

High School Seniors' College Plans: Gendered Variations in the Effects of Academic Agency and Cultural and Social Capital

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ABSTRACT. This research focused on gendered variations in the effects of academic agency, social and cultural capital on high school seniors' college plans. Monitoring the Future (2012) data from a sample of 12,000 seniors, supplemented with interviews with education professionals found theoretically meaningful gender differences. College plans of males and females were directly influenced by their academic agency. Their parents were an additional direct positive influence, even if only for males. But, parental cultural capital and abstaining from controlled substances increased likelihood of pursuing college through increased academic agency for both males and females. These findings contributed to the literature on gendered higher education pathways and supported theories of social and cultural capital development.

INTRODUCTION

Education is considered by scholars to be the panacea for many of the worlds' problems. Whether it is energy, or environmental crises or social justice issues, we would be closer to meaningful and effective solutions if people were able to make informed and educated choices. Against this background, it is pertinent to raise questions about the state of education in the U.S. Public schooling is available to all American children up until age 18. However, according to the Bureau of Labor Statistics (2014), only about 65% of the students graduating high school go directly to college. Granted, college is not the only option for continued learning by any means, but it is the most commonly accepted route to future success. In fact, in an increasingly technology driven economy, a high school diploma leaves graduates under qualified for most jobs that pay comfortable wages, restricting upward economic mobility.

Pursuing college, a major decision for many youth, is governed by many factors; some are within their control and some are far beyond most 18 year olds. For example, some

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who desire to continue their learning may be limited by financial constraints. Other limitations may be self-imposed, based on how students view themselves as successful learners and the effort they put into their education. Risky behaviors such as smoking and drinking can additionally constrain their college options. Their family and friends could either assist the students in continuing their education or deter them from that path. Gender is yet another consideration in the mobility plans of seniors as well. Female students may feel pressured to pursue a more typical feminine career, while males may be primed for positions of power and leadership. In this multilayered context of the lives of high school seniors, this research paper examined the effects of individual agency and socio-cultural capital on seniors' post high school plans; gender differences in the effects will be used to frame the analysis.

LITERATURE REVIEW

Education and factors influencing achievement have been recognized as important subjects of study by many scholars. The following review of the extant literature identified themes relevant to the educational goals of youth; namely gender in education, academic agency of students, delinquent behaviors, and socio-cultural capital available to them.

Gender and Education

Over the last 40 years, gender disparities in overall numbers of men and women at universities have not only evened out but have favored women (Buchmann and DiPrete 2006). To understand the growing female advantage in college graduation rates of American students, Buchmann and DiPrete (2006) utilized General Social Survey data and the National Educational Longitudinal Survey. An important precursor of gender differentials in college graduation was the overall superior performance in high school academics by females (compared to males).

Yet, gender inequality within specific fields of study in both the humanities and sciences is still very high. Barone (2011), in his study of surveys of university students who graduated between 1999 and 2002 across 8 EU countries, found that a distinction between care and technical subjects was responsible for the gender divide in both humanities and sciences. Fields more closely associated with the feminine caring role, like teaching, social work and nursing, had higher proportions of female graduates; computing and engineering had more male graduates. These divisions may be a factor in gendered income gaps as well.

Youth Agency

Research on youth is also rife with findings about the importance of the responsibility (agency) that youth take, or do not, for their academic success. Youth agency reflects

not only academic effort but other social activities that might limit their options and chances for future success.

Academic Agency

For example, the effort students put into their academic work can influence not only their choices of majors, but even their choice to pursue education beyond high school, if at all. Rooted in the power of perception, a study in the United Kingdom by Chevalier, Gibbons, Thorpe, Snell and Hoskins (2009) demonstrated that students were more likely to pursue higher education when they had positive views of their abilities, regardless of their actual skill levels. University students who were pursuing higher education had a more inflated view of their abilities in high school as well, estimating that they would do better on exams than they actually did. White males had the most inflated views of themselves in contrast to females and males of other races (Chevalier et al. 2009). In short, perception of ability was more powerful than actual ability in influencing student plans to pursue higher education.

Such disconnect between perception and reality should not be surprising given the developmental stage of adolescents and young adults. It is the rare high school senior that will be clear about his/her academic plan, leave alone be coherent in their predicted and actual academic effort. A study by Wust and Beck (2012) based on 472 surveys of college students in the EU, found that students expected to spend a longer time studying when the test was a long way in the future than when the actual time to study arrived. Two-thirds of students thought they would be in the middle rank of student grades.

In the U.S., the expectations-academic effort links have generally been more positive. Researchers, Domina, Conley and Farkas' (2011) found that U.S students, who expected to go to college, put more effort in high school. Not surprisingly, middle school students, from the longitudinal study of US youth, scaled down their original college plans as they grew older. However, regardless of that scaling down of educational goals, effort levels were still higher among American youth than they would have been without the "college-for-all ethos" (94). In other words, whether or not students actually go to college, thinking they will go is beneficial for how much effort goes into academics in high school.

Looking beyond educational attainment to career success of adults, positive attitude and perception are important, but without actual skills, long-term success could be limited. In a longitudinal (from 1979 to 2006) U.S. based study, Hall and Farkas (2011), compared attitudes and cognitive skills of adults of different race groups in a sample of 12,686 respondents. At various points in their careers, irrespective of race/ethnicity, positive attitudinal and behavioral skills were useful at first for both men and women; but, cognitive abilities took over in their impacts on wage growth over time. Taken together, research on adolescents and adults alike has indicated that positive perceptions and effort are crucial for academic and career success.

Delinquent Behavior

Delinquent behavior, another example of youth agency, even if negative agency, has been found to increase the risk of dropping out of high school and not going to college. Using the NLSY97 data from 1997 to 2006, Cowan (2011) found that students, who perceived college to be attainable cost-wise, were less likely to jeopardize that opportunity with risky behaviors. For example, students who lived in lower college cost areas participated in fewer risky behaviors, such as cigarette and marijuana use, and had fewer sexual partners.

Other studies have documented the academic risks posed by delinquent behavior. Barry, Chaney, and Chaney (2010), in their analyses of the 2006 *Monitoring the Future* data, found alcohol use and truancy to be associated with lower educational aspirations for seniors, and that truancy led to other delinquent behaviors. Fleming, White, Haggerty, Abbot, and Catalano (2012) also found higher educational attainment to be associated with less high school marijuana use. Fleming and his colleagues used data from ten public schools in Washington State who participated in the Raising Healthy Children project to track substance use from age 15 to 23. Cigarette smoking rates were highest for students not planning to go to college and for those who dropped out of college, but alcohol use was not unusual for any group of students. However, marijuana use increased after they entered college.

Unfortunately, the connection between drug use and school truancy could compound the risks for not completing high school and college for adolescents. For example, the effects of truancy on other risky behaviors persisted, even when school performance, isolation, friend groups and family were controlled, in a study of young adolescents in Denver (Henry, and Huizing 2006).

The negative agency that delinquency represents is not unique to the American youth. In a street outreach program in Taipei, researchers Chou, Ho, Chen and Chen (2006), evidenced that adolescents who used drugs had much higher rates of truancy than those who did not use drugs. More important from an academic standpoint, larger drug doses reported by students increased days of school missed.

Working through High School

Student employment during high school can be another detractor from academic effort. A study by John Robert Warren, Paul C. LePore and Robert D. Mare (2000), confirmed the connection between lower grades and employment during high school in the US. In evidence from a longitudinal study and follow-ups with a cross-sectional group in the early 90s, employed students had poorer grades, lower achievement on tests, lower socioeconomic standing, and reported lower likelihood of going to college. Employment, per se, was not the cause of lower grades; but grades were a result of factors associated with working in high school, such as reduced effort and even lower family

SES. In other words, employment while in high school can also offer a glimpse into students' socioeconomic standing.

Social and Cultural Capital

While effort and motivation are certainly important for life choices that youth make, the social and cultural contexts in which they live also play a large role in their educational success. Parents and peers are two dominant forces in adolescent lives.

Parents

Social and cultural capital, offered by educated parents to their children, can motivate their children to pursue and excel in their studies. However, the linkages between parent and children's educational trajectories have not been uniform. Holmlund, Lindahl and Plug (2011), in their review of 16 studies of the impacts of educated parents on children's education found varied patterns. Twin parent and adoptee studies showed fathers with a positive influence on children's education, while studies from countries with recent education reforms found mothers to be more instrumental. The researchers concluded that while parent education, or socio-cultural capital, is important for children's educational socialization, fathers and mothers were not uniformly relevant for the overall academic achievement of students. More generally, the role of women's education in lowering birth rates and increasing the general health of the population has been well documented. For example, when Lutz and Samir (2011) compared education trends in countries around the world in order to predict population growth, the positive impact of women's education was evident.

Such gendered effects have also been evident in the U.S. For example, Buchmann and DiPrete (2006) found that males with absent or less educated fathers had the lowest college completion rates while females in the same family situation did far better. They posited that the recent social and legal steps towards gender equality have changed the ways parents invest in sons and daughters, with maternal investment leaning especially towards daughters in homes with absent fathers.

Economic and interactional investments from parents were associated with students applying to more selective schools. In looking at families and high school seniors, An's study (2010) of a national sample in 2004 supported the general importance of social background and parental investments in their children's educational goals.

Peers

Parents are not the only people from whom students gather human capital. As children grow up, their friendship networks and network memberships, become increasingly important with both negative and positive ramifications. In a study of US high school

students, Flashman (2012) found that students typically created friend networks with those students who had similar achievement levels, regardless of socio-demographic traits. When students' achievement goals changed, they altered their network to keep friends at the same levels as themselves. Similarly, Ellenbogen and Chamberland (1997) found differences in the social networks of at-risk and not at-risk students. Of the nearly 200 students they surveyed, those at risk had more friends who had dropped out, more working friends, fewer in school and fewer friends of the same sex. If students and their friend groups are similar in their low achievement levels and goals, the encouragement to break out may be lacking.

Of course, not all peer social activities are detrimental to youth development. Recreational activities, such as sports, can create positive networks and useful social capital for teens. In a study of girls' sports, Troutman and Dufur (2007) found that females, in the NELS survey, who participated in high school sports, were more likely to complete college than females who did not participate. A national longitudinal study comparing sports benefits among males, females and minority groups, by Shifrer, Pearson, Muller and Wilkinson (2012), found that all groups of students benefitted in college although black female athletes were at a disadvantage until the 2000s. Lower levels of female participation in sports were also a concern to researchers. Overall, positive friend groups and recreational activities have had important impacts on students' success.

Demographics, Resource Deficits, and Education

Race or ethnicity and associated deficits in resources and cultural knowledge have been another crucial element in the education plans of American youth. Brian An (2010) found that minority students and those with more educated parents applied to the most selective schools. But it was family background that mattered and less so race or ethnicity. In a US immigrant community, researchers Gonzalez, Stein and Huq (2012) found that students' perceptions of resilience to barriers and adoption of Anglo values led to increased likelihood of college going in 171 Latino youth. These two findings implied that cultural knowledge of the mainstream did aid students in their education goals and success.

Urbanicity. Location within cities is often recognized as a marker of positive human and economic capital; but outside of cities, socioeconomic struggles mattered more for rural youth. Two examples: central city and suburban residential location of 16 year olds, impacted attainment positively based on data from the General Social Survey (Sander 2006). Overtime, the advantage decreased for youth but the location advantages grew for older people. Similarly, although rural students in the National Educational Longitudinal Study had more community and social resources to draw from, researchers Byun, Meece and Irvin (2012) noticed that lower socioeconomic standing made completing college more of a challenge for rural youth.

Gaps in the Research

Based on the literature on student agency and socio-cultural capital presented above, it is clear that researchers have begun to understand factors that influence student motivation for academic success. Some of the most prominent were: cost, friend circles, parental capital, social class and gender. When college was perceived to be financially and intellectually available to high school students, they were more academically engaged and refrained from risky behavior (Domina et al. 2011; Cowan 2011). On the other hand, if they were struggling academically, friends were a negative academic influence (Flashman 2011; Ellenbogen and Chamberland 1997). The role of cultural capital that parents offer their children was touched on by Buchman and Diprete (2006) but not systematically compared to other forms of capital. And, because gendered social expectations are still strong forces in the labor market and in women's occupational choices, researchers (Barone 2011) have advocated for continued research on gender in education. Gendered research is particularly appropriate because women have outnumbered men in college going rates (Buchmann and DiPrete 2006). Against this background, this paper explored the current female advantage in higher education; more specifically, academic agency, delinquent behaviors, and social and cultural capital, with an overlay of gendered variations, was connected to higher education plans of high school seniors.

RESEARCH QUESTION

Gendered variations in the influence of four spheres of influences on post-high school college plans were examined. The first set indicated positive dimensions of individual agency; namely students' effort in school, and their perception of themselves as learners. A potential risk dimension of individual agency, delinquent behavior, was the second explanatory source; unlike positive agency, delinquency was expected to inhibit post-graduation college plans. A set of social environmental factors, indicated by family and friends, rounded out the model. Cultural capital, offered by mothers and fathers, and social capital, accrued through their peer social interactions, were expected to further clarify college plans of high school seniors.

The formal research question posed was: What are the gendered variations in the effects of individual agency and socio-cultural capital on the clarity of high school seniors' academic plans post- graduation? Male and female students were looked at separately; it is well known that differences in gendered norms differentially influence male and female youth reactions to life circumstances and their self-concept. Student work history, race, and residence location was controlled. Students' work history was accounted for because students, whose parents cannot financially support them in high school or in college, tend to combine academics with work (Warren et al. 2000). Controlling for race and urbanicity will help account for possible cultural and other community barriers to education, often by-products of history of discrimination or community expectations.

THEORIES AND HYPOTHESES

To understand, theoretically, the gendered relationships of college plans to student academic agency, and cultural and social capital, three sets of inter-related concepts were used. They were: Coleman's social and cultural capital (1988); Lareau's concerted cultivation (2002); and gendered socialization norms (Jossleson and Harway 2012).

The social capital and social mobility theoretical frameworks were used to broadly frame the search for gender differences in college plans. Scholars have demonstrated the usefulness of social capital, both social and cultural, in social mobility outcomes (higher education and employment) of individuals. Coleman (1988), in his cultural and social capital theoretical reasoning, emphasized that the social and cultural capital and associated learning that parents transfer to their children have important consequences for their success. According to Coleman (1988), parents teach their children the role obligations, expectations, social norms, and the information channels that will be useful to them as they grow into adulthood. Children are expected to use the inherited social and cultural capital to develop their own human capital, commonly typified by educational and occupational success. Lareau (2002) further specified the particulars of the socialization (Cooley 1902) processes of teaching and learning that occurs between parents and children that are most productive for success in societal institutions. She contrasted the focused efforts or "concerted cultivation" by middle-class parents to help their children succeed against the more *laissez-faire*, natural parenting styles of working class and poor parents. In Lareau's concerted cultivation, goal directed parenting styles resulted in middle class children being better equipped to fit in and succeed in social institutions, such as higher education. In other words, parents, by role modelling (a variation of Cooley's looking glass self; Powers 2010:139) expectations and behavior that are normative in traditional institutions, teach their children appropriate pathways to succeed, giving them a head start in the social mobility ladder. In addition to parental capital, the social environments and networks around teens can impart (or not) capital as well. Crowder and South (2003), drawing on Wilson's theories of neighborhood disadvantages, demonstrated how low neighborhood capital could be a detrimental force in socialization for teens.

Against this theoretical background, it is reasonable to evaluate the relative roles that individual agency and social/cultural capital, respectively, play in predicting children's success. Applied to senior high school students, two sets of predictions were made. One, parents with more cultural capital would transfer that capital to children, who in turn would assume more academic agency, decrease delinquency, and have clear post high school plans. The formal hypotheses read as follows: The more parental social and cultural capital high school seniors have, irrespective of their gender, the more likely they would be to have net positive academic agency, and in turn firmer college plans; race/ethnicity, urbanicity, and student work experience will be controlled.

However, given the gendered nature of society, starting from the family and lingering on into other larger societal institutions, it is imperative to ask whether the outcomes of social and cultural capital are different for male and female students. Researches have posited that disparities in childrearing patterns associated with raising girls and boys continue to persist (Buchmann and DiPrete 2006). Gender inequalities and parity in the American society are a work in progress. For example, while more female than male students are entering and graduating from college (Buchmann and DiPrete 2006) and more women are succeeding in the work place, they continue to face glass ceilings in pay and promotions (Barone 2011).

The Male Role Norms Inventory, created by Levant (cited in Jossleson and Harway 2012) as binary opposites of female norms, offered useful tools to disaggregate the gendered effects. The male norms were avoidance of femininity, restriction of emotionality, toughness/aggression, self-reliance, homophobia, non-relational sexuality, and achievement. In fact, Chevalier et al. (2009) and Wust et al. (2012) documented the behavioral and attitudinal manifestations of the binary gender norms. In their studies, men tended to think more highly of themselves than women but also engage in more risky behavior. Assuming that the binary gender norms continue to operate in the lives of high school seniors in 2012, we predicted that social and cultural capital will have stronger positive net impacts on the agency (both positive and negative) of male, than female students, and in turn lead to clear college plans. If gendered role modeling assumptions hold true, paternal cultural capital will also have a stronger impact on academic agency and college plans of males than females; maternal cultural capital will be more relevant for female agency and college plans.

METHODS

This research relied on mixed methods for the data analyses. First, the hypothesis and associated theories were tested using the Monitoring the Future data gathered in 2012 by researchers at the University of Michigan (Johnston et al. 2012). Second, interviews with 8 professionals in the field of high school counseling, sociology, college admissions and education were used to elaborate on the survey findings.

Secondary Survey Data Set

Monitoring the Future: A Continuing Study of American Youth, is an annual survey that is administered to high school seniors from 130 private and public schools in the US. *Monitoring the Future (MTF)* addressed topics ranging from drug use, school work, future plans and family structure of seniors in high school. Researchers Johnston, Bachman, O'Malley, and Schulenberg, at the University of Michigan, with funding from the National Institute for Drug Abuse, have been conducting this survey yearly since 1975.² The 2012 MTF survey, the focus of this study, included a group of about 13,000

youth who responded to the questions relevant to plans after high school. Roughly equal numbers of male and female high school students were represented in the MTF survey (50.1% Male, 49.9% Female). The race/ethnic distribution of youth in the 2012 MTF survey mirrored the overall US population: 12% black, 70% white and 16% Hispanic (Appendix A. Table). As for rural and urban childhood environments: over 40% of respondents grew up in rural areas, such as farms or small towns. Students' work experience was determined by income and hours worked, which affected about 60% of students who held jobs during the school year. These three factors will be controlled for in the multivariate analysis.

Primary Qualitative Interviews

To lend experiential perspectives on the survey findings, eight professionals who work with high school seniors, in college admissions and in education were interviewed for their insights on factors influencing students' plans after graduation. A high school counselor and a college counselor for public high school students, recommended by peers, worked in the same school district. Yet, the two schools had very different demographics; one had nearly all Asian-American students with 95% college attendance (Interviewee #1) and the other advised a more diverse set of students with a typical college attendance of 65% (Interviewee #2). A third interviewee, a private school guidance counselor (#3) in the Bay Area, was contacted online. A teacher (Interviewee #4) and a PhD candidate who works with high school students in San Francisco, was referred by an acquaintance. Two admissions officers (Interviewees #5 and #6) from a private school in the Bay Area were also interviewed. A local specialist in educating teachers (Interviewee #7) and a student services vice president from a public university (Interviewee #8) were the final set of professionals to be interviewed. Each interview lasted about 30 minutes: three were phone conversations and the others were in-person interviews. Interview protocol can be found in Appendix B.

DATA ANALYSES

Three levels of analysis, univariate, bivariate, and linear regression, were used to examine the MTF data. To assess gendered variations, the analyses were disaggregated by male and female students, with about 6,400 respondents in each group.

² In the 2012 *MTF* survey, the focus of this study, schools were chosen using units of geography developed by the Sampling Section of the Survey Research Center. The likelihood of a particular school being selected was proportionate to the size of its graduating class. About 350 students were drawn from each school, with smaller schools having all seniors surveyed. Response rates for 2012 were 83% with a sample size of 14,343 students (Johnston et al., 2012) and was representative of the US high school population. But, *MTF* did not survey young people who have dropped out of high school, which could range from 11 to 20 percent, and who will therefore be omitted in the following analysis. Six survey forms, with a core set of questions on demographics, were used in the survey process so not all students responded to every question. A group of about 13,000 responded to the questions relevant to plans after high school, ability and effort.

Operationalization and Descriptive Analysis

Descriptive analyses of College plans, protective and risk in individual agency, and protective socio-cultural capital are presented below.

Gender Differences in College Plans

The focus of this study, students' college plans after graduation, was measured using a series of survey questions from the *MTF* survey (Table 1.A) about students' plans after high school. The questions referred to the likelihood of them pursuing 2-year college, 4-year college or graduate school. Because no one student should respond affirmatively to all three options (because attending a 2 year and 4 year college simultaneously is unlikely), the responses were ranked from more definite plans to not pursuing more education.

Table 1.A. College Plans of High School Seniors: *MTF* 2012

Concepts	Variables	Values	Statistics		
			Female (n=6330-6485)	Male (n=6233-6407)	
College Plans after High School Graduation (Dependent)	How likely are you to do each of the following things after high school?	Definitely will (4)	22.9%	20.3% ^{***}	
		V2182. Graduate from a two-year college program?	Probably will (3)	18.9	21.6
			Probably won't (2)	16.7	19.1
			Definitely won't (1)	41.5	39.0
		V2183. Graduate from a four-year college program?	Definitely will (4)	69.5%	57.5% ^{***}
			Probably will (3)	19.0	24.3
			Probably won't (2)	5.9	9.6
			Definitely won't (1)	5.6	8.6
		V2184. Attend a graduate or professional school after college?	Definitely will (4)	20.1%	29.2% ^{***}
			Probably will (3)	33.3	33.6
			Probably won't (2)	29.0	24.2
			Definitely won't (1)	17.7	13.0
Index of College Plans ¹	Mean (SD)	8.52(1.75)	8.05(1.93) ^{***}		
	Min-Max	3-12	3-12		

¹. Index of College Plans = V182(2 year college)+V183(4 year college)+V184(grad school); r of V183 and V184=.525^{***}; r of V182 and V184=.134^{***}; r of V182 and V183= -.201^{***}; *p≤ .05, **p≤.01, ***p≤.001.

The largest gap between males and females was that significantly smaller proportions of males (59%) planned to pursue college in contrast to females (69%). When averaged together, this finding is consistent with the Bureau of Labor Statistics (2014) data that about 60% of students, both male and female, going to college. As for 2 year and 4 year colleges, women had more definite plans to attend than males did, although more males had definite plans for graduate school. The mean () value of 8.3 on the index of college plans (range of 3-12) indicated a strong likelihood for most students to pursue some sort

of higher education; however, the index of women's college plans were slightly more definite (=8.52) than for males (=8.05).

Individual Agency: Protective and Risk Factors

As noted earlier, both positive and negative aspects of youth agency were considered for this analysis. Students' perceptions of their intelligence and school ability as compared to their peers can influence what they believe themselves to be capable of doing. The grades that students receive are feedback on that performance that ranks students among their peers. On the other hand, delinquent behavior or risky activities can serve to inhibit school performance and limit further education especially if students are apprehended by teachers or law enforcement.

Gendered Variations in College Agency: Protective Factor. Gender differences in students' perception of their school abilities, their intelligence and grades (first independent concept) presented in Table 1.B revealed the following: males had higher perceptions of their abilities while females had higher grades.

Table 1.B. Academic Agency: MTF 2012

Concepts	Variables	Values	Statistics	
			Female (n=6587-6591)	Male (n=6561-6567)
Perceived Ability	V2173. Compared with others your age throughout the country, how would you rate yourself on school ability?	1="Far Below Average"	0.7%	1.5%***
		2="Below Average"	1.3	1.8
		3="Slightly Below Average"	4.4	4.5
		4="Average"	33.5	28.1
		5="Slightly Above Average"	25.7	24.0
		6="Above Average"	28.8	30.1
		7="Far Above Average"	5.7	9.6
	V2174. How intelligent do you think you are compared with others your age?	1="Far Below Average"	0.8%	1.3%***
		2="Below Average"	1.6	1.2
		3="Slightly Below Average"	5.1	3.5
		4="Average"	32.4	24.1
		5="Slightly Above Average"	26.7	23.5
		6="Above Average"	26.7	33.3
		7="Far Above Average"	6.7	13.1
	V2179. Which of the following best describes your average grade so far in high school?	9="A (93-100)"	20.5%	14.9%***
		8="A- (90-92)"	22.1	17.7
		7="B+ (87-89)"	20.7	18.6
		6="B (83-86)"	15.7	19.0
		5="B- (80-82)"	9.3	12.4
		4="C+ (77-79)"	6.5	8.7
		3="C (73-76)"	3.5	5.4
2="C- (70-72)"		1.2	2.1	
1="D (69 or below)"		.5	1.1	
Index of Perceived Ability ¹	Mean(SD) Min-Max	16.7(3.4) 3-23	16.6(3.6)*** 3-23	

¹. Index of Academic Agency = V2173(ability)+V2174(intelligence)+V2179(grades); r of V2174 and V2173= .726***, r of V2174 and V2179=.370***, r of V2173 and V2179=.515***; *p<.05, **p<.01, ***p<.001

Looking specifically at the differences between male and female responses, women tended to clump more tightly in the middle, with over 30% considering themselves “average,” whereas only about 25% males ranked themselves as average. Fully twice as many men felt they were very high above or very high below average than women. In terms of grades, female respondents had a higher percentage of top grades (by 5%). A larger proportion of males reported their average grade to be C+ or below than females (by over 5%). On the index of academic agency (range of 3-23), it was revealed that what females (=16.7) lacked in positive perceptions, they slightly made up for with better grades (Male =16.6).

Gendered Variations in Delinquent Behavior: Risk Factor. Delinquent Behavior of students was measured using three indicators of substance use in the 30 days before the survey: alcohol, marijuana and cigarettes as well as truancy in the same period. The data are presented in Table 1.C.

The majority of students had not used any of these substances in 30 days prior to the survey; about 5% more females abstaining from all three. As for alcohol, 59% of females and 54% of males did not have any alcoholic beverages. About 20% females had alcohol on 1 to 2 occasions but twice as many males reported 10 to 40 occasions of drinking. Responses for marijuana ranging from 1 to 9 times was uniform between the sexes; but three times as many males reported 10 to 40 instances of using marijuana. Cigarettes, the least popular drug of choice, had 85% of females and 81% of males not smoking. Looking at truancy (classes that students cut), males skipped class more frequently than females by a very small percentage; 70% of males not missing any classes and about 15% missing 1 or 2 classes.

On the Index of Delinquent Behavior, which included alcohol, marijuana, cigarettes and truant behavior and ranged from 0-29, most student scores were in the bottom of the range; with a score of 2 to 4. For females, the mean value of 2.6 was about a point lower than the mean value of 3.4 for males; that is, most students were not delinquent; however, males did so more frequently than females.

Table 1.C. Delinquent Behaviors: MTF 2012

Concepts	Variables	Values	Statistics	
			Female (n=6359-6605)	Male (n=6365-6658)
Delinquent Behavior	V2106.C. On how many occasions (if any) have you had alcohol beverages to drink---more than just a few sips---during the last 30 days? ¹	0= "0 Occasions"	59.7%	54.4% ^{***}
		1="1-2 Occasions"	21.4	19.2
		2="3-5 Occasions"	9.9	12.1
		3="6-9 Occasions"	5.3	6.5
		4="10-19 Occasions"	2.6	4.3
		5="20-39 Occasions"	0.6	1.5
		6="40 or More"	0.5	1.8
	V2117.C. On how many occasions (if any) have you used marijuana during the last 30 days?	0= "0 Occasions"	80.7%	73.1% ^{***}
		1="1-2 Occasions"	7.3	8.0
		2="3-5 Occasions"	3.9	3.8
		3="6-9 Occasions"	2.2	2.5
		4="10-19 Occasions"	2.2	3.5
		5="20-39 Occasions"	1.7	3.1
		6="40 or More"	2.0	6.0
	V2102. How frequently have you smoked cigarettes during the past 30 days?	0="Not at all"	85.3%	81.0% ^{***}
		1=">one /day"	7.5	8.7
		2="1-5 /day"	4.6	5.8
		3="about ½ pack /day"	1.7	2.7
		4="About 1 pack /day"	0.7	1.3
		5="About 1½ pack/day"	0.1	0.2
		6="2 pack or more/day"	0.1	0.3
	V2176. During the last four weeks, how many whole days of school have missed... B. Because you skipped or cut? ¹	0="None"	69.2%	69.3%
		1="1 Day"	13.8	13.0
		2="2 Days"	6.9	7.4
3="3 Days"		4.4	4.1	
4="4-5 Days"		3.3	3.6	
5="6-10 Days"		1.3	1.2	
6="11 or More"		1.1	1.4	
V2178. During the last four weeks, how often have you gone to school, but skipped a class when you weren't supposed to? ²	0="Not at all"	72.8%	70.8% ^{**}	
	1="1 or 2 times"	16.9	17.0	
	2="3 to 5 times"	6.6	7.6	
	3="6 to 10 times"	2.3	2.6	
	4="10 to 20 times"	0.6	0.8	
	5="more than 20"	0.7	1.2	
Index of Delinquent Behavior ²	Mean(SD) Min-Max	2.6(3.6) 0-29	3.4(4.3) ^{***} 0-29	

^{1.} All variables recoded so that "0 occasions" or "Not at all" = 0;

^{2.} Index of Delinquent Behavior= V2106 (ALC) + V2117(MJ)+ V2102(CIG); r of V2106 and V2117=.424^{***}, r of V2106 and V2102= .346^{***}, r of V2117 and V2102=.396^{***}

^{*}p≤.05, ^{**}p≤.01, ^{***}p≤.001

Paternal and Maternal Cultural Capital

Parental availability and education levels do influence what students pick up from their parents and in turn, the cultural capital they can rely on as they grow up. Maternal and paternal education levels and whether the high school senior lived with them are shown in Table 1.D.

Table 1.D. Paternal and Maternal Cultural Capital: MTF 2012

Concept	Variables	Values	Statistics	
			Female (n=6227-6419)	Male (n=6191-6428)
Paternal Cultural Capital	V2163. What is the highest level of education your father completed?	1="completed some grade school or less"	4.2%	3.8%**
		2="some high school"	10.7	10.2
		3="completed high school"	28.4	26.5
		4= "some college"	16.8	18.0
		5=" completed college"	24.1	26.4
		6="graduate or professional school"	15.8	15.1
	V2155. Father or male guardian in household? ¹	0=Not Marked 1=Marked	27.6% 72.4	24.9%*** 75.4
	Index of Paternal Cultural Capital ²	Mean(SD) Min-Max	2.9(2.2) 1-7	3.1(2.1)*** 1-7
Maternal Cultural Capital	V2164. What is the highest level of education your mother completed?	1="completed some grade school or less"	3.2% 8.0	3.0%*** 6.7
		2="some high school"	23.2	22.5
		3="completed high school"	22.5	20.7
		4= "some college"	28.4	32.0
		5=" completed college"	14.7	15.0
		6="graduate or professional school"		
	V2155. Mother or female guardian in Household? ³	0=Not Marked 1=Marked	9.3% 90.7	10.6%* 89.4
	Index of Maternal Cultural Capital ⁴	Mean(SD) Min-Max	3.8(1.7) 1-7	3.7(1.8)*** 1-7

^{1.} V2155. Which of the following people live in the same household with you? Father or male guardian?

^{2.} Index of Paternal Cultural Capital=V2163(fathers education)+V2155(father at home). $r=.174^{***}$

^{3.} V2155. Which of the following people live in the same household with you? Mother or female guardian

^{4.} Index of Maternal Cultural Capital=V2164(mothers education)+V2156(mother at home). $r=.12^{***}$

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Female youth reported slightly lower rates of education for both parents than males did. But, mothers had completed more education than fathers by a few percentage points. And far more youth lived with their mothers (86.6%) than with their fathers (70%); only slightly more females reported no father or male guardian in their home. Because of these differences in living arrangements, the mean Index of Maternal Cultural Capital (female =3.8; male =3.7 on a range of 1-7) was higher than Index of Paternal Cultural Capital (female =2.9; male =3.1).

Peer Social Capital

Early in the life of a child, it is the parents that are very influential. But, as they grow up, friendship circles and activities outside the home become more influential. These new peer associations can change the views and behaviors of adolescents and generate social capital that can be drawn on to either support or hinder educational aspirations.

In terms of peer social capital, two indicators of seniors' involvement in social activities were used. Respondents were asked how frequently they go out in a week and how frequently they go on dates (Table 1.E). More female respondents went out a few times a week for recreational activities while more males reported doing an activity with their peers almost every day of the week. When it came to dating, males reported dating more frequently than females. The Index of Peer Social Capital, treated by adding frequency of social activities, indicated that males had more frequent social events (4.2) than females (3.7) but both participated in social activities each week.

Table 1.E. Peer Social Capital: Monitoring the Future 2012

Concepts	Variables	Values	Statistics	
			Female (n=6394-6519)	Male (n=6323-6437)
Peer Social Capital	V2194. During a typical week, on how many evenings to you go out for fun and recreation? ¹	0=less than 1	14.4%	11.2% ^{***}
		1=one	18.3	13.6
		2= two	27.8	25.2
		3=three	22.6	24.0
		4=four to five	12.0	16.8
		5=six to seven	4.7	9.2
		V2195. On the average, how often to you go out with a date? ²	0=never	37.2%
	1=1/mo	17.7	17.9	
	2=2-3/mo	15.0	15.8	
	3=1/wk	13.1	14.7	
4=2-3/wk	11.4	11.4		
5=3+/wk	5.5	5.8		
Index of Peer Social Capital ¹		Mean(SD) Min-Max	3.7(2.4) 0-10	4.2(2.4) ^{***} 0-10

1. Recoded for 'less than 1' to equal zero;

2. Recoded for 'never' to equal zero;

3. Index of Peer Social Capital = V2194(Go Out) + V2195 (Date); $r=.278^{***}$

¹p≤.05, ²p≤.01, ³p≤.001

Summary of Descriptive Statistics

The *MTF* sample of high school students used in this study was comparable to national statistics on gendered college plans and associated factors in many ways. There were small, but noticeable differences between males and females in the clarity of their college plans. Males were bifurcated in their perceptions of their abilities; they were either very high or very low in their self-rating. However, females had higher grade averages than males. Similarly, albeit the levels of delinquency were low for the sample, male youth were more delinquent than females. Generally, students had more access to maternal cultural capital than paternal cultural capital. But, female students reported higher levels of maternal cultural capital while males had more paternal cultural capital. Peer social capital from socializing was also reported more by males than females.

Bivariate Analysis

The next step in the analytical strategy was to explore the relationships among the indices of Students' College Plans, Academic Agency, Delinquent Behavior, Parental Cultural Capital, Peer Social Capital, Urbanicity, Work Experience, and Race. The focus was on comparisons between male and female high school students on the following relationships: the relationships of college plans to academic agency, followed by the other indices. The correlation matrices are presented in Appendix C.

Gender variations in the associations between college plans and predictors were in the expected directions. As for the association between the indices of Academic Agency and College Plans, male students who exercised more agency ($r=.23^{***}$), had firmer education plans than their female counterparts ($r=.12^{***}$). Similarly, delinquent behavior was negatively correlated with college plans more strongly for males ($r=-.10^{***}$) than for females ($r=-.03^*$). Paternal cultural capital was a positive influence for males ($r=.10^{***}$) but not for females. So was maternal cultural capital; mothers were a stronger influence on their sons ($r=.12^{***}$) than their daughters ($r=.05^{***}$), even though both benefitted from maternal cultural capital. On the other hand, peer social capital was not significantly correlated with college plans for either males or females.

Linear Regression Analysis

The robustness of gender differences in the correlations of students' academic agency and college plans, were tested using multivariate analyses; urbanicity, need for work and race were controlled. Additionally, to chart the specific pathways through which parents and friends helped shape the higher education plans of high school children/friends, a two-step regression analyses was conducted. In the first step, youth academic agency in their senior year of high school (a clear indicator of future academic plans) was regressed on delinquent behavior, peer influence, parental cultural and Peer Social Capital, urbanicity, work experience, and race/ethnicity. College plans were then,

in Step 2, regressed on academic agency, social and cultural capital, and other relevant factors. In order to evaluate gender variations in the said effects, the analyses were disaggregated by sex of the high school students.

The results are presented in Table 2 and modelled in Figure 1³. Qualitative insights from interviews with professionals in the field of education were used to elaborate on the relevant quantitative findings.

Youth Academic Agency (Model 1)

Overall, non-delinquency (agency), followed by social and cultural capital, were the most relevant factors in the academic agency of high school students. However, noteworthy gender similarities and differences were evident in their effects on high school students' academic agency. On the one hand, paternal and maternal cultural capital offered similar advantages in academic agency for both male (paternal $\beta=.14^{***}$ and maternal $\beta=.15^{***}$) and female youth (paternal $\beta=.12^{***}$ and maternal $\beta=.16$). On the other hand, the negative consequences of delinquency on limiting academic agency was stronger for females ($\beta=-.22^{***}$) than for males ($\beta=-.18^{***}$).

Interesting race/ethnic and gender interactions were also evident in academic agency: White male high school seniors' had more (net) academic agency than their non-white counterparts ($\beta=.11^{***}$); but, white females took less ownership of their academics than non-white females ($\beta=-.10^{***}$). A high school teacher (Interview #5) corroborated the self-talk and "growth mind states" of young students influencing their success; but in her experience the gendered cultural upbringing (more than just gender) that was critical. Cultural underpinnings of gender differences in the academic effort of students were echoed by another teacher (Interviewee #4) as well. The boys he counselled were struggling to fulfill more of the cultural expectations of what it means to be "college guys."

College Academic Plans (Model 2): Direct and Indirect Pathways

Turning to the college trajectories of the youth surveyed (Model 2), the following similarities and differences between male and female high school students were identified.

³ Because of the large sample size, only significant Beta values of $\pm.07$ or above (about a third the size of the largest beta value in the models) were discussed.

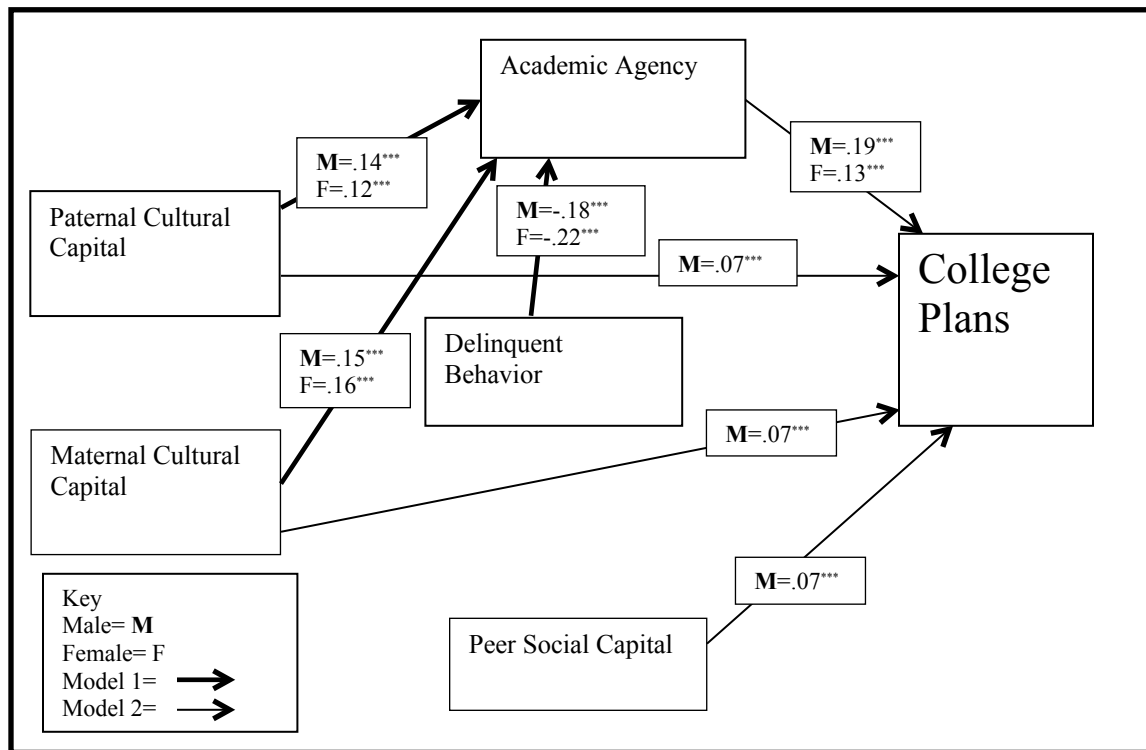
Table 2. Regression (β) Analysis of Gendered Variations in Academic Agency, Delinquent Behavior, and Socio-Cultural Capital on Academic Plans after High School¹:
Monitoring the Future 2012.

	Individual Academic Agency Model 1		Academic Plans ¹ Model 2	
	Males	Females	Males	Females
Individual Academic Agency ²	-----	-----	.19***	.13***
Delinquent Behavior ³	-.18***	-.22***	-.04*	NS ¹⁰
Paternal Cultural Capital ⁸	.14***	.12***	.07***	NS
Maternal Cultural Capital ⁵	.15***	.16***	.07***	.04*
Peer Social Capital ⁶	NS	NS	.05**	NS
Residential Location (Urbanicity?) ⁷	NS	NS	.08***	NS
Need for Work ⁸	NS	NS	NS	NS
White vs. Non-White ⁹	.11***	-.10***	-.16***	NS
Constant	14.28***	14.84***	5.82***	7.58***
Adjusted R ²	.13	.13	.09	.04
DF 1 and 2	7 & 4203	7 & 4253	8 & 3986	8 & 4089

1. Index of Academic Plans = 2 year college+4 year college+ graduate school; range= 3 (less plans)-12 (more plans);
 2. Index of Academic Agency= intelligence + school ability + grades: range =3 (more agency) - 23;
 3. Index of Delinquent Behavior= alcohol+ marijuana+ cigarettes+ days skipped +classes skipped: range =0 (less delinquency) - 29;
 4. Paternal Cultural Capital=education+ home: range = 1(less capital) – 7;
 5. Maternal Cultural Capital= education + home; range= 1(less capital) - 7;
 6. Index of Peer Social Capital= go out + dates: range = 0(never) – 10;
 7. Residential Location=non-urban= 1, urban = 2;
 8. Need for Work= money/hours worked: range = 1(less income) – 10;
 9. Race= White =1, Non-white=0;
 10. NS= Not Significant
- ***p <= .001; **p <= .01; * p <= .05

Academic Agency. High school students, whether male ($\beta=.19^{***}$) or female ($\beta=.13^{***}$), who ranked themselves as more capable academically than their classmates were more certain of their post high school academic plans than their peers who had less agency for their academic success. The education professionals uniformly underscored the power of confidence and self-perception in college success. To paraphrase the college admissions officer (Interviewee #3), students who believe that the sky is the limit aim higher and are able to take risks to achieve what they want.

Figure 1. Empirical Model of Gendered Direct and Indirect Pathways to College Plans¹



¹ Description of indices and variables can be found in Table 2 footnotes.

The gender similarities ended here. As was seen with academic agency (in Model 1), male and female high school seniors differed in their pathways to higher education. Male students translated their academic agency into firmer college plans ($\beta=.19^{***}$) than females ($\beta=.13^{***}$). The education professionals concurred with this male-female difference in college plans. For example, in the professional experience of one counselor (Interviewee #2), while students with low GPAs did not feel confident enough to apply to college in the first place, she had also noted observed a difference in the confidence levels of males and females. She referred to a “manly role” that kept confidence high in males. The male confidence, notwithstanding, she opined that the majority of those on the D and F grade list were male, while girls maintained Bs and Cs to stay above the radar even when they tune out of school. She added: even with a new generation of females, second guessing their abilities was still something women have to overcome (Interviewee #2). Another counselor elaborated on another dimension of the gender difference: in her experience, male and female students were different in perceptions of their general abilities; but, she also saw females being more confident about the subject matter in the humanities but not the sciences (Interviewee #1). The maturity level differences between 18 year-old males and females, made females more cognizant of the kind of work it takes to be successful; this gendered maturity difference

was also pointed out in the experience of a number of other professionals interviewed (Interviewees #3, #6, and #7).

Parents and their Capital. As for the role that fathers and mothers played in the college trajectories of their high school children, gender differences, while statistically evident, were not substantial. Paternal cultural capital ($\beta=.07^{***}$) was a marginal asset in the college plans of male high school seniors, but it was not for females. Maternal capital gave male students ($\beta=.07^{***}$) only a slight advantage in their college plans while girls were supported even less ($\beta=.04^{***}$) by their mothers.

Interesting gender differences were also evident in the indirect pathways to college through parents; parents molded the college plans of their children indirectly by helping them take more responsibility (agency) for their academics. One important example: while parents, with their social and cultural capital, were equally influential in firming up academic agency of both sons (paternal $\beta=.14^{***}$ and maternal $\beta=.15^{***}$) and daughters (paternal $\beta=.12^{***}$ and maternal $\beta=.16^{***}$), boys ($\beta=.19^{***}$) were ultimately able to enact their inherited capital into human capital more effectively than girls ($\beta=.13^{***}$).

How do these statistical findings match with the professional experiences of those interviewed for the study? Educated parents were uniformly viewed, by all interviewees, to be very important in shaping students' college plans. The professionals who worked with children from well-off families pointed to the observed differences in mothers' and fathers' involvement in education. The positive beta values for maternal and paternal influence for their children's agency and college plans supported these observations. Stay at home mothers were seen as the ones involved with the child's education (Interviewee #5, #6, and #8).

In the experience of some of the professionals, it was not just parent education but also their careers that were relevant for the children. At the high achieving school (where Interviewee #1 worked) with 95% of students attending college, not only parents' education but also their careers shaped students' college choices. To other professional interviewees, both the pressure parents can put on their children and the influence of parental expectations were key forces encouraging college attendance (Interviewees #3, #4, and #5). On the other end of the spectrum, parents struggling to get by financially were harder to get hold of for parent-teacher conferences, as per one counselor (Interviewee #2) and consequently were less involved in their students' education. The unfortunate consequence was that kids slipped through the system without the grades or skills to go to college.

When pressed to explore gender differences in college plans of high school seniors, the interviewee responses were muted; they were unsure of gendered variations in parental influence (which might explain parents being a marginal asset for male youth and no female effect in the multivariate analyses). They had not experienced differences in capital conferred from mothers to daughters versus sons, even though almost all found mothers to be more involved in children's education and gathering college information.

In the end, it was the illustrations the professionals offered that hinted at possible gendered pathways to college. For example, one admissions officer noted that boys look up to their fathers more than girls do, so an absent or bad father role model can be much more damaging for them (Interview #3). Another counselor (Interviewee #4) noted that when athletic scholarships were on the table, fathers became much more involved in the college application process. With more boys than girls involved in highly competitive sports, additional encouragement from fathers may be more common for boys than girls.

Other instances of gendered parental capital were evident in their comments about mentors. One noted that first generation students may identify with a mentor of the same gender with more education and go to college (Interviewee #7). Others also highlighted the importance of mentors to guide students, especially in the absence of strong parental capital (Interviewee #6 and #7).

Peer Social Capital. Another sphere of influence on high school seniors, were peers. While peers and delinquency did not directly restrict college plans of either boys or girls, delinquency indirectly restricted college plans by rendering youth less responsible for their academics. Male model: Delinquency \rightarrow Agency ($\beta = -0.18^{***}$) \rightarrow College Plans ($\beta = 0.19^{***}$); Female Delinquency \rightarrow Agency ($\beta = -0.22^{***}$) \rightarrow College plans ($\beta = 0.13^{***}$).

The professional interviewees were nearly uniform in their assessment of the relevance of peer social groups in the college plans of high school seniors. A few noted that students surrounded themselves with students of similar aspirations (Interviewee # 3, #4, and #8). The complex interactions between peers and community for teenagers were on the minds of education professionals. One (Interviewee #5) reflected on the conflicting demands that students from lower socioeconomic groups have to reconcile as they try to bridge multiple communities of people with different expectations. She discussed the different perceptions of the limits and heights of academic achievement that are passed on from one generation to another in different ethnic groups and how difficult it can be to go against their community for a young person. Another interviewee (#7) echoed the pull of a high school social group in his personal experience, and how difficult it was to go home and try to fit in with old friends who had not gone to school.

Delinquency. Adolescents, particularly males, who were delinquent ($\beta = -.04^*$) had, on balance, less clear post high school academic plans. Interviewees were divided in their assessment of the drug prevalence among high school youth. Some found delinquency to be the exception to the rule for most students but others thought casual usage drugs and alcohol to be as high as 60% (Interviewees #3 and #4). The counselor (Interviewee #4) found that students thought they could do it all but couldn't keep up the standard of work if they became too involved in drinking and smoking. The school to prison pipeline, especially for males, was another case in point. One admissions officer (Interviewee #6), made the following observation: males were more truant at a younger age and were labeled as delinquent by mostly female teachers who did not have the resources to discipline them in the classroom.

Race/Ethnic, Geography, and the Resources They Bring. Finally, Black or Hispanic male youth ($\beta = -.16^{***}$) and those who lived in bigger cities ($\beta = .08^{***}$) were less sure of college. Race and ethnicity and their economic and cultural implications were recurring themes in the interviews. In their professional experiences, the history of college going in the family and the community were tied to minority status as well as socioeconomic background (Interviewee #3, #4, and #5). One (Interviewee #8) made the distinction in levels of drug use between high and low socioeconomic groups. She said that both groups engage in equally high levels of risky behavior, but the well-resourced teens take precautions and know how to not let drug use jeopardize their future.

Gendered Pathways to College: Diverse for Boys, but Limited for Girls

On balance, the regression analyses and the education professionals concurred that factors influencing male and female youth were not uniform when it came to their choices in higher education. At one level, the hypothesis about more parental and Peer Social Capital leading to increased positive academic agency held true for males and females in this study. However, as predicted in the gendered hypothesis, parental cultural capital was both directly and indirectly influential in the college plans, primarily of males. In contrast, females were influenced mainly by indirect pathways; parental capital increased female agency, which in turn was converted into firmer college plans. In other words, while male youth had the privilege of diverse pathways to college, the pathways were narrower for female youth.

CONCLUSIONS

Empirical Implications

The MTF survey data analyzed for this research brought to light significant gender differences in college pathways of high school students. That academic agency was the most important factor in college plans of high school seniors showed the importance of positive learning environments where students are encouraged to think highly of themselves. The positive role that parents played in fostering academic agency was another important empirical take-away. Positive family and community environment were key elements for engendering college aspirations according to all the education professionals interviewed for this research.

For male high school seniors, the multiple, direct and indirect, pathways, through their own agency, their parents, lower delinquency, and positive peer social groups, highlighted the many diverse opportunities open to boys to firm up their college plans. But, as one of the interviewee cautioned (Interviewee #6), there are many ways boys can get tripped up on their way from high school to college.

In contrast, college pathways were more limited for girls. They either relied on only their own academic agency and indirectly on their parents' cultural capital. In one way, the limited pathway of college-going influence may be an asset for girls. Unlike their male counterpart, girls might have a clearer set of, even if limited, pathways to college, which might also explain why girls are going to college at much higher rates than males. The disparities in maturity levels of boys and girls aged 18 were a key concern of professionals working in education and may contribute to the disparities in college readiness, and ability to succeed. In the final analyses, gendered pathways to college were evident in the quantitative and narrative comments by education professionals.

Theoretical Implications

Theoretically speaking, cultural capital from parents proved to have a strong indirect influence allowing their student children to exercise positive agency in their educational plans. In keeping with Coleman's theory of cultural capital and the hypothesis stated earlier, parental cultural capital increased agency for males and females, leading to more concrete college plans. However, at first glance the concerted cultivation of capital (Lareau 2003) notion that parents enact for their children was basically uniform for boys and girls, negated the gendered capital hypothesis. But, the diverse set of options available to boys versus the narrower college pathways open to girls confirmed the gendered capital expectations.

With increasing numbers of women, and stagnant numbers of men, attending college, new theoretical paradigms are needed for the inverted gender performance in higher education. Some professional interviewees noted that females have finally caught up, and are on an almost equal playing field. Perhaps the challenge for women to achieve and maintain equality with men has required women to take more responsibility or agency for their lives, be more organized and plan ahead in ways that have not been required of men.

Limitations and Suggestions for Future Research

Like any research project, this paper too had limitations. The most obvious was the predictors used for college education explained only 9% (Adjusted $R^2=.09$) of the variability in college plans of males and 4% (Adjusted $R^2=.04$) for females. In addition to strengthening the measurement of concepts, exploring additional pathways to college plans of high school seniors will be useful. One interesting avenue would be to compare age and maturity levels of adolescents exiting high school and their future success. Others could include contextual inequalities, be they social, geographical, or even the quality of high schools students attend.

Research on gendered challenges, be they familial, cultural, social, or developmental, in shaping college pathways is also needed. Clarifying the forces that uniquely influence females will move the field of gender research forward and begin to fill out the

theoretical contours for a newer generation of educated women. Such research may also have the added benefit of finding ways to encourage males to pursue college education and to make their skills more relevant in the new information technology economy.

Promise of Gender Roles in Social Science Research

The effects of gender roles on young men's and women's plans to pursue higher education were explored in this research. The building and strengthening of these roles are both a longstanding norm and a slowly morphing one in the sociology of gender and families. Discussions of gender equality and feminism are not simply black and white with one gender beating out the other, as in education. The increased freedoms offered to, and availed of by, women seem to be moving society towards one in which there is a middle class of women with the men bifurcated at the opposite ends of the class spectrum; they have either excelled or dropped out of the system. Families and other social institutions need to continue to explore ways in which men and women are both supported to achieve a more productive and inclusive social system.

APPENDICES

Appendix A. Table

Race, Urbanicity, Work Experience by Sex: Monitoring the Future: 2012

Concepts	Variables	Values	Statistics			
			Total	Female (n=6227-6419)	Male (n=6191-6428)	
Race	V2151. How do you describe yourself?	0=Black	12.1%	13.1%	10.4%	
		1=White	71.6	70.3	73.7	
		0=Hispanic	16.4	16.6	15.8	
Rural vs Urban	V2152. Where did you grow up mostly? ¹	1=Farm, country or small town	42.7%	43.1%	42.4%	
		2=medium to very large city	57.3%	56.9	57.6	
Work Experiences	V2192. During the average week, how much money do you get from a job or other work?	1=none	46.0%	45.6%	46.7%	
		2=\$1-5	.6	.5	.7	
		3=\$6-10	2.4	2.7	1.9	
		4=\$11-20	3.0	2.9	3.1	
		5=\$21-35	3.6	3.7	3.4	
		6=\$36-50	4.7	5.3	4.2	
		7=\$51-75	7.2	8.2	6.3	
		8=\$76-125	14.1	14.5	13.8	
		9=\$126-175	8.6	8.7	8.5	
		10=\$176+	9.8	8.0	11.4	
		V2191. On the average over the school year, how many hours per week do you work in a paid or unpaid job?	1=none	41.6%	40.2%	43.2%
			2=5 or less	11.1	10.9	11.5
			3=6 to 10	10.2	11.2	9.2
			4=11 to 15	9.4	9.5	9.2
5=16 to 20	11.1		11.6	10.5		
6=21-25	7.0		7.6	6.3		
7=26 to 30	4.7		4.7	4.7		
8=more than 30	4.8		4.1	5.4		
Index of Need for Work ²	Mean(SD)	1.5(1.1)	1.4(89)	1.55(1.2)***		
	Min-Max	1-10	1-10	1-10		

¹ Recoded into groups of rural versus urban.

² Index of Need for Work= V2192(\$)/V2191(hours); r=.769***
*p≤.05, **p≤.01, ***p≤.001

Appendix B

Consent Form and Interview Protocol

Letter of Consent

Research Question: Gender differences in college plans of high school seniors and the roles played by the high school senior, their friends, and parents. Financial challenge, race and urbanicity will also be considered.

Interview Date and Time: _____
Respondent ID#: __ (1-8)

Dear _____:

I am a Sociology Senior working on my Research Capstone Paper under the direction of Professor Marilyn Fernandez in the Department of Sociology at Santa Clara University. I am conducting my research on high school seniors and their plans for college.

You were selected for this interview, because of your knowledge of and experience working in the area of high school counseling, education studies or college admissions.

I am requesting your participation, which will involve responding to questions about factors influencing high school seniors' decisions concerning college and will last about 30 minutes. Your participation in this study is voluntary. You have the right to choose to not participate or to withdraw from the interview at any time. The results of the research study may be presented at SCU's Annual Anthropology/Sociology Undergraduate Research Conference and published (in a Sociology department publication). Pseudonyms will be used in lieu of your name and the name of your organization in the written paper. You will also not be asked (nor recorded) questions about your specific characteristics, such as age, race, sex, religion.

If you have any questions concerning the research study, please call/email me at _____ or Dr. Fernandez at _____

Sincerely,

Laila Waheed

By signing below you are giving consent to participate in the above study. (If the interviewee was contacted by email or phone, request an electronic message denoting consent).

Signature

Printed Name

Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, through Office of Research Compliance and Integrity at (408) 554-5591.

Interview Protocol

Hello,

My name is Laila Waheed, and I am a Sociology Senior at Santa Clara University. As part of our major's curriculum, seniors have the opportunity to write a research paper to be published in the Silicon Valley Notebook, a SCU Sociology Department Publication. I'm writing about High School seniors' college aspirations.

You were selected for this interview, because of your knowledge of and experience working in the area education. I would like to talk to you about what you know/think about High School seniors' plans after they graduate and factors influencing those plans.

The interview will take about 30 minutes. In order to protect the confidentiality of your opinions, I will only use only pseudo-names (to represent you and your organization), when I write about your thoughts.

1. What is the Type of the Agency/Organization/Association/Institution where you learned about (and/or worked) with this issue:
 - a. What is your position in this organization?
 - b. How long have you been in this position and in this organization?
2. Based on what you know of high school seniors and their plans after graduation, how common is it for students to go directly to college? Have you observed differences between teen boys and teen girls; could you expand a bit more?
3. In your opinion, what are some factors that help High School seniors choose to go to college? (PROBE with: Could you expand a bit more, particularly about gender differences?).
4. What do you think hinders these students' from thinking about college? (Also probe for differences between boys and girls)
[If the respondent does not bring up your independent concepts (ICs) as potential causes of seniors' decision to go or not to go to college), PROBE for the ICs and for gender differences :
5. Student Responsibility
 - a. How about how students perceive themselves in terms of ability? Do you see differences between boys and girls perceptions of themselves?
 - b. How about students' effort in school affecting choices? Do you see different effort levels between boys and girls?
6. Adolescent Risky Behaviors
 - c. What roles do you think marijuana, cigarettes and alcohol have on students' plans to pursue more education?
7. Parents
 - d. How about parents? Are adolescents with educated parents more likely to think about college after high school?
 - e. Do you think one parent is more influential than the other in terms of influencing college going? Could you expand?
 - f. How important is parents' availability to the teen in their college choices?

8. Peers

- a. How do you think students' social lives (such as recreational activities with their friends) influence students' likelihood to pursue more education?
- b. What do you think about friend groups influencing college going?

9. Controls

- a. How do you think students' college choices are influenced by holding a job during high school?
- b. Do you think family economic background influences the choices students make? How so?
- c. How about race/ethnic differences in college decisions?
- d. How about differences among urban and rural youth have different tendencies in terms of college?

8. Is there anything else about high school students and their college plans I should know more about?

Thank you very much for your time. If you wish to see a copy of my final paper, I would be glad to share it with you at the end of the winter quarter. If you have any further questions or comments for me, I can be contacted at _____. Or if you wish to speak to my faculty advisor, Dr. Marilyn Fernandez, she can be reached at _____.

Appendix C

Correlation Matrix: Indices of College Plans Academic Agency, Paternal and Maternal Cultural Capital, Peer Social Capital, Delinquent Behavior, Urbanicity, Need for Work and Race
(Male n=5580-6294 below diagonal; Female n=5717-6309 above diagonal)

		FEMALE								
		College Plans ¹	Academic Agency ²	Delinquent Behavior ³	Paternal Cultural Capital ⁴	Maternal Cultural Capital ⁵	Peer Social Capital ⁶	Urban vs Rural ⁷	Need for Work ⁸	Race ⁹
M A L E	Index of College Plans	1.0	.12***	-.03*	-.01	.05**	.00	.07***	-.03*	-.01*
	Index of Academic Agency	.23***	1.0	-.23***	.23***	.22***	-.02	.02	.00	.17***
	Index of Delinquent Behavior	-.10***	-.19***	1.0	-.09***	.09***	-.26***	.00	.02***	.01**
	Index of Paternal Cultural Capital	.10***	.25***	-.13***	1.0	.36***	-.01	.06***	.02	.32**
	Index of Maternal Cultural Capital	.12***	.24***	-.10***	.35***	1.0	-.03*	.10***	.02	.18***
	Index of Peer Social Capital	.017	-.03*	.28***	-.01	.00	1.0	-.05***	.08***	.09***
	Urban versus Rural	.12***	.03***	.019	.04**	.09***	-.01**	1.0	-.01	-.25***
	Need for Work	-.01	-.01	.08***	-.01	.00	.10***	-.03**	1.0	.04**
	Race	-.10***	.20***	.02	.29***	.19***	.04**	-.17***	-.01	1.0

1. Index of College Plans = 2 year college+4 year college+ graduate school; range= 3(less plans)-12(more plans);
2. Index of Academic Agency=school ability+ intelligence+grades; range= 3(lower agency) -23(higher agency);
3. Index of Delinquent Behavior=cigarettes+alcohol+marijuana+truancy; range = 0(less delinquency)-29;
4. Index of Paternal Cultural Capital=father at home+father education; range = 1(less capital)-7;
5. Index of Maternal Cultural Capital=mother at home+mother education; range = 1(less capital)-7;
6. Index of Peer Social Capital=going out+ dating;range=0(less capital)-10;
7. Rural vs Urban grouped as 1=rural, 2= urban;
8. Need for work=money /hours; range = 1(low income and low hours)-10(low income and high hours);
9. Race=white(1) vs non-white(0);

*** p <=.001; ** p <=.01; * p <=.05.

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- Interviewee 2. 11/05/2014. College and Career Counselor.
- Interviewee 3. 2/13/2015. College Admissions Officer.
- Interviewee 4. 2/24/2015. Guidance Counselor and Teacher.
- Interviewee 5. 3/0/2015. Teacher and PhD Candidate.
- Interviewee 6. 3/02/2015. College Admissions Officer.
- Interviewee 7. 3/02/2015. College VP of Student Services.
- Interviewee 8. 3/03/2015. Education Specialist.
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