten category response set running from "Slower than most," through 'Average' up to 'Faster than anybody else.' The second question was: "About what % of the time... do you completely understand the teacher's lesson?" Possible responses were: "10% or less; 11% to 35%; about half the time; 65% to 89%; and 90% or more." Both variables were deviated from the integer value nearest the 30th percentile. The quickly learn variable was divided by 1.8 to make it's standard deviation close to the SD of the 'completely understand variable and then added. GPA

question was: “What was your grade point average last term?” with responses running from A, A-, B+, down to D+, D, D-/F.

- ¹⁶ We checked the sensitivity of our findings to this decision by estimating a model including an index of the student’s self esteem. Students with high self esteem were significantly less likely to be regularly harassed. Adding this variable, however, reduced the coefficients on the square terms of the classroom engagement and pro-learning attitudes indices only slightly so our findings regarding the concavity of the relationship between engagement and harassment is unaffected.
- ¹⁷ “Time spent watching TV, playing video games and listening to music alone or with family” is endogenous. When we dropped it from the model, however, coefficients on attitude and engagement variables changed very little.
- ¹⁸ The What Works character education report is at http://ies.ed.gov/ncee/wwc/pdf/CE_TR_06_04_07.pdf Positive Action’s website is (http://positive.action.net/google/character_education/)
- ¹⁹ In 1980 seventy-five percent of the 10th graders in the bottom quartile on achievement tests said they planned to attend college. National Center for Education Statistics, *Digest of Education Statistics*, 1993, p. 137.
- ²⁰ Twelve years later in 1992 only 3.3 percent of students in the bottom quartile on a battery of achievement tests taken in 12th grade had actually obtained a Bachelors degree and only 4.1 percent had gotten an Associates degree. Students in the top quartile were 20 times more likely to get a Bachelors degree. National Center for Education Statistics, *Digest of Education Statistics*, 1998 p. 329. When this information is presented to students, it should be stressed that college completion rates are influenced by absolute achievement levels not ones class rank and that poor achievement in the early years of secondary school can be overcome by hard work in the upper grades.
- ²¹ Making college attendance and completion a part of a school’s ethos need not marginalize applied technical education. Many of the jobs that used to be filled by young high school graduates, now require a strong background in writing, math and science and a longer period of occupationally specific training. This training is now being done partly in high school and partly in community college. Consequently, vocational teachers should present their program as the occupational equivalent of Advanced Placement courses in academic subjects. Those who graduate with three or four courses occupational courses earn substantially more and are better able to support themselves while attending college. At the end of 10th grade, students with low academic achievement levels should be required to develop a backup plan that involves training for immediate employment after high school.
- ²² James Coleman, *The Adolescent Society*, New York, Free Press, 1961, p 309.
- ²³ Other ways of broadening participation would be to include scores on subject matter tests taken by students in a particular course (eg. 3rd year French) or in the whole school (eg. the state’s 7th grade science test). As in sports, fair competition can be ensured by placing small schools and schools serving disadvantaged populations in separate leagues. While cable TV broadcasts of High School Bowl-like contests can be a component of the program, most of the points obtained by a school’s team should come from assessments of the performance of the entire team on authentic tasks like writing an essay, giving a speech, determining the chemical composition of a compound, working out long mathematics problems, writing a computer program, or fixing a car.