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THE INTERACTIVE EFFECTS OF PARENTAL EDUCATION AND FRIENDS' COLLEGE
PLANS ON COLLEGE ENROLLMENT

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ABSTRACT

Both parents and peers provide high school students with resources that may influence their decision to enroll in a four year college or university after high school graduation. These resources are often considered forms of social capital. What is not well understood is whether important forms of capital such as parental education and friends' educational plans may jointly matter for college enrollment. Theories of cumulative advantage and resource substitution suggest that the answer may be yes. The present study tests this supposition by analyzing data from the 2004 and 2006 waves of the Education Longitudinal Study of 2002 (ELS2002) (N = 12,866 students from 750 U.S. high schools). Results offer preliminary support that parental education and friends' college plans jointly contribute to a student's likelihood of enrollment in a four year college or university and partially support both cumulative advantage and resource substitution theory.

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INTRODUCTION

Education is central to social and economic success in America today. It is predictive of occupational attainment and financial well-being, social status, and the general advancement of society (Hollingshead 1975; Mazumder 2003). A bachelor's degree, in particular, produces advantages in occupational status attainment and is associated with additional annual earnings of approximately 37% for males and 39% for females (Pascarella & Tarenzini 2005). Because of the multitude of social and economic benefits that can be derived from a college education, it is of critical importance to understand the various processes and factors that influence enrollment in four-year colleges and universities.

Families and peers have significant influence in shaping college enrollment. A host of family resources affect college enrollment including economic resources such as wealth and income (Mazumder 2003), social resources such as parental involvement and contact between parents and schools (Sandefur et al. 2006), and cultural resources such as parental encouragement of participation in extracurricular activities (Kaufman & Gabler 2004). Parental education, specifically whether or not one's parents are college educated, is one family resource that has a particularly strong effect on college enrollment. Students whose parents did not go to college are significantly less likely to attend college themselves even when other important factors including academic preparation, educational expectations, parental support in college planning, and income are controlled (Choy 2001). Yet, family resources are not the sole predictors of college enrollment. Peers matter, too. Within the school, peers' college-going plans exert a normative influence on the college enrollment process (Sokatch 2006).

Previous research on factors predicting college enrollment tends to focus either on families (Teachman 1987, Perna & Titus 2005, Sandefur et al. 2006) or peers (Sokatch 2006).

The present study proposes that parental education and peer educational plans matter jointly. More specifically, it examines whether high school peers' college-going behavior moderates the established relationship between parental education and college enrollment using data from the 2004 and 2006 waves of the Education Longitudinal Study of 2002 (ELS2002). These data follow a nationally representative sample of high school sophomores through their transition out of high school and into either postsecondary education, the labor market, or idleness. My analysis will make a substantial contribution to the literature by providing a more nuanced understanding of the joint contribution that families and peer groups make to students' postsecondary education. Cumulative advantage and resource substitution theories will be used to explain these joint effects.

BACKGROUND

Parental education is an important indicator of social capital. The concept of social capital, first applied to educational research by Coleman (1988), refers to the ways that human relations can facilitate specific action and desirable outcomes. Coleman (1988) describes three different forms of social capital: social expectations, obligations and trust, norms and sanctions, and information channels. Parental education functions as social capital in each of these ways. Parents who are college educated themselves are likely to develop an expectation for their child to go to college, which in turn establishes a norm within the family regarding acceptable and unacceptable educational decisions. In addition, the relationship between a student and a college educated parent constitutes an information channel which, as Coleman describes it, involves the sharing of knowledge through social relations that provides a basis for action (Coleman 1988). A college educated parent can share with their child valuable knowledge related to college

enrollment such as application tips, advice about high school coursework and admittance testing, and suggestions for who to talk to when to increase the odds of admission. This ‘insider knowledge’ helps to facilitate college enrollment and gives students with a college educated parent a distinct advantage over students without a college educated parent in the college enrollment process.

Peer groups can also provide social capital to high school students in the ways that Coleman (1988) described. Peer groups establish social expectations for appropriate action through the development of social norms that can be either facilitative or constraining. In the case of peer groups and college enrollment, if a student is surrounded by many peers who are planning to go to college this would constitute a social norm that facilitates college enrollment. However, a peer group in which few if any students are planning to go to college would exhibit a social norm that constrains college enrollment. In both cases, a social expectation regarding college enrollment is established which normatively influences educational decisions. Additionally, peer groups can function much like parents as an information channel in terms of sharing information with one another that may be helpful in facilitating college enrollment.

What is yet untested is whether the association between parental education and college enrollment varies by students’ peers’ educational plans. Two theories give rise to competing perspectives about the way that a student’s parents’ and peers’ educational experiences jointly matter: cumulative advantage theory and resource substitution theory.

Cumulative Advantages of Parent and Peer Educational Decisions for College Enrollment

Cumulative advantage theory has its beginnings in Morton’s (1988) explanation of stratification in scientific careers. Termed the Matthew Effect, Merton described the phenomena

by which scientists who performed well early in their careers accrued recognition and rewards leading to further success at a rate much higher than their initially less successful counterparts (Merton 1988). In this way, the inequality of recognition and reward between scientists increased over time as a result of their initial level of success (DiPrete & Eirich 2006).

Since its initial conceptualization, cumulative advantage theory has been applied broadly in sociological research. For example, it has been used to explain how health disparities arise as a result of age and educational attainment (Ross & Wu 1996, Mirowsky & Ross 2005), the interactive effects of socioeconomic status and smoking on health over the life course (Pampel & Rogers 2004), and the way that institutional arrangements and individual action combine to result in income inequality over time (O’Rand 1996).

The theory has also been applied to the study of educational success. One study used cumulative advantage theory to explain the effects of motivation and prior and current educational experiences on science-achievement scores (Walberg & Tsai 1983). Not only did the authors find that all three predictors significantly increased science scores, they were also cumulative in their effects since prior education predicted motivation and current education which in turn jointly influenced test scores (Walberg & Tsai 1983). Another study found that the benefits of cultural capital also accumulate in ways that increase educational success (Aschaffenburg & Maas 1997). Higher initial levels of cultural capital among students as a result of parental socialization led to a greater accumulation of cultural capital over time, as compared to their initially less advantaged peers. This in turn increased the likelihood of making the transitions from high school completion to college enrollment and from college enrollment to degree attainment (Aschaffenburg & Maas 1997).

In the present study, I test whether a cumulative advantage framework can also be used to

show how two forms of social capital—parental education and peers’ college plans—accumulate and jointly influence high school students’ likelihood of enrolling in a four-year college or university. Support for the theory would be indicated if study findings show that parental education is related to the number of peers that plan to attend college and that as the two increase jointly, students’ odds of college enrollment increase exponentially.

Resource Substitution: An Alternative Explanation for Understanding How Parents and Peers Influence College Enrollment

Parents’ education and peers educational plans may influence college enrollment in an alternative way. It is possible that the presence of one form of social capital could substitute for the absence of another. In other words, having a parent with a college degree may serve as a buffer for having few friends planning to go to college. Conversely, having many friends who plan to go to college may also serve as a buffer for having a parent without a college degree. This supposition is supported by an alternative framework for understanding the joint effects that parental education and friends’ college plans may have on college enrollment: resource substitution theory.

Resource substitution posits that a particular outcome is less dependent on any one resource when multiple resources are present (Mirowsky & Ross 2006). It also suggests that when multiple resources are lacking, the presence of any one resource that affects a particular outcome becomes increasingly critical (Mirowsky & Ross 2006).

Mirowsky and Ross (2006) use resource substitution theory to explain why education improves psychological well-being more for women than for men. Compared to men, women have more limited access to resources such as power, authority, and earnings that reduce the

likelihood of developing depression (2006). Education however has reductive effects on depression as it influences employment, earnings, and social status leading to greater financial stability, emotional well-being, and a sense of self-control (2006). According to resource substitution theory, where women are lacking power, authority, and earnings relative to men, education acts as a substitute and buffers against depression (Mirowsky and Ross 2006). These buffering effects are more beneficial for women than they are for men because of the relative disadvantage women experience with regards to power, authority, and earnings (Mirowsky and Ross 2006).

Rather than jointly influencing college enrollment as cumulative advantage theory would suggest, the two forms of social capital investigated in this study—parental education and friends' college plans—may act as substitutes. That is, a student who is lacking one of these resources may be able to use the other as a substitute in order to facilitate college enrollment. Support for resource substitution theory would be indicated if study findings show that the odds of college enrollment are similar among students with highly educated parents but few college-bound friends and students with many college-bound friends but poorly educated parents.

Cumulative advantage and resource substitution theories offer divergent perspectives about how parental education and friends' college plans matter jointly for college enrollment. The present study tests the applicability of both theories in an effort to show how possessing (or lacking) different forms of social capital shapes young people's chances of enrolling in a four-year college or university. Results will have important implications for understanding how the acquisition of different forms of social capital influences students' ability to reach this attainment milestone.

METHODS

Data and Sample

The present study uses data from the Education Longitudinal Study (ELS) of 2002 which follows a nationally representative sample of high school sophomores through their transition out of high school and into postsecondary education, the workforce, or idleness. The ELS obtained information from multiple respondents including students, their parents, their teachers, their librarians, and school administrators. The ELS includes four waves of data: the base year in 2002, the first follow-up in 2004, the second follow-up in 2006, and a final follow-up in 2012. During the first wave of data collection in 2002, over 15,000 high school sophomores from 750 different schools were surveyed. With the first follow-up in 2004 (Wave II), the 2002 sample was freshened by extending the possibility of sample selection to high school seniors that were not high school sophomores in 2002, thus making it more nationally representative. The second follow-up in 2006 (Wave III) surveyed respondents two years after high school graduation, and a third follow-up to come in 2012 (Wave IV) will survey the same sample eight years after high school graduation.

The sample for the present study is drawn from participants in the first and second follow-ups because this time frame captures the transition out of high school and into either postsecondary enrollment, the workforce, or idleness. I exclude from my sample any respondents with missing data on my three key analytic variables: college enrollment, parental education, and the proportion of friends who plan to attend a four year college or university. My final analytic sample consists of 12,866 students from 750 different American high schools.

Variables of Interest

College Enrollment. The dependent variable in this study is a dummy variable indicating

whether respondents were enrolled full-time in a four year college or university at the time of the second follow-up (1 = yes). The variable was constructed using an item from the second follow-up that asked about postsecondary enrollment status in January 2006. The original item consisted of seven response options: enrolled full time at a four year school (1), enrolled full time at a two year school (2), enrolled full time at a less than two year school (3), enrolled part time at a four year school (4), enrolled part time at a two year school (5), enrolled part time at a less than two year school (6), and not enrolled (7). The present study condensed this item into a simple dichotomous measure where 1 = full time enrollment at a four year school (1) and 0 = no postsecondary enrollment or enrollment in other postsecondary programs (2-7). The study focuses on four-year college enrollment because it is the postsecondary path most likely to lead to Bachelor's degree attainment, a significant threshold for economic and status attainment (Pascarella & Terenzini 2005, Baum & Ma 2007, Hollingshead 2011). In the sample, 41.8% of respondents were enrolled full time in a four year school and 58.2% were not.

Parental Education. The first independent variable of interest is parental education. Parental education was recoded using a Wave II measure of parent's highest level of education originally consisting of eight categories: did not finish high school (1), graduated from high school or obtained GED (2), attended a two-year school but did not obtain a degree (3), graduated from a two-year school (4), attended a four-year college but did not obtain a degree (5), graduated from a four-year college (6), completed a Master's degree or equivalent (7), and completed a PhD, MD, or other advanced degree (8). The item was condensed into four categories: 0 = no high school diploma, 1 = high school diploma, 2 = postsecondary enrollment but no Bachelor's degree, and 3 = Bachelor's degree or higher. Respondents with a parent who graduated from a two-year school, attended but did not graduate from a two-year school, or

attended but did not graduate from a four-year school all fell under the ‘postsecondary enrollment but no Bachelor’s degree’ category. Categories were collapsed in this way to assess whether parents who reached an attainment milestone lower than that of a four year degree offered their children any advantage in their odds of enrollment of a four year college or university. In the sample, 5.7% of respondents had a parent with less than a high school degree, 18.8% had a parent with a high school degree, 32.0% had a parent with some college, and 43.5% had a parent with a Bachelor’s degree or higher.

Friends’ College Plans. The second independent variable of interest is friends’ college plans, which was constructed using an item from the first follow-up survey. It asked students how many of their friends were planning to attend a four year college or university. The original item included five response options: none (1), a few (2), some (3), most (4), and all (5). The item was recoded into a three-category measure consisting of the categories 1 = few or no friends, 2 = some friends, and 3 = most or all friends planning to attend a four year college or university. These categories were collapsed because presumably having few friends planning to attend a four year school will not significantly increase one’s likelihood of four-year college enrollment compared to having no friends planning to attend four year college or university. In the same sense, having many friends planning to attend a four year college or university will likely have similar effects on college enrollment as having all of one’s friends planning to attend a four year school. In the sample, 21.0% of respondents had few friends planning to attend a four year school, 22.6% had some friends planning to attend a four year school, and 56.4% had many friends planning to attend a four year school.

Analytic Strategy

I began my analysis by analyzing the bivariate relationship between parental education

and friends' college plans using a crosstabulation. This establishes whether there is a positive association between the two forms of social capital of interest in the current study. Support for cumulative advantage theory hinges in part on this supposition.

I then conduct preliminary analyses that identify how parental education and friends' college plans are independently related to college enrollment. I conduct bivariate analyses showing the relationship between parental education and full-time four year college enrollment and then the relationship between friends' college plans and full-time four year college enrollment using two separate crosstabulations.

I then use a three-way crosstabulation to show whether the association between a student's friends' college plans and their likelihood of full-time four year college enrollment varies by their parents' level of educational attainment. This analysis provides a preliminary test of whether and how parental education and friends' college plans are jointly associated with full-time four year college enrollment.

RESULTS

Parental Education and Friends' College Plans. Table 1 shows how the proportion of students having few or no friends, some friends, or most or all friends planning to attend four year schools varies by parental education. As seen in the first column of Table 1, there is a negative linear relationship between parental education and the proportion of students having few or no friends planning to attend a four year school. This indicates that students lacking parental education as a form of social capital are likely to also be lacking college-bound friends as a form of social capital.

The opposite is seen in column three. Here, a positive linear relationship exists between

parental education and the proportion of students with most or all of their friends planning to attend a four year school. Column three also shows that the difference in the proportion of students having most or all of their friends planning to attend a four year school is approximately 7% between students with a parent without high school diploma and students with a parent who has a high school diploma and is approximately 10% between students with a parent who has a high school diploma and students with a parent who was enrolled in a postsecondary institution but did not obtain a Bachelor's degree. However, the difference in the proportion of students having most or all of their friends planning to attend a four year school jumps to 20% between students with a parent who was enrolled in a postsecondary institution but did not obtain a Bachelor's degree and students with a parent that has a Bachelor's degree or higher. These results indicate that one form of social capital, parental education, predicts another form of social capital, college-bound friends. This supports a central tenant of cumulative advantage theory, evidently indicating that the resources hypothesized to accumulate are related.

The results in column two show no clear relationship. Among students with a parent without a high school diploma, a parent with a high school diploma, and a parent who attended a postsecondary institution but did not obtain a Bachelor's degree the proportion who have some friends planning to attend a four year school are all very similar (around 27%). Only about 16.5% of students with a parent who has a Bachelor's degree or higher however have some friends that are planning to attend a four year school since the proportion that have most or all of their friends planning to go to a four year school is so high (71%). This suggests that having a parent with at least a bachelor's degree may be a distinct threshold for gaining access to college-bound peers.

TABLE 1 ABOUT HERE

Parental Education and College Enrollment. Table 2 shows proportions of respondents who were and were not enrolled full-time in four year schools by parental education. It indicates the expected linear relationship between parental education and college enrollment. Column one in Table 2 shows a negative linear relationship between parental education and no college enrollment. The proportion of students not enrolled full-time in a four year school drops substantially with each successive increase in parental education.

Column two shows a positive linear relationship between parental education and college enrollment. As parental education increases, the proportion of respondents enrolled full time at a four year school also increases. Column two also shows that only about 16% of students with a parent without a high school diploma were enrolled full-time in four year schools, whereas nearly 61% of students with a parent who had obtained a bachelor's degree or higher were similarly enrolled. The second column of results also indicates that the percent difference in full-time four year enrollment between students with a parent without a high school diploma and students with a parent who has a high school diploma (approximately 7%) is comparable to the difference between students with a parent who has a high school diploma and students with a parent who was enrolled in a postsecondary institution but did not obtain a Bachelor's degree (approximately 9%). However, there is a much larger difference in full-time four year enrollment between students with a parent who was enrolled in a postsecondary institution but did not obtain a Bachelor's degree and students with a parent who has a Bachelor's degree or higher (approximately 28%). This suggests that having a parent with at least a Bachelor's degree is a distinct threshold that significantly improves a student's likelihood of college enrollment.

TABLE 2 ABOUT HERE

Friends' College Plans and College Enrollment. Table 3 shows proportions of respondents who were and were not enrolled full time in a four year school by the proportion of their friends who planned to attend a four year school. This table also shows the associations one would expect. In column one, there is a negative linear relationship between the proportion of friends' with college plans and no enrollment in a four year college or university. As the proportion of friends planning to attend a four year school increases, the percentage of respondents not enrolled full-time in a four year school decreases. There is a particularly drastic decrease in the proportion of students not enrolled in a four year school for students with most or all of their friends planning to attend a four year college or university, implying that having many college-bound friends constitutes a form of social capital that facilitates college enrollment.

A positive linear relationship between the proportion of friends with college plans and college enrollment is seen in column two. As the proportion of friends planning to attend a four year school increases, the percentage of respondents enrolled full-time in a four year school also increases. Approximately 14% of students with few or no friends planning to attend a four year school are enrolled in a four year school themselves, whereas about 60% of students with most or all of their friends planning to attend a four year school are enrolled in a school of this type. There is a 38% increase in the percentage of students enrolled full time at a four year school between students having some friends planning to attend a four year school and students having most or all of their friends planning to attend a four year school, whereas the difference in enrollment between students having few or no friends and some friends planning to attend a four year school is only about 8%. These findings suggest that having some or fewer friends planning to attend a four year school minimally affects full-time four year enrollment, but having most or

all of one's friends planning to attend a four year school has important effects on enrollment.

TABLE 3 ABOUT HERE

Friends' College Plans and College Enrollment by Parental Education. Figure 1 summarizes graphically how the proportion of students enrolled full-time in a four year school varies by both students' proportion of friends planning to attend a four year school and parental education. This figure is based on the findings presented in Appendix B, which shows the results from the three way crosstabulation between parental education, friends' college plans, and students' enrollment in a four year college or university. Within each attainment category in Figure 1, the white bars represent students with few to no friends planning to attend a four year college or university, the grey bars represent students with some friends planning to attend a four year college or university, and the black bars represent students with most or all friends attending a four year college or university.

Comparing the height of the white, grey and black bars *within* each category of parental education, shows that students' likelihood of enrolling in a four year college or university increases as their proportion of friends who plan to go to college increases. In fact, within each category of parental education, the proportion of students enrolled in a four year college or university is three to four times higher among those who have most or all of their friends planning to attend a four year school compared to those who have few or no friends planning to attend a four year college or university.

When bars of the same color are compared *across* categories of parents' educational attainment, it shows that students' likelihood of enrolling in a four year college or university increases as their parent's highest level of education increases for those with few or no friends and most or all of their friends planning to attend a four year school. For both students with few

or no friend planning to attend a four year school and those with most or all of their friends planning to attend a four year school, the largest increase in college enrollment can be seen when a parent has a Bachelor's degree or higher. No clear relationship is seen when the grey bars across the categories of parental education are compared.

What is also clear from the findings presented in Figure 1 is that students with the lowest level of both types of social capital investigated in this study are in the most disadvantaged position for college enrollment. Among students who have a parent without a high school diploma and few or no friends planning to attend a four year school, only 6.5% enrolled in a four year college or university. Conversely, 72.56% of students with a parent who has a Bachelor's degree or higher and most or all of their friends planning to attend a four year school enrolled in a four year college or university. In other words, students who have the highest level of both forms of social capital are in the most advantaged position for college enrollment. This suggests support for cumulative advantage theory.

Findings in Figure 1 also offer some support for resource substitution theory. This is seen when comparing students with the lowest value of one form of social capital and the highest of the other (i.e. the black bar for students with a parent who does not have a high school diploma and the white bar for students who have a parent with a Bachelor's degree or higher). The likelihood of college enrollment among both of these groups is very similar. Nearly 27% of students with a parent without a high school diploma and most or all of their friends planning to attend a four year school enroll in college, while nearly 25% of students with a parent who has a Bachelor's degree or higher and few or no friends planning to attend a four year school enroll in college.

FIGURE 1 ABOUT HERE

DISCUSSION

The present study makes an important contribution to the literature on college enrollment by assessing the joint influence that two forms of social capital—parents' education level and peer who are college bound—exert on students' likelihood of enrollment in a four year postsecondary institution. Previous research primarily focuses on the separate effects of either families or peers. By drawing from cumulative advantage and resource substitution theories, I developed alternative explanations about how both forms of social capital may influence college enrollment and examined these suppositions empirically.

The bivariate analysis presented in Table 1 shows that higher levels of parental education are associated with a higher proportion of students' friends planning to attend a four year college or university. Showing this finding is a necessary first step in testing the applicability of cumulative advantage theory because a central tenet of the framework is that one advantageous resource predicts another advantageous resource.

When these results are considered along with the findings in Figure 1, it becomes clear that parental education and friends' college plans do jointly matter for college enrollment and that cumulative advantage theory helps explain how. Results show that the highest proportion of students enrolled full-time in a four year college or university are those with a parent who has a bachelor's degree or higher and many college-bound friends. Additionally, the results indicate that as parental education increases, the gap in college enrollment between students with few college-bound friends and students with many college-bound friends becomes increasingly larger. This suggests that the joint effects of parental education and friends' college plans on a student's likelihood of college enrollment increase exponentially, rather than linearly, with each successive level of parental education. In other words, the advantages of having two important

forms of social capital—parental education and college-bound friends—are cumulative. Thus, cumulative advantage theory is applicable for understanding the joint effects of parental education and friends' college plans on a student's likelihood of college enrollment.

Resource substitution theory also receives some support in this study. The percentage of students with a parent who has a bachelor's degree or higher and few or no friends planning to attend a four year school is very similar to the percentage of students with a parent without a high school diploma and most or all of their friends planning to attend a four year school (24.82% and 26.75% respectively). These findings suggest that if one advantageous resource is present (e.g. a parent who has a bachelor's degree or higher), it can substitute for another that is lacking (e.g. most or all of one's friends planning to attend a four year college or university) to increase the odds of a desirable outcome, in this case college enrollment.

It is important to place this finding and support for resource substitution in the proper context, however. Even though the resources this study investigates can be substituted in ways that suggest similar likelihood of college enrollment, students who have *both* resources (highly educated parents and many college-bound friends) are still nearly three times more likely to attend college than those with only one resource.

While the findings of the present study do suggest that parental education and friends' college plans matter jointly for college enrollment and lend support to theories of cumulative advantage and resource substitution, the analysis is preliminary and has several limitations. The primary limitation is that the analysis does not account for possible confounding variables. Several factors may explain the basic associations found in this study. For example, it is well known that students' sociodemographic background characteristics, including their racial and ethnic background, gender, family structure and family income, are all related to parents'

education level, peer selection, and college enrollment. My future research will use multivariate analyses to further assess whether and how parental education and peers' educational plans jointly influence college enrollment.

An additional study limitation is that key study variables are operationalized rather simply. I constructed enrollment as a dichotomous outcome indicating full-time four year college enrollment only. This approach assessed the joint effects of parental education and friends' college plans on the college enrollment pattern most likely to lead young people to occupational success (Pascarella & Terenzini 2005, Baum & Ma 2007, Hollingshead 2011) but at the expense of more detailed knowledge about the way that parents and peers may matter for other postsecondary enrollment options. Future studies should address this issue.

The recoding scheme for parental education was also rather simple. The Bachelor's degree or higher category included not only parents with a Bachelor's degree, but also those with a Master's degree or a Doctorate, which may have been responsible for the substantial increase in college enrollment among students with a parent of this type rather than the joint effects of parental education and friends' college plans. Furthermore, the parental education measure was based on the highest education level of either parent. Considering mother's highest level of education and father's highest level of education separately would lead to a more detailed understanding of how parental education affects college enrollment and consequently how it combines with friends' college plans to jointly affect college enrollment. Further research should consider these alternative approaches to operationalizing parental education.

CONCLUSION

Ultimately this study's findings suggest that cumulative advantage and resource

substitution theories can both be used to help explain whether and how parental education and friends' college plans jointly influence students' odds of enrollment in a four year college or university. Study findings provide strong preliminary support for a joint association between parental education and friends' college plans, indicating that the advantages of having both forms of social capital are cumulative with successive increases in parental education and that having one form can buffer against the negative effects of lacking the other. This study's application of cumulative advantage and resource substitution theories to the college enrollment process provides a new lens through which to view the complex but critical transition from high school into postsecondary education and may serve as a theoretically sound basis for more sophisticated analysis of this process in the future.

Table 1. Proportion of Students with Few or No Friends, Some Friends, or Most or All Friends Planning to Attend a Four Year College or University by Parent's Highest Level of Education

Parental Education	Friends' College Plans			Total
	<i>Few or No Friends to 4yr</i>	<i>Some Friends to 4yr</i>	<i>Most or All Friends to 4yr</i>	
<i>No High School Diploma</i>	0.3943 (289)	0.2742 (201)	0.3315 (243)	(733)
<i>High School Diploma</i>	0.3237 (783)	0.2778 (672)	0.3985 (964)	(2,419)
<i>Postsecondary Enrollment, No Bachelor's Degree</i>	0.2305 (949)	0.2691 (1,108)	0.5004 (2,060)	(4,117)
<i>Bachelor's Degree or Higher</i>	0.1217 (681)	0.1653 (925)	0.7131 (3,991)	(5,597)
Total	0.2100 (2,702)	22.59 (2,906)	0.5641 (7,258)	(12,866)

Notes: n = 12,866

Source: Education Longitudinal Study of 2002

Table 2. Proportion of Students Enrolled or Not Enrolled Full-Time in a Four Year College or University by Parent’s Highest Level of Education

Parental Education	College Enrollment		Total
	<i>Not Enrolled in 4yr School</i>	<i>Enrolled in 4yr School</i>	
<i>No High School Diploma</i>	0.839 (615)	0.161 (118)	(733)
<i>High School Diploma</i>	0.7718 (1,867)	0.2282 (552)	(2,419)
<i>Postsecondary Enrollment, No Bachelor’s Degree</i>	0.6786 (2,794)	0.3214 (1,323)	(4,117)
<i>Bachelor’s Degree or Higher</i>	0.3943 (2,207)	0.6057 (3,390)	(5,597)
Total	0.5816 (7,483)	0.4184 (5,383)	(12,866)

Notes: n = 12,866

Source: *Education Longitudinal Study of 2002*

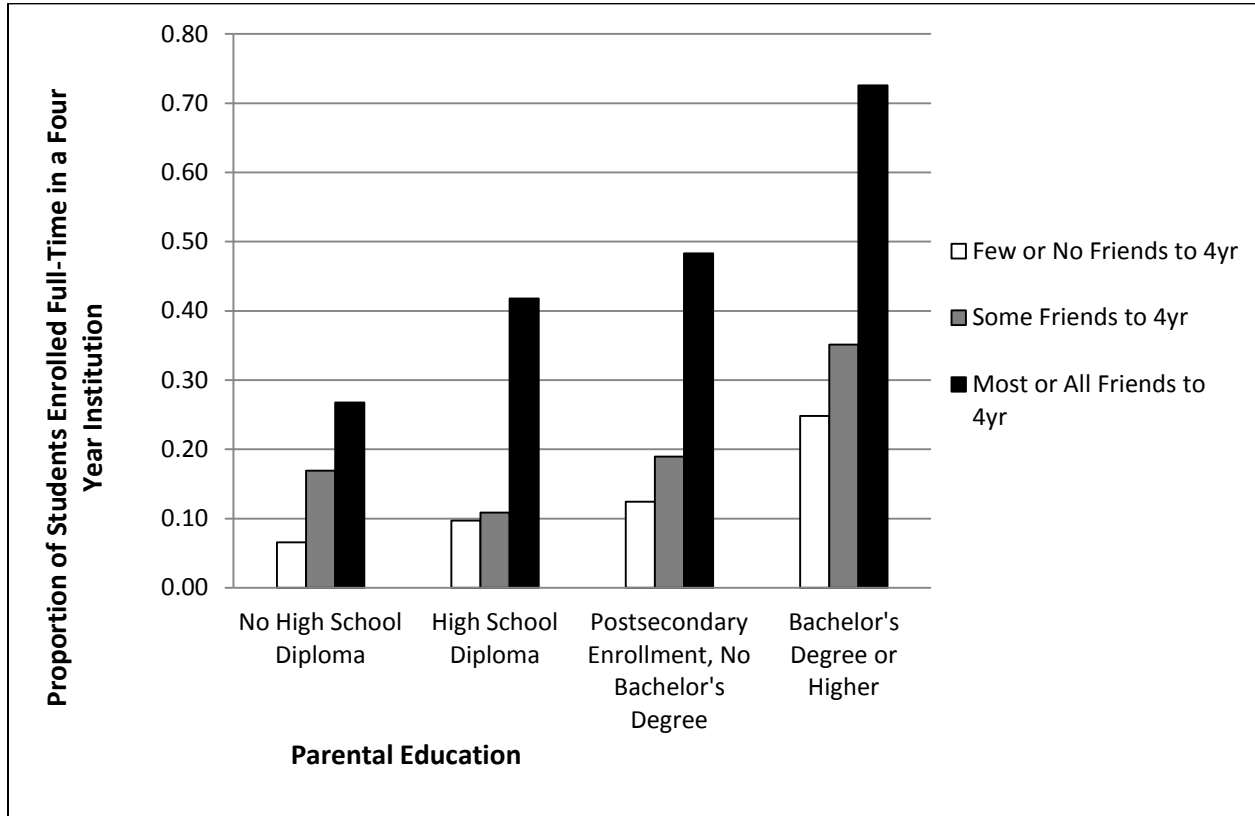
Table 3. Proportion of Students Enrolled or Not Enrolled Full-Time in a Four Year College or University by Amount of Friends Planning to Attend a Four Year School

Friends' College Plans	College Enrollment		Total
	<i>Not Enrolled in 4yr School</i>	<i>Enrolled in 4yr School</i>	
<i>Few or No Friends to 4yr</i>	0.8586 (2,320)	0.1414 (382)	(2,702)
<i>Some Friends to 4yr</i>	0.7791 (2,264)	0.2209 (642)	(2,906)
<i>Most or All Friends to 4yr</i>	0.3994 (2,899)	0.6006 (4,359)	(7,258)
<i>Total</i>	0.5816 (7,483)	0.4184 (5,383)	(12,866)

Notes: n = 12,866

Source: *Education Longitudinal Study of 2002*

Figure 1. Proportion of Students Enrolled Full-Time in a Four Year Institution by Parental Education and Friends' College Plans



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Appendix A. Descriptive Statistics

	(N = 12,866)	
	<i>Mean or Proportion</i>	<i>SD</i>
<i>Dependent Variable:</i>		
College Enrollment	0.418	0.493
<i>Independent Variables:</i>		
Parental Education	2.133	0.913
Friends' College Plans	2.354	0.805

Notes: Parental education is an ordinal variable ranging from 1 (no high school diploma) to 4 (Bachelor's degree or higher) with a mean of 2.133 indicating that on average at least one parent attended some postsecondary institution. College enrollment is a dichotomous variable where 0 = no full-time enrollment in a 4yr institution and 1 = full-time enrollment in a 4yr institution with a proportion of .418 indicating that less than half of the sample was enrolled full-time in a four year school.

Source: *Education Longitudinal Study of 2002*

Appendix B.

Panel 1. Proportion of Students with a Parent without a High School Diploma Enrolled or Not Enrolled Full-Time in a Four Year College or University by Amount of Friends Planning to Attend a Four Year School

Friends' College Plans	College Enrollment		Total
	Not Enrolled in 4yr School	Enrolled in 4yr School	
<i>Few or No Friends to 4yr</i>	0.9343 (270)	0.0657 (19)	(289)
<i>Some Friends to 4yr</i>	0.8308 (167)	0.1692 (34)	(201)
<i>Most or All Friends to 4yr</i>	0.7325 (178)	0.2675 (65)	(243)
<i>Total</i>	0.8390 (615)	0.1610 (118)	(733)

Notes: n = 733

Source: *Education Longitudinal Study of 2002*

Panel 2. Proportion of Students with a Parent with a High School Diploma Enrolled or Not Enrolled Full-Time in a Four Year College or University by Amount of Friends Planning to Attend a Four Year School

Friends' College Plans	College Enrollment		Total
	Not Enrolled in 4yr School	Enrolled in 4yr School	
<i>Few or No Friends to 4yr</i>	0.9029 (707)	0.0971 (76)	(783)
<i>Some Friends to 4yr</i>	0.8914 (599)	0.1086 (73)	(672)
<i>Most or All Friends to 4yr</i>	0.5820 (561)	0.4180 (403)	(964)
<i>Total</i>	0.7718 (1,867)	0.2282 (552)	(2,419)

Notes: n = 2,419

Source: *Education Longitudinal Study of 2002*

Panel 3. Proportion of Students with a Parent who was Enrolled in a Postsecondary Institution but did not Obtain a Bachelor's Degree Enrolled or Not Enrolled Full-Time in a Four Year College or University by Amount of Friends Planning to Attend a Four Year School

Friends' College Plans	College Enrollment		
	<i>Not Enrolled in 4yr School</i>	<i>Enrolled in 4yr School</i>	<i>Total</i>
<i>Few or No Friends to 4yr</i>	0.8757 (831)	0.1243 (118)	(949)
<i>Some Friends to 4yr</i>	0.8105 (898)	0.1895 (210)	(1,108)
<i>Most or All Friends to 4yr</i>	0.5170 (1,065)	0.4830 (995)	(2,060)
<i>Total</i>	0.6786 (2,794)	0.3214 (1,323)	(4,117)

Notes: n = 4,117

Source: *Education Longitudinal Study of 2002*

Panel 4. Proportion of Students with a Parent who has a Bachelor's Degree or Higher Enrolled or Not Enrolled Full-Time in a Four Year College or University by Amount of Friends Planning to Attend a Four Year School

Friends' College Plans	College Enrollment		
	<i>Not Enrolled in 4yr School</i>	<i>Enrolled in 4yr School</i>	<i>Total</i>
<i>Few or No Friends to 4yr</i>	0.7518 (512)	0.2482 (169)	(681)
<i>Some Friends to 4yr</i>	0.6486 (600)	0.3514 (325)	(925)
<i>Most or All Friends to 4yr</i>	0.2744 (1,095)	0.7256 (2,896)	(3,991)
<i>Total</i>	0.3943 (2,207)	0.6057 (3,390)	(5,597)

Notes: n = 5,597

Source: *Education Longitudinal Study of 2002*

Academic Vita

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EDUCATION

- **The Pennsylvania State University** – University Park, PA (Fall 2010 – Spring 2012)
 - o Bachelor of Arts in Sociology, Schreyer Honors College
 - o Dean’s List: Fall 2010, Spring and Fall 2011
 - o Honors Thesis: *The Interactive Effects of Parental Education and Friends’ College Plans on College Enrollment*
- **Dickinson College** – Carlisle, PA (Fall 2008-Spring 2010)
 - o Dean’s List: Fall 2008, Spring and Fall 2009, Spring 2010

RESEARCH EXPERIENCE

- **The Association of Religion Data Archives** – State College, PA (Spring 2011-Spring 2012)
 - o *Research Assistant*
 - Prepared codebooks to be uploaded onto website
 - Collected and organized numerical data in Excel
 - Performed routine website maintenance checks
- **Schreyer Honors College Undergraduate Thesis** – University Park, PA (Fall 2010-Spring 2012)
 - o *Principal Investigator*
 - Conducted independent research using data from the Education Longitudinal Study 2002 looking at the joint effects of parental education and friends’ college plans on college enrollment

WORK EXPERIENCE

- **Child Development & Family Council** – State College, PA (Summers 09,10)
 - o *Childcare Assistant*
 - Supervised and managed children K-8th grade
 - Organized and implemented camp activities
 - Communicated with parents regularly
- **Grace Prep High School** – State College, PA (Fall 2010)
 - o *Assistant Girls Soccer Coach*
- **Midstep Centers for Child Development** – State College, PA (Summers 07,08)
 - o *Intake Specialist & Administrative Assistant*
 - Conducted patient intake screenings
 - Scored psychological tests

LEADERSHIP, SERVICE, & EXTRACURRICULAR ACTIVITIES

- **HOINA (Homes of the Indian Nation) Program Participant** – July 21-August 17, 2011
 - Schreyer Honors College Service Learning Trip to an orphanage in Southern India
 - Taught at children's schools, organized staff English Lessons, whitewashed/painted/tiled
- **Penn State Reformed University Fellowship** (2010-2012)
 - Leadership Team
 - Community Group Leader
 - Spring Break Missions Trips: 2011 – Chicago, 2012 – Los Angeles
- **Penn State Dance Marathon - RUF** (2011-2012)
- **Dickinson College Varsity Women's Soccer** (2008-2010)
 - First Team All-Conference Honors 2008
 - Second Team All-Region Honors 2009, Team MVP
- **Alpha Phi Omega – National Co-Ed Service Fraternity, Alpha Gamma Alpha Chapter** (2009-10)
 - Homeless shelter, food distribution center, nursing home volunteering
- **Dickinson College Habitat for Humanity** (2009-2010)
 - Spring break trip to Miami (2010)