THE COMPLEXITY OF NON-COMPLETION: DISPARATE EFFECTS OF RACE/ETHNICITY AND GENDER IN PUSH AND PULL MODELS OF STUDENT DROPOUT

by

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(Under the Direction of Linda Renzulli)

ABSTRACT

While we do know that some groups of students are more likely to drop out than others, dropout is a complex process, and currently no single model of dropout captures the true complexity of the paths that lead to a student failing to graduate. In this paper, I contend that student dropout is better conceptualized through the characterization of dropout as caused by both push and pull factors. In addition, I apply multiple broad theories, including cultural explanations of Latino dropout, the class and race theories of Wilson (1987), and oppositional culture and gender socialization theories to the problem of student dropout. This paper is of interest to those who wish to examine both the specific reasons that certain subgroups of students leave school before the completion of their education, and to those interested in theoretical explanations of student dropout.

INDEX WORDS: Dropout, Push Factor, Pull Factor, Race, Latino, Black, Gender, Secondary Education

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CHAPTER 1

INTRODUCTION

During the last few decades, numerous studies have tried to identify and explain why students leave school before the completion of their secondary education (Alexander, Entwisle, and Horsey 1997; Rumberger 1983; Rumberger 1987; Stearns and Glennie 2006; Stearns, Moller, Potochnick, and Blau 2007). In the early 1960s, a term was created to describe someone who did not have a high school diploma: "dropout" (Dorn 1993). Since that time, failing to achieve what is now seen as a minimal level of education has become increasingly stigmatized. Due to the fact that a majority of American adolescents (approximately 71% in 2002 (Greene 2002)) currently do graduate from high school, employers now use a high school diploma as a way to pre-screen applicants for all but the most menial jobs (Dorn 1993; Fitzpatrick and Yoels 1992; Rumberger 1987). This has become increasingly true as the U.S. economy becomes primarily service based, and few jobs that require only physical prowess are available (Rumberger and Thomas 2000). Consequently, dropping out of high school has strongly negative effects on a both a person's immediately employability and long-term career trajectory.

In addition to lessened occupational prospects, dropping out of school causes a variety of other detrimental outcomes. According to Rumberger (1987), dropouts have educational and credential deficiencies that affect their economic and social wellbeing throughout their lives. Individual costs include disenfranchisement from community and societal institutions and a substantial loss of personal income (McDill, Natriello, and Pallas 1986). Additionally, these personal losses lead to societal costs of billions of dollars in the form of government assistance,

higher crime rates, lower tax payments, and costly employment and training programs (McDill, Natriello, and Pallas 1986; Rumberger 1987). As multiple studies have clarified the harmful effects of student dropout for both the individual and the society, a variety of dropout prevention programs have been instituted. Some of these programs are more effective than others, but in general they have been critiqued for being too narrow in focus and too one-dimensional to address the different problems faced by diverse student groups (Dupper 1993; Dynarski and Gleason 2002).

While the vast majority of studies on dropout thus far have operationalized leaving school as one process (for notable exceptions, see Gambetta 1987; Jordan, Lara, and McPartland 1996), it is likely that there are different paths that lead to student dropout. In line with the arguments of Jordan, et.al. (1996), I contend that it is too simplistic to conceptualize the problem of dropout through the parsimonious dual outcome model (i.e., dropout or not dropout) that is used almost exclusively in the dropout literature. Instead, I assert that student dropout should be categorized into two main types: dropout caused by factors within the school, and dropout caused by factors outside of the school. As opposed to the dual outcome model outlined above, I utilize a model that incorporates four possible outcomes: still in school, pushed out of school, pulled out of school, or both pushed and pulled out. Using a nationally representative longitudinal sample of high school students, I analyze not only factors that have been identified in previous literature as contributors to student dropout, but also the reasons that the students themselves report to be the cause of their failure to attain a high school diploma. Using this information, I will be able to develop a much more nuanced understanding of the patterns of dropout for students of different racial/ethnic backgrounds and genders. As will be shown below, a failure to examine the variations in types of student dropout can mask important

distinctions in the patterns of dropout for different groups of students. Thus, through an examination of the differential causes of dropout for certain groups of students, I propose to fill a theoretical and empirical hole in the literature. The model of student dropout that I have developed will allow me to examine the processes of dropout for different student groups in greater detail, thus adding to the overall understanding of the complex causes that can prompt a student to leave school before graduation.

The utilization of a more complex model of student dropout is especially important in light of current increases in the number of students from multiple minority racial and ethnic backgrounds within the school age population. While prior research has shown that both race/ethnicity and gender affect the likelihood of a student dropping out (Cook 2006; Jordan, Lara, and McPartland 1996; Rumberger 1983) there has been less analysis of the specific causes of dropout for each racial or gender group. According to Jordan, et.al. (1996: 63), "systematic insights are not readily available on whether and how dropouts in different racial/ethnic groups are driven by different causal processes." Examining the reasons that students give for leaving school will help to clarify how factors both within and outside of the school setting may lead to lower rates of student attainment, and also how certain students may be differentially affected by these factors. Therefore, I utilize theories that suggest the importance of economic and cultural effects on school outcomes in order to create hypotheses about the differential dropout of multiple racial/ethnic and gender groups. Based on class and cultural difference theories forwarded by Wilson (1987) and others, I hypothesize that Black and Latino students will evidence distinct patterns of dropout as compared to each other and their White peers. I also expect that some of these effects will remain significant even after controlling for the student's social and financial resources. In addition, drawing from theories of oppositional culture and

gender socialization, I propose that girls and boys will exhibit starkly divergent paths to dropout. I contend that exploring the implications these theories have for student dropout will help to clarify the reasons students leave school, but also assist in the further development of theories of oppositional culture, gender socialization, and the critical effects of culture and economic resources on individual outcomes.

CHAPTER 2

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Pushout/Pullout Model of Student Dropout

Literature on dropout has long recognized the fact that students leave school for a variety of different reasons. Numerous empirical studies have identified a wide range of factors that influence the likelihood that a student will drop out; however, few of these studies have attempted to incorporate these known factors into a comprehensive causal model (Rumberger 1987). As stated above, hardly any previous empirical studies of dropout have utilized models of student non-completion that allow for more than two potential outcomes: in school or not in school. However, according to Jordan, et.al, (1996) previous educational research has recognized two main paths that lead to student dropout: "push" factors or "pull" factors (Gambetta 1987; Rumberger 1987), and this theoretical construct should guide our conceptualizations of dropout. In this type of model, push factors are conceived of as located within the school itself and include academic failure, delinquency within the school or classroom, or an inability to create appropriate social relationships with teachers or peers (Jordan, Lara, and McPartland 1996). According to Jordan, et.al. (1996: 63), push effects are best conceptualized as factors that "negatively impact the connection adolescents make with the school's environment and cause them to dropout." When a student is pushed out of school it is because they have failed to create appropriate identification or connections with the school (Griffin 2002; Lan and Lanthier 2003). If a student rejects the context of schooling, this can in turn lead to delinquent behavior, academic disinterest, and eventually complete withdraw from

the academic process. Additionally, the school itself can force a student out through the utilization of explicit policies and practices such as mandatory expulsion for low grades and misbehavior (Bowditch 1993; Rumberger and Thomas 2000); thus, agency on the part of both the student and the school can lead to a student being "pushed out."

On the other hand, many students experience a variety of complex pressures and loyalties during their adolescent years, some of which can be described as pull factors because they compete with or preclude students' commitment to their education. For example, a student may be "pulled out" due to family issues including new parenthood, family care-giving commitments, or financial responsibilities (Jordan, Lara, and McPartland 1996). Due to the large amount of time and effort that students must invest in order to succeed in secondary schooling, any number of alternate competing forces may result in students being unable to complete their education. Whether students are pushed or pulled out of school is an important distinction, because it highlights the different structural or cultural causes that are involved in each process.

In accordance with the push/pull conceptualization of dropout outlined by Jordan, et.al. (1996), I utilize a model of dropout that distinguishes between students who left because of factors located within the school, and those that dropped out due to factors located outside of the school. To gather this information, the dataset that I used for this study provided students who had dropped out with a list of 21 reasons commonly given for leaving school, and asked them to identify the factors that led them to drop out. While these reasons were quite varied, they generally reflected either a push effect or a pull effect, and are distinguished as such in my dependent variable (see dependent variable description and Table 2 for the specific reasons provided to the students). As will be demonstrated below, my analyses suggest that there are a variety of complex patterns of dropout that differ by race/ethnicity and gender, and further, that

some of these distinctions would not be apparent in a dichotomous outcome model of student dropout. Therefore, my findings suggest that the use of the push/pull model of student dropout is critical for identifying and understanding the reasons that students leave school before graduation.

As previous work on dropout has demonstrated, there are a variety of student characteristics that are often associated with an increased likelihood that the student will leave school prior to graduation (Astone and McLanahan 1994; Crane 1991). In addition, other research has definitively shown that outside influences, including the financial resources of the school, neighborhood, and family (Alexander, Entwisle, and Kabbani 2001; Christle, Jolivette, and Nelson 2007) can affect the dropout rate of different groups of students. It is not enough, however, to simply examine broad patterns of student dropout without also shedding light on the multitude of reasons students have for their personal decision to leave school. There are fundamental differences between the dropout patterns of students who leave school due to familial concerns, and those who experience elevated levels of dropout due to a high expulsion rate. In this work, I am interested in identifying the different patterns of factors that lead to student dropout because I believe that developing better understandings of the reasons that students leave school can lead to the creation of more effective dropout prevention policy. If there are in fact differences between the paths to dropout of different groups of students, then it seems probable that one type of dropout prevention program will not address the variety of reasons that students drop out.

Issues of Race, Class, and Culture

To date, most research on the ways that race influences a student's likelihood of dropping out has focused on the difference between White and Black students (Alexander, Entwisle, and

Horsey 1997; Felice 1981; Guryan 2004), and less attention has been paid to the reasons that members of different minority groups might leave school before graduation (for notable exceptions, see Driscoll 1999; Dunham and Wilson 2007; Olatunji 2005; Rumberger and Thomas 2000). Multiple researchers have shown that the effects of "being Black" on dropping out all but disappear after controlling for individual and family socioeconomic status (Fitzpatrick and Yoels 1992; Nam, Rhodes, and Herriott 1968; Rumberger 1983). The "class not race" finding, however, may not be true of all racial/ethnic groups, and more research about non-Black minority students in this area is clearly necessary. According to Jordan, et al. (1996), while the research literature has created some knowledge of broad patterns of dropout behavior, there is less understanding of the different reasons certain groups of students drop out. Thus far, most theoretical frameworks for dropout have extended one parsimonious model that can be applied to all groups (Jordan, Lara, and McPartland 1996); however, this does not allow for the possibility that patterns of dropout in racial/ethnic and gender groups are driven by different causal processes. Filling this omission in the literature has become increasingly important as the percentage of minorities, especially Latinos, in the school age population has grown (Driscoll 1999). Therefore, in this study I apply previously developed theories of race and gender to the problem of the push/pull effects of student dropout, and make different hypotheses about the paths to dropout for different racial/ethnic and gender groups.

Black Student Dropout

Census and research data throughout the 1900s and 2000s have made it indisputably clear that on average Black students in the U.S. have a higher rate of school non-completion than White students (Bergman 2004; Rumberger 1987). Generally, Black students tend to have a

greater incidence than their White classmates of a variety of behaviors and characteristics that have been associated with dropout, including pregnancy (Crane 1991; Mayer and Jencks 1989), delinquency, a lack of connection with school, and absenteeism (Bowditch 1993). Therefore, I expect that prior to the inclusion of other student and school characteristics such as socio-economic status in the analysis, I will find that Black students will experience a greater likelihood of dropout than their White classmates. Thus, I hypothesize:

H1: Black students will be more likely than White students to report being pushed out of school.

H2: Black students will be more likely than White students to report being pulled out of school.

As many studies have demonstrated, however, the background characteristics of a student, primarily socio-economic status, are critical to understanding the actual difference between White and Black dropout rates (Fitzpatrick and Yoels 1992; Rumberger 1983). At the aggregate level, theorists such as William Julius Wilson (1987) have offered structural explanations for differences between Whites and Blacks, based on the idea that the higher frequency and concentration of poverty in Black communities is the cause of many of the social problems found therein. In addition, differential outcomes for Black students have been explained on an individual level through an examination of the many ways that a student's SES can promote or constrain their eventual academic attainment. In this work, I will examine the effects of economic resources on the likelihood of Black student dropout at both the aggregate and individual level in order to compare the relative effects of each explanation on the actual outcomes for Black students.

In order to examine the effects of differential resources on the dropout rates of Black students, I first offer an examination of the effect that individual SES can have on the likelihood that a student will drop out of school. According to Rumberger (1983), there are several aspects of a student's socio-economic background that can influence their probability of achieving a high school diploma. For example, status attainment research suggests that the educational attainment of both parents is correlated with the amount of education that their child will receive (Blau and Duncan 1967; Sewell and Hauser 1972). Parents who are more highly educated can offer many advantages to their children, the most obvious of which is that they will likely have the financial resources to supplement and assist with attaining the best education for their children. A parent with a clear understanding of the workings of the educational system can also be an invaluable asset for students, especially if they ever face bureaucratic processes within the educational system such as disciplinary proceedings. Finally, according to the work of Sewell and Hauser (1972), significant people in a child's life can have a strong influence on their educational and occupational aspirations, which will in turn influence the child's eventual outcomes. Therefore, students who are surrounded by people with high levels of academic attainment will be more likely to aspire to similar levels of education themselves.

Family income is also an influential factor in predicting the likelihood that a student will drop out. Children from poor families may feel pressure to contribute to their family's income, and therefore may be inclined to leave school to find paid work (Rumberger 1983). Students from families with higher incomes, in contrast, may even be excused from some time-consuming responsibilities within the household, such as caring for younger siblings or elderly relatives. Finally, greater financial resources may offer students alternatives to dropout that are not available to their classmates with lower SES. For example, a teenage pregnancy within a high-

SES family might not result in the girl needing to leave school in order to work or care for the baby; however, dropping out may be the only viable option for a teenage mother from a low-SES family.

Due to the clear importance of the factors outlined above in predicting whether or not a student will drop out, I contend that individual SES is a more important indicator of educational attainment than race. In fact, I suggest that the finding that being Black increases the likelihood of dropout is confounded with class, and instead it is SES that is driving the higher rate of dropout through both push and pull factors. Therefore, I hypothesize that when I account for student SES, being Black will no longer be a predictor of dropout.

H1a: When student SES is controlled for, Black students will not be more likely than White students to be pushed out of school.

H2a: When student SES is controlled for, Black students will not be more likely than White students to be pulled out of school.

In addition to the individual explanation of differential Black and White dropout rates, I offer a structural explanation at the community or regional level. In line with arguments proposed by Wilson (1978; 1987), I contend that the reasons for differences in the dropout rates of White and Black students are complex and difficult to explain with a race-specific thesis at the structural level as well as at the individual level. Instead, the detrimental effects of pervasive community-level poverty primarily cause the current inequalities in outcomes for Blacks and Whites in a variety of social spheres; the apparent racial differences are in fact due to the higher prevalence of poverty in many Black communities.

There are two extremely common race-based explanations for the pervasiveness of inequality between Blacks and Whites, both of which Wilson (1987) disputes: the continued

importance of racial bias and the culture of poverty. While racial discrimination clearly still exists and affects the potential outcomes of the Black citizens of America, Wilson (1987) claims that using current discrimination as the main explanation of racial differences in outcomes is incorrect for a variety of reasons. Primarily, he claims that this argument contains a failure to recognize the ways in which "the fate of poor Blacks is inextricably connected to the structure and functioning of the modern U.S. economy" (Wilson 1987: 134). In addition, he points out that certain Blacks have been able to improve their social and economic condition even while millions of others were forced into areas of increasingly concentrated poverty; this appears to contradict a simple racial bias explanation for the problems present in poor Black communities. On the other hand, the culture of poverty thesis, which at its most basic proposes that poor Blacks teach poverty-causing values and behaviors to their children, is also incorrect. According to Wilson (1987), social isolation into communities of concentrated poverty may cause cultural distinctions from mainstream American social ethos. This does not mean, however, that structural changes would not affect the economic outcomes of the members of these communities; in other words, cultural traits are not autonomous, and will change based on the social situation of the group in question (Wilson 1987).

If race-informed explanations of inequality of certain outcomes are incorrect, then this suggests that another factor is the real impetus of unequal outcomes between Blacks and Whites. According to Wilson (1987), this factor is the high percentage of Blacks that live in areas of concentrated poverty. In his view, poverty is both a cause and an effect of other social and structural problems, such as the growing number of female-headed households in inner-city neighborhoods. Despite the strong association between being Black and numerous poor social and economic outcomes, race is not the causal factor in this relationship. Instead, poverty caused

by bad historical and structural conditions has had a far greater impact on the Black population, and the results of poverty continue to be detrimental for Blacks in a variety of social organizations.

Further, since the introduction of the intersectionality of race, class, and gender perspective in the early 1980s, a variety of studies on dropout have demonstrated that race and class often intersect to create unique patterns of dropout for students of different races or ethnicities based on their socio-economic status. Using the intersectionality perspective[1] may be especially beneficial in research that examines both relationships of inequality among social groups and changing inequality along multiple dimensions (McCall 2005). Examining intersectionality in dropout research can create a more nuanced understanding of the ways that belonging to certain social groups can result in differential rates of dropout. Previous research on the relationship between race and measures of poverty suggests that these two factors may interact at both the student and school level (Dunham and Wilson 2007; Rumberger and Palardy 2005; Zvoch 2006). I hypothesize:

H3: School-level poverty will weaken the relationship between being Black and both types of dropout.

H4: Student SES will weaken the relationship between being Black and both types of dropout.

In general, the above hypotheses suggest that the average differences between Black and White students in level of school completion is primarily the result of disparate rates of poverty between the two groups, and further, that race and poverty interact to create complex patterns of dropout.

[1] While the Intersectionality perspective is normally conceived of as comprising the three dimensions of race, class, and gender, numerical constraints do not permit me to examine the intersection of all three within one equation.

Latino Student Dropout

Expanding the dropout literature beyond the Black/White dichotomy has become extremely important, especially as the dialog about immigration and its consequences has continued to heat up in recent years. Children of immigrant families are the fastest growing demographic under the age of 15, and currently over 25% of immigrants are from Mexico alone (Driscoll 1999). Therefore, it is clear that the Latino population in American public schools is becoming increasingly influential, and understanding the educational challenges for this group in particular is especially important (Rodriguez and Morrobel 2004). According to many scholars, Latino students are plagued by many of the problems that also contribute to higher rates of dropout for Black students, including low GPA and low SES (Dunham and Wilson 2007; Montecel, Cortez, and Cortez 2004; Suh, Suh, and Houston 2007). In addition to these contributors to Latino dropout, however, there may be strong cultural influences within the Latino community that increase the chances of dropout (Gillock and Reyes 1999; Olatunji 2005; Stanton-Salazar 2001). For this reason, I will employ both socio-economic and cultural difference theories in order to explain the patterns of dropout of Latino students.

For Black students, I proposed congruent hypotheses for both pushout and pullout factors leading to dropout. For Latino students, however, I offer different hypotheses for the push and pull models. Because push factors operate within schools and between schools and students, it seems likely that cultural factors will influence this type of dropout less than they may influence whether a student is pulled out of school. Therefore, I do not expect to find significant difference between Black and Latino students in the ways that race and SES affect their likelihood of being pushed out. For the push model of student dropout for Latino students, I hypothesize the following:

H5: Latino students will be more likely than White students to report being pushed out of school.

As with Black students, many Latino students face issues associated with living in poverty and attending schools in impoverished neighborhoods. While the Latino community as a whole has lower levels of residential segregation than the Black population (Iceland and Wilkes 2006), there are still many places in the United States in which Latinos reside in areas of concentrated poverty. In fact, it is often the case that Latino families who face other social hardships, (i.e., recent immigrant status, low SES), are also the most likely to live in highly segregated neighborhoods (Iceland and Scopilliti 2008; Wahl, Breckenridge, and Gunkel 2007). Thus, it is probable that both the structural arguments of Wilson (1987) and the individual SES theories about the importance of class and poverty for Black students will also apply to Latino students. In line with the hypotheses for Black students outlined above, I contend:

H5a: When student SES is controlled for, Latino students will be no more likely than White students to be pushed out of school.

In addition, it is possible that the interactions I proposed above for Black students are also present for Latino students. As with Black students, these hypotheses suggest that for Latino students, the relationship between race and being pushed out of school is confounded, and the explanations for differential rates of dropout come more from class than from race.

I hypothesize:

H6: School-level poverty will weaken the relationship between being Latino and the student reporting that they were pushed out of school.

H7: Student SES will weaken the relationship between being Latino and the student reporting that they were pushed out of school.

Recently, there has been research conducted that suggests Latino students drop out of school for a variety of reasons associated with immigration, including the need to work in order to care for family both in the U.S. and abroad (Driscoll 1999; Landale, Oropesa, and Llanes 1998; Perreira, Harris, and Lee 2006; Rodriguez and Morrobel 2004). In addition, Latino students may also face increased cultural and social pressures to dropout (Driscoll 1999; Landale, Oropesa, and Llanes 1998; Perreira, Harris, and Lee 2006). These cultural and social pressures may stem from traditional values brought by the student or their families from their country of origin, or they may be instilled through peer and other interpersonal networks within the communities in which these students reside. While there is clearly some understanding of the effect cultural influences may have on the dropout of Latino students, increasing rates of school attainment for these adolescents will require a more nuanced understanding of their patterns of dropout.

One of the most common explanations of high Latino dropout is that these students are working many hours during adolescence or even prior to being a teenager (Laws 2005), and this becomes a commitment that interferes with school so greatly that these students leave the educational setting altogether (Lee and Staff 2007). In essence, this is both an economic and a cultural explanation for Latino dropout. As many Latino families are currently living in poverty, it seems likely that there would be strong pressure on students to contribute to the family finances (Landale, Oropesa, and Llanes 1998). Additionally, some Latinos must send money back to their families in the countries from which they immigrated, further stretching an already tight budget; in fact, finding work in order to improve the family's standard of living is the primary reason many Mexican youth immigrate with their parents (Olatunji 2005). In a study of the work experience of Mexican-origin youth, Olatunji (2005) claims that traditional cultural

values may instill different motivations for working. He states that in the United States, schooling is seen as necessary to the normal development of adolescents, but in the developing country of Mexico, school is a luxury and work is an economic necessity. Therefore, it is likely that one result of these different belief systems is an increased rate of Latino dropout due to familial pressure to leave school.

The effects of differing cultural norms and values may also be especially influential in causing the dropout of Latina girls. Research conducted by Valdivieso and Nicolau (1994) suggests that Latino youth are often forced to take on adult roles and responsibilities earlier than members of other groups. This may be especially true for Latinas, who are often asked to take on a large share of the domestic upkeep of the household (Gillock and Reyes 1999; Stanton-Salazar 2001) or begin their own households at a young age. In fact, according to one study conducted in 1982, a third of Latina dropouts left school because they had married or planned to get married, and a quarter of the dropouts left because they were pregnant (Valdivieso and Nicolau 1994). By the time of the follow-up in 1984, almost half of the girls who had not graduated were married, and over a third had children. While both Latina and Black girls have a higher probability of becoming mothers during adolescence than their White peers (Sucoff and Upchurch 1998), Latina girls are much more likely to get married either during or immediately following high school (Valdivieso and Nicolau 1994), a pattern that is also evidenced in the data used for this project (see Table 2). This suggests that the pressure on Latino students to establish families separate from their parents may be stronger than for members of other racial/ethnic groups. Overall, the higher likelihood of both marriage and pregnancy implies Latina girls may experience strong cultural influences that are likely to result in a greater likelihood of dropping out before the completion of high school.

As outlined above, both work and family responsibilities are social pressures that interfere with a strong commitment to education, and thus can be defined as pull factors leading to dropout. I contend that the dual influence of economic and social pressures on Latino adolescents will result in a higher likelihood of these students reporting being pulled out of school than their White classmates. Therefore, I hypothesize:

H8: Latino students will be more likely than White students to be pulled out of school.

In addition, I believe that the same interactions I proposed above for the push model of Latino dropout will also apply to the pull model. If it is in fact the case that Latino students face strong familial responsibilities such as the need to provide financial assistance to their family, the actual financial resources of the family (such as SES) will clearly affect these obligations. The poverty level of the student and school has been linked by multiple studies to reasons for dropout that I have characterized as "pullout," such as the student expressing a need to work long hours or the student becoming the father or mother of a baby (Crane 1991; Entwisle, Alexander, and Olson 2005; Lee and Staff 2007). I hypothesize:

H9: School-level poverty will weaken the relationship between being Latino and the student reporting that they were pulled out of school.

H10: Student SES will weaken the relationship between being Latino and the student reporting that they were pulled out of school.

However, the high percentage of recent immigrants in the American Latino population may result in the group as a whole showing increased rates of dropout that may be due to issues related to cultural differences, immigration, and potential language deficiencies. These factors may have less influence for students that have integrated more thoroughly into American culture. I further hypothesize:

H11: Students who report that English is their second language will be more likely to be both pushed and pulled out of school.

Finally, in recent years many researchers have begun to contend that it is important to conceptualize Latinos as made up of multiple different groups, rather than one homogenous population (Landale, Oropesa, and Llanes 1998; Torres Stone and McQuillan 2007; Valdivieso and Nicolau 1994). Due to a variety of cultural, geographic, and socio-economic distinctions between Latinos from different countries and/or regions, it is likely that I will find different patterns of dropout if I examine the Latino students in more detail. For example, Cuban-origin Latino immigrants are generally older and have a higher SES than some other Latino groups (Valdivieso and Nicolau 1994). According to the associations of poverty and dropout outlined above, it is probable that Cuban-origin Latinos will have a lower likelihood of dropout than Latino students with a lower average SES. Therefore, it seems that examining Latino dropout in greater detail will further develop understandings of the reasons that certain Latinos choose to leave school.

Several previous studies have found that Mexican-origin students (both immigrant and those born in America) had a higher likelihood of dropout than students from most other Latino subgroups (Driscoll 1999; Landale, Oropesa, and Llanes 1998). In fact, Mexican-origin Latinos have the lowest level of educational attainment of any major U.S. ethnic group. One potential reason for this difference between Latinos from Mexico and those from other countries may be the unique location of Mexico as adjacent to the United States; this geography allows a relatively high number of Mexican citizens to enter the U.S. and permits them to do so with fewer financial resources. Not only are Mexican-origin Latinos by far the largest group of Latinos in the United States, but they tend to have low SES compared to other Latino subgroups. Due to the potential

importance of these differences, I extend my analysis to examine the dropout patterns of Mexican-descent Latino students, and hypothesize[2]:

H12: Latino students who report being of Mexican descent will be more likely than Whites to be pushed and pulled out of school.

Issues of Gender, Class, and Culture

While social class continues to be the most reliable predictor of a student's level of achievement in school (Salisbury, Rees, and Gorard 1999), student gender has long been touted as one of the primary determinants of the likelihood that a student will drop out (Kaplan and Damphouse 1996; Renzulli and Park 2000; Stearns and Glennie 2006; Zvoch 2006). There have been many hypotheses about the reasons for these gender differences in patterns of dropout, and most seem to suggest that a push/pull model may in fact accurately portray the different reasons that girls and boys leave school (Bowditch 1993; Cook 2006; Downey and Vogt Yuan 2005; Frosh, Phoenix, and Pattman 2002; Gray and McLellan 2006; Myhill and Jones 2006). Therefore, it is likely that further clarifying the pathways that lead to dropout will highlight critical distinctions between boys and girls. If this is the case, understanding this difference could be extremely beneficial in the creation of improved anti-dropout programs that target the specific reasons certain students leave school prior to graduation. In addition, this analysis will contribute to the expansion of theories of oppositional culture by applying them to the case of gender, and examine the resulting effect of participation in these cultures on the likelihood of dropout.

[2] In order to maintain one reference category within the primary set of nested models, this hypothesis examines the difference in likelihood of both types of dropout between Latinos of Mexican descent and Whites. In a separate analysis, I compared the likelihood of both types of dropout between Latinos of Mexican descent and those of non-Mexican descent; the result was not statistically significant, which is most likely due to issues of cell size in the analysis. This finding should be examined further in future research.

Male Student Dropout

In addition to race, the effect of gender on student commitment to school has long been considered an important factor in predicting eventual educational outcomes. In general, boys do worse than girls on measures of academic achievement such as GPA (Cook 2006; Mickelson 1989), tend to be considered more delinquent than girls (Myhill and Jones 2006), and have a higher overall dropout rate than girls (Kimmel 2006; Mickelson 1989). In recent years, this "crisis" of underachieving boys has received national media attention (Cook 2006; Salisbury, Rees, and Gorard 1999), and within the educational community a variety of theories have been forwarded to explain these gendered differences in educational outcomes. There are a variety of hypotheses that attempt to explain why boys are currently lagging behind in most standard measures of school achievement; the two most common of these explanations are the "poor boys" hypothesis and the "troublesome boys" hypothesis. According to the "poor boys" hypothesis, the educational system is controlled by women (and/or feminists), and therefore the current curriculum and school environment have "pathologized boyhood" (Kimmel 2006) through the creation of schools that restrict the natural energies and enthusiasms of boys. This theory, which has gotten a great deal of attention from the mass media, suggests that boys are underachieving because schools now impose regimes of obedience within classrooms that are incongruent with the necessity of allowing "boys to be boys" (Kimmel 2006).

According to Kimmel, however, there are several problems with the conceptualization of schools as "girl friendly" and "anti-boy" (2006). Primarily, this hypothesis essentializes gender and assumes that all boys possess the same aggressive, competitive, rambunctious nature; and further, that boys and girls have starkly different needs even in early childhood. In addition, the "poor boys" theory assumes that changes in the structure of schooling over the past few decades

have been imposed to benefit girls, when in fact the majority of recent changes have been made by schools in order to meet the requirements of No Child Left Behind legislation. If schools are in fact imposing stricter order and restrictions on their students, it is likely through the cancellation or drastic reduction of recreational programs in schools such as physical education in an attempt to increase the instruction time necessary to help students pass national standardized tests (Kimmel 2006). Finally, if schools were in fact suffering from overall feminization, then it would follow that over time, boys would be experiencing an overall decline in achievement. This may not actually be occurring, however, because the statistics cited by many authors who support the "poor boys" hypothesis can be misleading (Kimmel 2006). For example, it is the case that more women than men are currently attending institutes of higher education, but it is also the case that more *people* are going to college. Thus, while the rate of increase for boys attending higher education is smaller than the rate of increase for girls, it is still true that more boys are going to college than ever before; or in other words, boys are continuing to improve their overall levels of educational attainment. In addition, it is not yet clear that the increased rates of women enrolling in institutes of higher education is due to changes in the school system. It is equally plausible that other achievements of the feminist movement, such as access to tools for family planning, are more responsible for the rise in women's educational attainment. In light of this evidence, it appears that the "poor boys" hypothesis is likely not the correct explanation for the reasons that boys are doing less well than girls on measures of school achievement.

The "troublesome boys" hypothesis, on the other hand, offers an explanation for the differential achievement of boys and girls that has received much more support in the literature. According to this hypothesis, adolescent boys display an academic culture that contains norms

and behaviors that are incongruent with educational effort and achievement (Mickelson 1989; Suitor and Reavis 1995; Van Houtte 2004; Wiens 2005). In a study of the academic achievement of students during their secondary education, Van Houtte claims that girls are more likely to do homework, display less disruptive classroom behavior, and are more enthusiastic about continuing their studies (2004). While adolescents of both genders do consider academic achievement somewhat important, boys are much more likely than girls to impart prestige to their peers based upon other status indicators such as sports or physical appearance (Suitor and Reavis 1995).

In fact, research has shown that boys generally earn lower grades than girls in high school, even in subjects where boys tend to have higher test scores (Downey and Vogt Yuan 2005). Multiple scholars have concluded that one important factor in this test score-grade anomaly is boys' classroom behavior, which is commonly interpreted as poorer than girls' behavior by both teachers and the students themselves (Downey and Vogt Yuan 2005; Francis 2000; Frosh, Phoenix, and Pattman 2002). According to Frosh, et.al. (2002), adolescent masculinity involves a causal treatment of schoolwork, and high status is achieved through demonstrating opposition to authority and subverting rules imposed by the school. In essence, boys create an oppositional culture to school and the authority it represents. Similar to the theory proposed by Ogbu (2004), some boys may feel that they are forced to behave in a prescribed way by an outside authority, and thus engage in acts of collective resistance. This oppositional culture is further reinforced by the perceptions of teachers and administrators that boys are problematic in terms of both behavior and achievement (Jones and Myhill 2004; Myhill 2002; Salisbury, Rees, and Gorard 1999). The real problem, however, is that the combination of boys' oppositional culture and teacher expectations of delinquent behavior often have the result of

student disengagement from school, and at worst, formal sanctions which push boys out of school (Wiens 2005).

According to research done by Kathryn Weins (2005), boys account for 71 percent of all school suspensions and 90 percent of all disciplinary actions. Both suspension/expulsion and high levels of disconnect from school have long been touted as important contributors to student dropout (Battin-Pearson, Newcomb, Abbott, Hill, Catalano, and Hawkins 2000; Bowditch 1993; Stearns and Glennie 2006) and therefore boys and girls are likely to have different patterns of dropout even when they attend the same school. In general, the result of differences in achievement, teacher perceptions, and delinquency can be expected to cause boys to be more likely to leave school because of the push reasons outlined above. Therefore, I hypothesize:

H13: Boys will be more likely than girls to report being pushed out of school.

In addition, according to the work of Willis (1977) and Ogbu (2004), class is an important factor in the creation of oppositional culture. As with the working class boys in Willis' study, it is likely that the students' level of SES will influence the amount to which they act out, and thus their overall likelihood of being pushed out of school. I hypothesize:

H14: Student SES will weaken the relationship between being male and the likelihood that the student will report being pushed out of school.

Female Student Dropout

As outlined above, girls tend to be more engaged in school and exhibit higher levels of educational achievement. Socially, however, girls may experience strong familial pressures and commitments that require them to leave school prior to completing their education. Issues such as pregnancy and need to care for family members may leave girls with little option other than

dropping out (Kirby, Coyle, and Gould 2001; Zachry 2005), and the responsibility for these family responsibilities often falls disproportionately on girls and women. As discussed above, the academic achievement of girls often surpasses that of boys, and the academic culture of adolescent girls is not incongruent with school expectations in the way that is the case for boys' culture. In fact, according to Mickelson (1989), girls perform well in school because good performance is compatible with the obedient "good girl" role into which they are socialized from a young age. Therefore, when a girl does decide to dropout, it is likely due to factors other than forced exclusion from the educational system. Instead, female dropout is likely caused by a responsibility that precludes the student's ability to remain committed to their education.

It appears that for girls, the characteristics of the communities in which students reside may be more important in predicting educational attainment than even the characteristics of the schools that they attend. According to research conducted by Crane (1991), adolescent girls demonstrate sharp increases in their likelihood of dropping out in the worst neighborhoods of large cities. In fact, the chances of girls becoming pregnant in impoverished neighborhoods was a little more than a third higher/month, and this high rate of pregnancy also had an impact on educational attainment statistics. For example, a two standard deviation increase in the proportion of female-headed households in a zip code area reduced the average educational attainment by a quarter of a year. It seems probable that girls' ability to complete their secondary education, especially those that reside in neighborhoods with high levels of poverty, is disproportionately affected by family responsibilities. Finally, it appears that student responses to feelings of isolation or alienation from their school may also be gendered. As work by Jones and Myhill (2004) demonstrates, girls commonly practice self-exclusion through truanting and absenteeism, as opposed to the deviant behavior common to boys.

While boys may also experience pull factors that could cause dropout, including both family issues and need to work (Ash 2007; Entwisle, Alexander, and Olson 2005; Lee and Staff 2007), I contend that the impact of the pull factors outlined above disparately influences patterns of female dropout. I hypothesize:

H15: Girls will be more likely than boys to report being pulled out of school.

Additionally, many of the pull factors affecting girls may be more or less influential depending on the students' SES or their surrounding community (Crane 1991; Mayer and Jencks 1989). Greater economic resources may allow girls who do become pregnant to continue school, and girls with higher SES will likely not be pressured to leave school in order to work or care for family. Therefore, it is likely that girls with higher levels of SES will be less likely to be pulled from school; thus, I hypothesize:

H16: Student SES will weaken the relationship between being female and the likelihood that the student will report being pulled out of school.

Thorough the application of theories of oppositional culture and gender socialization, I have developed a set of opposing hypotheses for the differences in patterns of dropout between girls and boys. As with race, if my results suggest different causes and patterns of dropout across gender, then this may suggest a need for multiple dropout prevention programs that will specifically target the reasons that different groups of students leave school prior to completion.

CHAPTER 3

DATA & METHODS

The analyses described below are designed to examine the different factors that may lead to a student being either pushed out of school or pulled out of school. In addition to looking at direct effects of certain variables on the likelihood of a student reporting being either pushed or pulled out of school, these analyses also include multiple interaction effects, which may give a clearer picture of the ways in which the school itself, outside factors, and student characteristics can affect each other and lead to student dropout.

Data

In order to examine the complex patterns of dropout that I am interested in, I used the restricted release of the Educational Longitudinal Study (ELS) dataset. The ELS is designed to monitor a national sample of high school students as they transition through their secondary schooling and beyond (IES 2002). Included in the data is information about the school and student at multiple levels and from a variety of sources, including the student and their records, their parents and teachers, and school administrators. According to the Institute for Educational Science in the U.S. Department of Education, this multilevel focus allows for a comprehensive picture of the home, school, and community environments of each student (Bowditch 1993). For this study, I use the initial survey of tenth graders nationwide (conducted in 2002), and the first follow-up, collected two years later (2004). The first wave of the study included students from 750 schools, with a total N of 16,373 cases.

The ELS is an ideal dataset for examining student dropout at the high school level for numerous reasons. Primarily, its longitudinal nature allows for an examination of factors that may have caused dropout prior to the actual event, so I can assume causation rather than just association. In addition, the survey design (random probability sample, but with over-sampling of certain under-represented groups) allows me to examine patterns of dropout at the national level, and thus work toward comprehensive conclusions about the relevance of the proposed push/pull model for certain groups of students nationwide.

For this study, I decided to select a subset of cases for the analysis for theoretical and empirical reasons. Primarily, I chose to only include students who attended public school at the time of the first survey. Previous studies have suggested that student achievement may be affected by type of school attended (Jordan, Lara, and McPartland 1996), and further, these achievement differentials may be even starker for students from low-SES backgrounds (Cook 2006). Public schools usually have very little choice as to which students attend, and pushing "undesirable" students out may be a public school's only way of manipulating their student population (Mickelson 1989). Additionally, many non-public schools impose a rigorous application process on any new students, further confounding the issues of school demographics and student outcomes. Therefore, it is possible that the processes that lead to student dropout may be different for students who attend private, military, or religious schools than for pubic school students, and for this reason I have included only the public school cases.

As is clear from the above hypotheses, I grouped the remaining students into one of three possible racial/ethnic groups (Black, White, and Latino), and also divided the Latino students into Mexican/non-Mexican descent for later models. In the ELS, there are 1,295 students that identify themselves as of Asian or Pacific Islander descent. Of these students, however, only 20

reported dropping out of school by the time of the follow-up. In fact, not one of these students reported being pulled out of school, and only 8 reported being pushed out. This is not a surprising finding in light of the large body of research that has shown Asian-American students to generally have high academic attainment (Wong 2006; Wong, Lai, Nagasawa, and Lin 1998); however, the resulting small cell sizes were not conducive to interpretable regression analyses. I also dropped Native American students from the study due to their small numerical presence within the dataset (N=103; only 5 reported dropping out by the time of the follow-up). In addition, I excluded students who reported being bi- or multi-racial because of similar numerical constraints (N=587; only 33 reported dropping out by the time of the follow-up). After limiting the dataset to public school students who did not report being either Native American, Asian-American or of mixed racial/ethnic ancestry, and after removing cases with missing data, the total N=5,602.

Variables

Dependent Variable

For this study, I created a categorical dependent variable, designed for use in the below analytical strategy. The following dependent variable compares students leaving school for push/pull/both reasons with students that were still in school at the time of the follow-up survey. See Table 1 for definitions, sources, or descriptions of any of the following variables.

TABLE 1: VARIABLES OF INTEREST: DEFINITIONS, SOURCES, AND DESCRIPTIVES

Variable*	Description and Coding	Mean	SD
Dependent Variable			
Push/Pull Out of School	Categorical: Coded 0 if the student is still in school, 1 if the student reported being pushed out of school, 2 if the student reported being pulled out of school and 3 if the student reported being both pushed and pulled out of school (ELS; second wave follow-up, student section)	0.11	0.50

Student Characteristics			
Female	Dummy: Coded 1 if the student reported being female, 0 if the student reported being male (ELS; first wave, student questionnaire)	.51	.50
Black	Dummy: Coded 1 if the student reported being Black, 0 else (ELS; first wave, student questionnaire)	.16	.37
Latino	Dummy: Coded 1 if the student reported being Latino, 0 else (ELS; first wave, student questionnaire)	.17	.38
Latino, Mexican descent	Dummy: Coded 1 if the student reported being Latino and of Mexican descent, 0 else (ELS; first wave, student questionnaire)	.12	.32
Latino, Non-Mexican descent	Dummy: Coded 1 if the student reported being Latino and of non-Mexican descent, 0 else (ELS; first wave, student questionnaire)	.06	.23
Socio-Economic Status	Continuous: Measure of student SES based upon father's and mother's levels of education, occupations, and family income (ELS; first wave, student questionnaire)	-.09	.70
English is Student's Second Language	Dummy: Coded 1 if the student reported that English was their second language, 0 else (ELS; first wave, student questionnaire)	.13	.33
School Characteristics			
% Eligible for Free Lunch	Continuous: Percent of students that are eligible for the free lunch program (ELS; first wave, administrator questionnaire)	24.59	19.30
% Minority	Continuous: Percent of minority students in the school (ELS; first wave, administrator questionnaire)	35.13	31.45
% Students in College Preparatory Programs	Continuous: Percent of students in the school enrolled in college preparatory programs (ELS; first wave, administrator questionnaire)	54.60	31.06

Urban	Categorical: School location, coded 1 if the school was located in an urban setting, 0 else (ELS; first wave, adminstrator questionnaire)	.96	.71
Student Control Variables			
Unsafe	Dummy: Coded 1 if the student reported feeling unsafe in their school, 0 else (ELS; first wave, student questionnaire)	.11	.31
Retained	Dummy: Coded 1 if the parent reported the student was ever retained for one or more grades, 0 else (ELS; first wave, parent questionnaire)	.14	.35
Family Composition	Dummy: Coded 1 if the student reported living in a household with both biological mother and father present, 0 else (ELS; first wave, student questionnaire)	.51	.50
Disconnect from School	Ordinal: Compilation variable of seven measures of disconnect from school (ELS; first wave, student questionnaire)	.64	.51

* N=5602

I used a categorical dependent variable that measured a student's educational status at the time of the follow-up survey. This "type of dropout" variable is coded 0 if the student did not drop out of school, 1 if the student reported leaving school for "push out" reasons, 2 if the student reported leaving school for "pull out" reasons, and 3 if the student reported leaving school for both push and pull reasons. There were 21 possible response categories from which the students could choose one or multiple reasons for their choice to drop out. In line with the coding scheme of Jordan, et.al. (1996), I separated the reasons into either "push" factors or "pull" factors. Push factors include the following possible reasons (also see Table 2): the student did not like school, could not get along with his/her teachers, could not get along with other students, was suspended, was expelled, did not feel safe, did not feel as if he/she belonged there, could not keep up with school work, was getting poor grades/failing, changed schools and did

not like the new one, thought he/she would fail competency test, thought he/she couldn't complete course requirements, thought it would be easier to get a GED, or missed too many days. Pull factors include: the student got a job, was pregnant, became the father/mother of a baby, had to support his/her family, had to care for a member of his/her family, got married/planned to get married, or could not work at the same time.

Main Independent Variables

The following independent variables (also outlined in Table 1) will allow me to assess the ways that race and the resources of both the student and the school they attend have an impact on the likelihood that a student will be either pushed, pulled, or both from school.

Student Gender: In many previous studies of dropout, gender is often considered an important explanatory variable in the likelihood of whether or not a student will leave school. A variety of studies have demonstrated that boys are more likely than girls to drop out of school (Crane 1991; Mayer and Jencks 1989), and generally do worse on measures of achievement (Cook 2006; Rumberger 1983). In addition, several of the reasons included in the dependent variables for type of student dropout seem likely to be gendered (i.e., became pregnant). As hypothesized above, it seems likely that girls and boys will demonstrate different likelihoods of dropping out for either push or pull reasons. This variable is constructed as a dummy-code of the student's self-reported sex (coded 0 for male, 1 for female).

Race/Ethnicity: The main independent variables of interest in this study are a set of dichotomous dummy-coded race/ethnicity measures for Black and Latino, with White as the reference category for each variable. Using dummy codes that compare the likelihood dropout for each of the three minority racial groups to white students will allow me to clearly test my hypotheses about the effect that a student's race has on his or her likelihood of being pushed/pulled out of

school. As described above, students that did not report being a member of any one of these three racial groups was dropped from the analysis due to their small numerical presence in the survey.

Latinos of Mexican/Non-Mexican Descent: The Latino population in the United States has been growing quickly in recent decades, and as a plethora of research has shown, this population is far from homogenous. In order to examine any potential differences between Latinos of Mexican descent and those of non-Mexican descent, I created two dummy-coded variables that further divided the students who reported being in the ethnic group "Latino" into their country of descent. While there is a great deal more complexity within the Latino community that is not captured by this simplified categorization, I was limited in my ability to distinguish ethnic divisions such as country of origin or generation since immigration. Unfortunately, despite the fact that the ELS does include a question that asks for the ethnic subgroup of students that reported being Latino, the number of students in some of the subgroups were too small to the support the model. Therefore, I was only able to distinguish between Latinos that reported being of Mexican descent and Latinos that reported being of non-Mexican descent.

Student SES: Student socio-economic status is one of the most common explanations for differences in rates of student dropout (Alexander, Entwisle, and Kabbani 2001; Rumberger 1983). In order to measure student SES, I used a variable already present within the ELS dataset. In accordance with normal SES measures, this variable is calculated using five equally weighted, standardized components: father's education, mother's education, family income, father's occupation, and mother's occupation (any missing values were imputed). In the variable, the occupational prestige scores for both the student's mother and father were drawn from the 1989 *General Social Survey* (GSS) scores. The ELS also included another measure of SES, with the

same components but utilizing the 1961 Duncan SEI-version occupational prestige scores. When included in the model, both measures of SES provided the same substantive conclusions, so I decided to measure SES using the more current GSS occupational prestige scores. This SES measure, as provided by the ELS, has a range of -2 (lowest possible SES) to 2 (highest possible SES).

English is the Student's Second Language[3]: Previous research has demonstrated that low English proficiency can be a source of both academic and social division (Callahan, Wilkinson, and Muller 2008), and has previously been used as an indicator of both recent immigrant status and level of assimilation (Olatunji 2005; Stanton-Salazar 2001). Therefore, I include a control measure that is a dichotomous dummy variable for whether or not English was the student's second language (coded 1 for yes and 0 for no).

School-Level Independent Variables

School-level Poverty: The measure of the level of poverty in the school was constructed using a variable in ELS in which schools reported the percentage of their students eligible for free lunch programs. I contend that this measure of school poverty is valid due to the fact that it includes all students who are eligible for the free lunch due to low family income, and not just the students who choose to take advantage of the program. Therefore, this measure should provide a relatively accurate percentage of the students within the school who are living at or below the state poverty line.

Percent Minority: The percent of minority students in a school has been shown to be correlated with measures of student achievement in multiple studies (Rumberger and Palardy 2005; Stewart

[3] While students from racial/ethnic groups other than Latino could be captured in this variable, the vast majority of students that reported English as their second language were Latino. In a highly significant crosstab of ESL and Latino, I found that approximately 97 percent of the students who identified English as their second language also identified as Latino.

2007). Therefore, I chose to control for the proportion of the school population that was non-White with a measure of the percent minority. The information for this variable was provided by the school administrators in their portion of the original wave of the ELS.

Urban: This variable controls for whether or not the school was located in an urban setting, as defined by the Common Core of Data (coded 1 for urban, 0 else).

Academic Intensity of School: It is likely that schools with a strong academic focus will both possess the resources necessary to assist in the prevention of student dropout, and may have a higher population of students who will be unlikely to leave school before graduation. In addition, other recent studies of the school characteristics that may lead to high school dropout have found a significant relationship between measures of student achievement and dropout (Christle, Jolivette, and Nelson 2007). Therefore, I controlled for the level of academic intensity of the school through a measure provided by the school administrators of the percent of students in the school who participate in college preparatory programs.

Student-Level Independent Variables

In addition, this model included some control variables for factors that are considered likely to contribute to dropout within the literature. Including these variables allows me to take into account some other factors that may be influencing student dropout rates along with the variables described above.

Family Composition: A variety of studies have demonstrated a connection between a student's family structure and their school performance and attainment (Astone and McLanahan 1994; Heard 2007). Consistent with educational attainment studies conducted by Stewart (2007) and Jeynes (2007), I controlled for whether or not the student resided in a nuclear family household (biological father and mother both present). This dichotomous variable was coded 1 if the

student lived in an intact family household and 0 if the student's household was comprised of any other combination of parents and/or guardians.

Feels Safe/Unsafe: If students feel unsafe in their school, they may be more likely to avoid spending time at the school and decide to drop out. Therefore, I included a dummy-coded measure of the student response to a question asked in the first wave of the ELS survey: "Do you feel safe at your school?"

Retained: Previous studies have found that being retained for one or multiple years in school can have a detrimental impact on a student's educational achievement, and can eventually lead to dropout (Bowman 2005; Jimerson, Pletcher, Graydon, Schnurr, Nickerson, and Kundert 2006; Stearns, Moller, Potochnick, and Blau 2007). Therefore, I also created a measure of whether or not the student was retained for any school year before the time of the original survey. This dichotomous dummy variable was coded 0 for never retained and 1 for retained.

Level of Disconnect from School: A student that is already exhibiting behaviors that suggest an overall disconnect from their school may have an increased likelihood of dropping out by the time of the follow-up. Therefore, I created a scale variable to create one measure that was a compilation of seven key disconnect variables found in the dataset. The combination of these factors provides an overall measure of disconnect that I believe is more valid than simply using any one of the variables to operationalize this concept. Variables in the scale include: how often in the last year the student was late for school, cut/skipped classes, was absent, got into trouble, got an in-school suspension, was suspended or put on probation, or was transferred for discipline reasons. The reliability measure for the scale is α=.70

Analytical Strategy

In order to fully examine the differences between students that reported being either pushed out of school or pulled out of school with students that had not dropped out at the time of the follow up, I use a multinomial logistic regression (MLR) model. This model is designed for use with a nominal dependent variable with several mutually exclusive categories that cannot be ranked in any meaningful way. Multinomial Logistic Regression is the most appropriate modeling strategy for this analysis due to the unordered multi-categorical nature of my dependent variable. Since the dependent variable has three categories it is only necessary to analyze two logits for the estimation of the model.[4] In this case, "still in school" is the reference category, therefore creating the following three logits: Pushed Out versus Still in School, Pulled Out versus Still in School, and both Pushed Out and Pulled Out versus Still in School. In order to account for robust standard errors due to the ELS design of multiple students clustered within schools, I used the STATA cluster command. For ease of interpretation, I present the odds ratios for the model, and also provide comparative fit statistics for each stage of the model and graphically display any interactions of interest.

The analysis outlined below proceeds in multiple steps. The first set of steps is comprised of nested models to test my hypotheses about the effect of SES and school level poverty on the likelihood of dropout by certain race and gender groups. These models are followed by a second set of steps that include new models to test for interaction effects.

In the first model of the nested models, I examine the effect of the demographic characteristics of student gender and racial/ethnic identification on the likelihood of being either pushed or pulled out of school. Examining the effect of these factors on dropout prior to the

[4] In order to ensure that this model conformed to the assumption of independence from irrelevant alternatives, I ran a Small-Hsiao test and found no violation.

inclusion of any control variables will allow me to identify if any of these characteristics are significant predictors of dropout as suggested by hypotheses 1, 4, 7, 11, and 12. This basic model, however, does not account for any of the other student characteristics that are considered critically important predictors of likelihood of dropout in the literature. Therefore, the remaining steps will incorporate variables or sets of variables that may further explain patterns of student dropout.

In the second model of the analysis, I include the measure of student SES, which is commonly cited as the most important factor in predicting a student's future educational outcomes (Alexander, Entwisle, and Horsey 1997; Rumberger 1983). If hypotheses 1a and 4a are in fact correct, then in this stage of the model, the effect of "Latino" on pushed out and the effect of "Black" on both pushed and pulled out should no longer be significant. For this reason, I incorporate SES in a stage separate from the rest of the student characteristics, which allows for a closer examination of the effect that SES does have in this model.

The third model incorporates all of the school characteristic control variables. This group of variables controls for the percent of students eligible for free lunch, the percent minority, the urbanicity, and finally the percent of students enrolled in college preparatory programs. Incorporating the school-level controls as a separate step in the model will allow for the examination of whether or not school characteristics have a distinct effect on the likelihood of student dropout beyond that which is controlled for by SES. In model four, I further control for other student-level characteristics that may affect the likelihood of a student dropping out; these include family structure, whether or not the students feel safe at school, whether or not the student has ever been retained for one or more grades, and the student's level of disconnect from school at the time of the initial survey.

The fifth model includes all of the variables outlined above aside from the breakdown of Latino into Mexican/Non-Mexican descent. This full model (without the Latino descent breakdown) includes the ELS variable, which examines the effect of the student's immigrant status or assimilation into American culture (measured by whether or not English is the student's first language) has on their likelihood of being either pushed or pulled out of school. Due to the fact that many studies have suggested this may be a prominent reason for high rates of Latino dropout, I separated this variable from the other student control measures. This will allow me to examine the individual effect of whether or not English is the student's first language on the model.

Finally, in the last model, students who reported being Latino are further divided into whether or not they are of Mexican descent. This final stage will allow me to examine whether or not there are differences in the push/pull factors of dropout between these two groups of Latino students. As outlined above, I was unable to further distinguish the backgrounds of these Latino students due to numerical constraints. This step will allow me, however, to clarify whether or not there are differences between Mexican-descent students (currently the largest immigrant group) and Latino students who come from countries other than Mexico.

Interactions

In order to examine whether or not the race-class interactions outlined in multiple hypotheses above are in fact significant, I conducted some final iterations of this model. To preserve clarity and interpretability, I include only models with significant interactions, and one additional model to provide a point of comparison, in Table 5.

CHAPTER 4

RESULTS & DISCUSSION

In the following examination of my models, I find as the theories of economic structure, cultural influence, oppositional culture, and gender socialization would suggest, race/ethnicity and gender do affect patterns of student dropout. Primarily, an examination of the dropout type response code frequencies for each race/gender category (see table 2) reveals that patterns in the ELS data generally correspond with patterns of dropout previously described in the literature.

Table 2[5]: Student Reasons for Dropping Out and Frequencies by Race and Gender Category (%) (Response Options present in ELS)

	Black		Latino		White	
	Male	Fem.	Male	Fem.	Male	Fem.
Reasons coded "Pushed Out"						
Did not like school	16.3	17.0	36.6	19.1	49.2	37.5
Could not get along with his/her teachers	23.3	21.3	24.4	7.4	30.5	26.7
Could not get along with other students	15.1	17.0	17.1	20.6	18.6	14.2
Was suspended	33.7	8.5	17.1	4.4	19.5	6.7
Was expelled	24.4	2.1	8.5	0.0	9.3	2.5
Did not feel safe	8.1	10.6	13.4	8.8	5.9	3.3
Did not feel as if he/she belonged there	12.8	17.0	14.6	8.8	24.6	20.0
Could not keep up with school work	23.3	25.5	34.1	30.9	39.8	31.7
Was getting poor grades/failing	34.9	25.5	50.0	38.2	44.1	33.3
Changed schools and did not like the new one	8.1	8.5	13.4	10.3	14.4	5.0
Thought he/she would fail compentency test	5.8	21.3	8.5	16.2	5.9	5.8
Thought it would be easier to get a GED	36.0	38.3	42.7	33.8	44.9	46.7
Missed too many school days	41.9	46.9	50.0	44.1	37.3	39.2
Thought he/she couldn't complete course requirements	20.9	31.9	29.3	33.8	24.6	21.7
Reasons Coded "Pulled Out"						
Got a job	23.3	23.4	34.1	17.6	37.3	15.0
Was pregnant		36.2		35.3		21.7
Became the father/mother of a baby	9.3	34.0	9.8	36.8	5.1	17.5
Had to support his/her family	24.4	27.7	27.8	27.9	10.2	15.0
Had to care for a member of his/her family	24.4	14.9	18.3	26.5	6.8	14.2

[5] Each student could indicate one or more reasons that they were either pushed or pulled out of school; cell values represent the percentage of students within the race/gender category that chose each response.

Got married/planned to get married	7.0	8.5	3.7	20.6	1.7	9.2
Could not work at the same time	15.1	17.0	30.5	17.6	25.4	19.2

As Table 2 shows, gender differences in reasons for dropout are consistent with the "troublesome boys" hypothesis. In every racial/ethnic group, males were more likely to report leaving school due to a suspension or expulsion. In addition, while many of the students cited academic failure as a reason for dropping out, this was also more common among all of the boys as compared to the girls in their same racial/ethnic category. While there did not seem to be many clear differences by race in response percentages for the pushed out students, patterns for students being pulled out were also consistent with the literature. Especially noticeable were the racial distinctions in the responses to the pregnancy and marriage questions; over 10 percent more minority girls reported leaving school because they were pregnant. Additionally, 20.6 percent of Latina girls reported leaving to get married, while students in all of the other categories chose this response less than 10 percent of the time.

In addition, as proposed above, these factors have differential effects on the likelihood that a student will be either pushed or pulled out of school. Even after controlling for other common factors that predict and/or facilitate dropout, I find that for certain students, the effects of race/ethnicity and gender are still significant factors in their paths to leaving school prior to graduation (see Table 3). It appears that there are interesting and significant differences in the dropout patterns of Latino students who descend from Mexico and those who descend from other Latino countries. Finally, my results show that SES does moderate the likelihood of dropout for the different racial/ethnic groups in some interesting ways. Each nested model is a significant improvement over the model preceding it according to a likelihood ratio test, with the exceptions

Table 3- Odds Ratios Predicting Push Out or Pull Out of School

Models	Demographic Model			SES Included Model			School Control Model			Student Control Model		
Variables	Pushed	Pulled	Both	Pushed	Pulled	Both	Pushed	Pulled	Both	Pushed	Pulled	Both
Demographic Variables												
Female	0.46**	2.95*	0.74	0.44**	2.82*	0.69	0.44**	2.78*	0.70	0.59*	3.27*	0.89
Black	2.05*	1.42	1.53	1.49	1.01	1.02	1.40	2.25	0.74	1.02	1.59	0.47
Latino/a	1.87*	3.36**	2.51***	1.15	1.99	1.34	1.11	4.51*	0.95	0.88	3.78*	0.81
Student Socioeconomic Status												
SES				0.43***	0.42**	0.35***	0.46**	0.43*	0.34***	0.53**	0.52+	0.42***
English as student's second language												
ESL												
Mexican/Non-Mexican Descent Latinos/as												
Mexican Descent												
Other Descent												
Student Control Variables												
Family structure										0.70	0.42+	0.39**
Students feel unsafe in school										1.25	0.92	1.37
Student retained										3.41***	2.94*	3.59***
Disconnection from school										3.78***	2.53**	3.47***
School Characteristics												
% students eligible for free lunch							1.01	1.00	1.00	1.01	1.00	1.00
% minority students							1.00	0.98+	1.00	1.00	0.98+	1.00
Urban							1.40	1.13	1.73*	1.23	1.10	1.60+
% students enrolled in college preparatory programs							1.00	0.99	1.00	1.00	0.99	1.00
-2 Log Pseudolikelihood	-1324.2	-1324.2	-1324.2	-1281.1	-1281.1	-1281.1	-1267.3	-1267.3	-1267.3	-1117.2	-1117.2	-1117.2
N	5602	5602	5602	5602	5602	5602	5602	5602	5602	5602	5602	5602

***p<.001 **p<.01 *p<.05 +p<.10

ESL Model				Latino Descent Model			
Pushed	Pulled	Both		Pushed	Pulled	Both	
0.59 *	3.30 *	0.89		0.59 *	3.30 *	0.88	
1.02	1.63	0.47		1.01	1.64	0.48	
0.89	3.06 +	0.82					
0.52 **	0.55 +	0.42 ***		0.51 **	0.55 +	0.42 ***	
0.96	1.67	0.99		0.94	1.68	1.00	
				0.72	3.10 +	0.88	
				1.35	2.96	0.69	
0.70	0.40 +	0.39 **		0.73	0.40 +	0.38 **	
1.25	0.93	1.38		1.22	0.93	1.39	
3.40 ***	2.95 *	3.58 ***		3.39 ***	2.92 *	3.59 ***	
3.78 ***	2.51 **	3.47 ***		3.78 ***	2.53 **	3.49 ***	
1.01	1.00	1.00		1.01	1.00	1.00	
1.00	0.98 +	1.00		1.00	0.98 +	1.00	
1.23	1.09	1.61 +		1.22	1.09	1.61 +	
1.00	0.99	1.00		1.00	0.99	1.00	
-1116.8	-1116.8	-1116.8		-1115.5	-1115.5	-1115.5	
5602	5602	5602		5602	5602	5602	

of Model 5 and Model 6. The addition of the ESL variable does not significantly improve the overall predictive power of the model, and neither does separating the Latino cases into Mexican/non-Mexican descent.

As the above table (Table 3) shows, there are few clear findings for students who were both pushed and pulled out in any of the models. Although Latino students are more likely to be "both" in the Demographic Only model, once SES is included there is no longer a significant difference between Latinos and Whites. In fact, in all of the models that include any control variables, there is no significant difference between boys and girls or between Whites and either Blacks or Latinos in the likelihood of being both pushed and pulled out. Therefore, in the following discussion, I will only be commenting on the findings for the Pushed Out versus Still in School logit and the Pulled Out versus Still in School logit.

The Effects of Race/Ethnicity on Push/Pull Factors Leading to Student Dropout

Upon examining the race/ethnicity effects in the analysis, I find a variety of interesting relationships between types of dropout and minority groups. In the Demographic Only model (model 1, table 3), we see that both Black and Latino students are significantly more likely to be pushed out than White students, as would be expected in a model that does not control for the effects of other student characteristics and school poverty. Therefore, this finding does support hypotheses 1, 5, and 8, which suggest that there will be a relationship between race/ethnicity and both "push" and "pull" causes of student dropout. Surprisingly, however, the results show that even in this model without any control variables, Black students are not significantly more likely than White students to be pulled out of school. This finding does not allow me to accept hypothesis 2, and is quite interesting in light of public perceptions of teen pregnancy and single motherhood in Black communities. As the crosstab in Table 4 shows, a higher percentage of Black males than Black females reported being pulled out of school in the study, while the opposite gender ratio is true for White and Latino students.

Table 4: Crosstab of Race/Ethnicity and Gender for Pulled Out Students (%)

	Female	Male
Black	35.7	64.3
Latino	73.9	26.1
White	82.6	17.4

$Chi^2 = 9.38$ Pr = .01

It is likely that the non-significance of the "Black" variable in whether or not a student is pulled out of school (found in table 3 model 1) is at least in part being driven by the fact that Black girls are currently doing much better than Black boys on almost all measures of school achievement and attainment (Mickelson and Greene 2006; Pollard 1993); this gender difference is much more distinct for Black students than for students of other races/ethnicities. Unlike the

other two groups of students, Black females are not being pulled from school at far higher rates than Black males. Thus, since girls overall are much more likely to be pulled from school, but the gender ratio is different for Black students, I find no significant difference between Black and White students in their overall likelihood of being pulled from school. In addition, it is possible that the gender achievement gap is wider for Black students than for students of other races/ethnicities. While I cannot explore this particular potential explanation for this finding in greater detail due to data limitations, it should be further examined in future research.

As discussed above, the "class not race" theory contends that the Black-White difference in dropout rates is actually driven by systematic inequalities in SES and school levels of poverty. In the second model of the analysis, I find adding SES to the analysis does have the expected effect of removing all significance from the race variables for both types of dropout.[6] This supports hypotheses 1a and 5a, in which I suggest that the addition of SES will cause White/Black and White/Latino differences in the likelihood a student reports being pushed out of school to become non-significant. Therefore, as suggested by theories that posit the importance of economic causes of racial difference, it appears that SES is the true cause of racial/ethnic differences in the rates of students being pushed out.

I did hypothesize, however, that Latino students would be pulled from school at significantly higher rates than White students, and that this difference would exist even when other factors such as SES were incorporated into the analysis. The second model seems to contradict hypothesis 8, and there appears to be no significant difference in the likelihood that Latino and White students will be pulled from school. This is not actually the case, however, because it appears that there is a suppressor effect occurring. There is no relationship in the second model, but the third model does show that Latino students are significantly more likely to

[6] The BIC value of 60.38 provides strong support for using Model 2 (with SES included) over Model 1.

be pulled out. This effect of "Latino" was hidden because schools with a high percentage of minority students also tend to have a high Latino population, and as seen in Model 3, schools with a high percentage of minority students also tend to have a slightly lower likelihood of students being pulled out. This finding, and others in the table, are significant at the $\alpha < .10$ level. I have included them because I am using directional hypotheses which I test using one-tailed t-tests.

The results I outline above remain stable, even as I add to the nested models. In the Student Control model[7] (model 3, table 3), I find that a student who was ever retained or who had a high level of disconnect at the time of the first survey is significantly more likely to be both pushed and pulled out of school. After incorporating the student and school level controls, I still find that Latino students are 2.72 times more likely to be pulled from school than White students. Therefore, in Model 5, I include one final control variable in order to examine the effect of assimilation and English proficiency on student dropout. In the ESL Model (model 5), I find that even after controlling for whether or not English was the student's first language, Latino students are still slightly more than three times as likely as White students to be pulled out. Therefore, it appears that something beyond financial resources, level of disconnect from school, and knowledge of English is causing Latino students to be pulled out of school at a significantly higher rate than White students. Due to the continuing presence of the White/Latino difference even when the Black/White difference is no longer significant in the analysis, it is likely that cultural factors are in fact contributing to the higher rate of Latino students being pulled out.

In order to further investigate the intriguing finding that Latino students are significantly more likely to be pulled out even with all of the controls included in the analysis, I examined

[7] The BIC value of 197.68 provides very strong support for Model 4.

whether or not there were differences in type of dropout by the student's country of descent. As explained above, numerical constraints did not permit me to divide the students into each individual country of origin, so I examined whether or not there were differences between Latino students who reported being of Mexican descent and Latino students from other countries. This is especially interesting because there are more Mexican-American students in the public school system than students from any other Latino country, and if they do in fact evidence unique dropout patterns, this is crucially important to dropout prevention efforts. Additionally, finding difference in dropout between these groups would support other research that has suggested a need to look beyond simple categorization of these students as "Latino."

As is evident in the final model of the primary analysis, I do find a difference between the two groups of Latino students, with Mexican-descent Latinos driving the significant difference between Latinos and Whites being pulled out. In the Latino Descent Model, I find that Latinos of Mexican descent are over three times as likely to be pulled out as White students, but there is no significant finding for Latinos who are not originally from Mexico. These findings suggest that there are important differences in the dropout patterns of Latino students who immigrated (or whose families immigrated) from different regions and countries. I believe that this finding needs to be followed up with further research into both the reasons for this large difference between the groups and also the causes of the much higher odds that a Latino student of Mexican descent will be pulled out.

In Table 5, I include all models in which the interactions were significant, with the exception of the Mexican*SES model which is non-significant but included for the purpose of comparison.

Table 5- Odds Ratios with SES Interactions

Interactions	SES*Black Model		SES*Latino/a Model		SES*Mexican Descent Model		SES*Other Descent Model	
Variables	Pushed	Pulled	Pushed	Pulled	Pushed	Pulled	Pushed	Pulled
Demographic Variables								
Female	0.59 *	3.36 *	0.60 *	3.24 *	0.60 *	3.31 *	0.61 *	3.26 *
Black	1.32	0.23	0.82	1.72	0.95	1.68	0.89	1.66
Latino/a	0.86	3.18 +	1.41	2.83				
Student Socioeconomic Status								
SES	0.47 **	0.66	0.37 ***	0.61	0.46 **	0.59	0.43 ***	0.56
English is student's second language								
ESL	0.94	1.79	1.17	1.63	1.08	1.61	0.91	1.70
Mexican/Non-Mexican Descent Latinos/as								
Mexican Descent					1.10	2.66	0.61	3.12 +
Other Descent					1.19	3.11	2.11	3.05
SES and Race Interactions								
SES*Black	1.85	0.08 +						
SES*Latino/a			4.04 **	0.82				
Interactions: Mexican/Non-Mexican Descent								
Mexican*SES					2.40	0.78		
Other*SES							4.05 *	1.08
Student Control Variables								
Family structure	0.69	0.39 *	0.77	0.39 +	0.75	0.40 +	0.76	0.40 +
Students feel unsafe in school	1.26	0.89	1.24	0.94	1.21	0.95	1.25	0.93
Student retained	3.41 ***	2.84 *	3.41 ***	2.90 *	3.37 ***	2.91 *	3.45 ***	2.92 *
Disconnection from school	3.81 ***	2.51 **	3.81 ***	2.51 **	3.83 ***	2.52 **	3.71 ***	2.53 **
School Characteristics								
% students eligible for free lunch	1.01	1.00	1.01	1.00	1.01	1.00	1.01	1.00
% minority students	1.00	0.98 +	1.00	0.98 +	1.00	0.98 +	1.00	0.98 +
Urban	1.20	1.14	1.26	1.07	1.21	1.10	1.30	1.08
% students enrolled in college preparatory programs	1.00	0.99	1.00	0.99	1.00	0.99	1.00	0.99
-2 Log Pseudolikelihood	-1113.17	-1113.17	-1108.06	-1108.06	-1110.47	-1110.47	-1112.04	-1112.04
N	5602	5602	5602	5602	5602	5602	5602	5602

***p<.001 **p<.01 *p<.05 +p<.10

None of the race and school-level poverty interactions predicted in hypotheses 3, 6, and 9 were significant, so it appears that the level of school poverty does not moderate the relationship between a student's race and whether or not they drop out. In addition, I found that there were

no significant interactions between the student's race/ethnicity and their gender, so again I have to conclude that gender does not moderate the relationship between race and dropout. I did find, however, that many of the predicted interactions between SES and race/ethnicity are in fact significant, and therefore it appears that SES does moderate many of these relationships.

In hypothesis 4, I suggested that SES would moderate the relationship between "Black" and both types of drop out, and I found that this was the case only for the pulled out equation. In the original equation without the interaction, I found that on average SES reduces the chances that students will be pulled out of school. Here, however, I find that the effect is weaker for Black students than for White students, but only at low SES levels. Figure 1 shows that Black students with low SES values are more likely than White students to dropout. As SES increases,

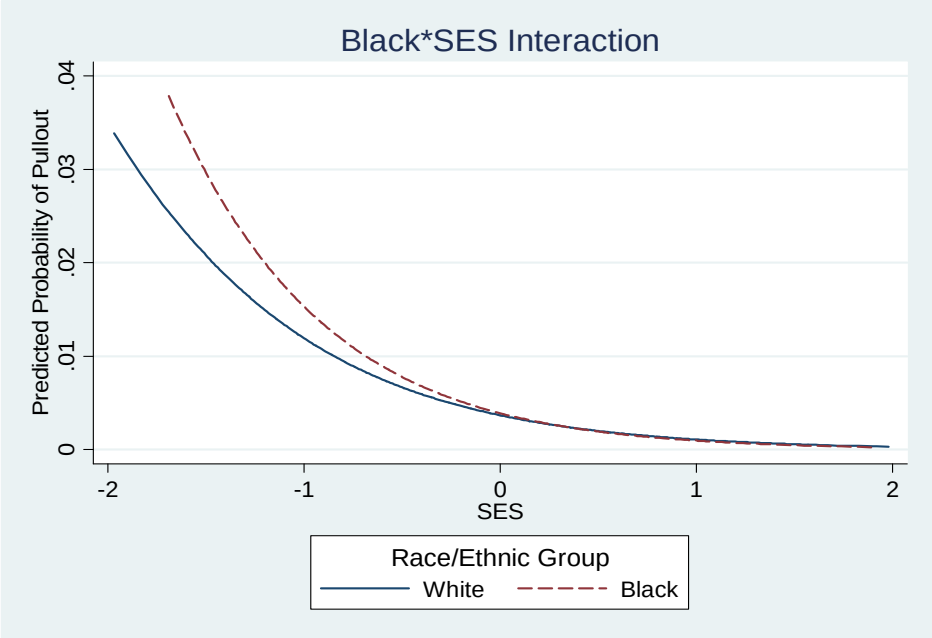

Figure 1: Interaction of Black and SES

however, the difference between Black and White rates of pullout diminishes until there is no discernable difference between the two lines. This finding supports hypothesis 4, as it shows that SES moderates the relationship between being Black and being pulled out, and in fact

appears to reduce the difference between White and Black students to essentially zero at high levels of SES.

I also estimated an interaction between Latino and SES (shown in Figure 2), and I found that it was statistically significant in the pushed-out equation. In this model, I find that the effect of SES is weaker for Latino students than for non-Latino students. Among Whites, a one-unit increase in SES reduces the odds of being pushed out by about half. Among Latinos, however, a one-unit increase in SES has less effect on the odds of dropping out. The net effect of SES for Latinos is obtained by adding together the main effect of SES and the coefficient from the interaction between Latino and SES. After summing these coefficients, I find that the net effect of SES for Latino students is significantly different from zero; therefore, SES still lessens the likelihood of being pushed out for Latino students, just not to the extent that it does for White students.

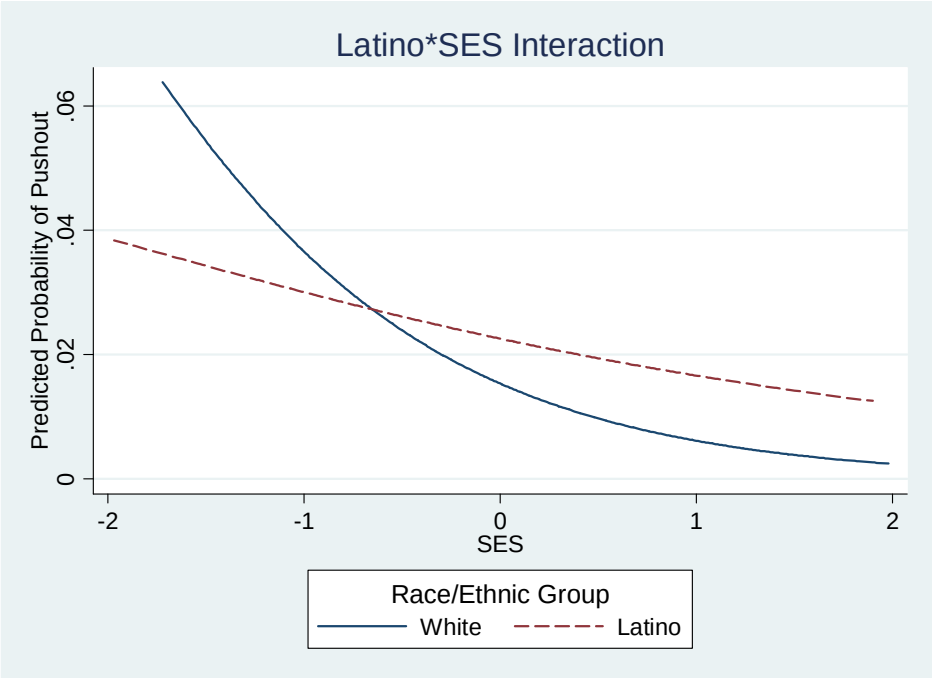

Figure 2: Interaction of Latino and SES

Finally, to extend my analysis of the Mexican-non-Mexican descent difference, I also examined interactions with SES for these two groups of students. In this case, I find that SES does not moderate the relationship between Mexican students and being pushed out of school; as Figure 3 shows, the lines depicting the effect of SES on being pushed out are very similar for both Latinos of Mexican descent and White students. For Latinos of non-Mexican descent, however, I find that SES does moderate the relationship for these students and being pushed out. In fact, as Figure 4 depicts, an increase in SES appears to have very little effect on the rates of push out for these students, which is in stark contrast with the effect it seems to have for all other student groups. As with the Latino*SES interaction depicted above, the net effect of SES for Latinos of both Mexican and of Non-Mexican descent is significant.

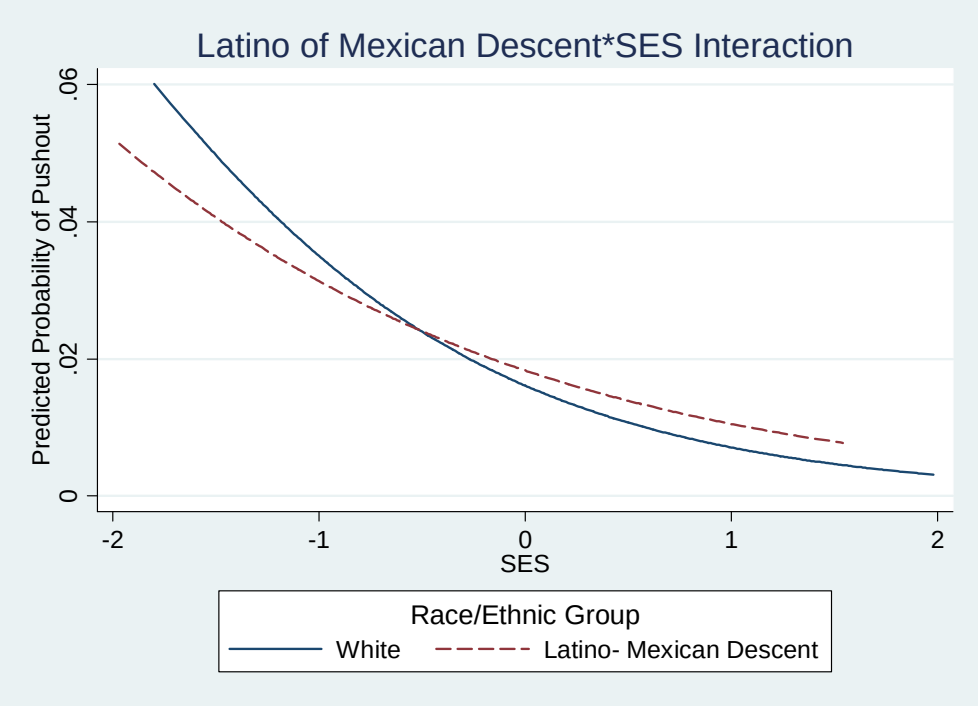

Figure 3: Interaction of Mexican Descent Latino and SES

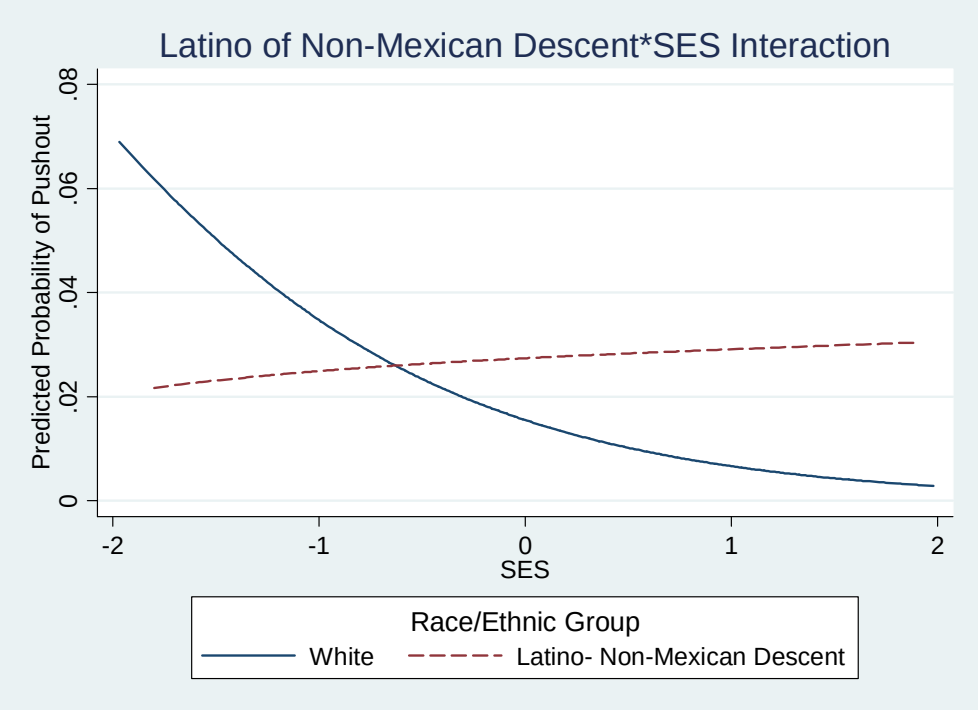

Figure 4: Interaction of non-Mexican Descent Latino and SES

Some of this difference depicted in figures 3 and 4 may be explained through the extensive diversity present in this non-Mexican descent group. As outlined above, Cuban immigrants tend to be older and more financially secure (Valdivieso and Nicolau 1994); this could have the result of decreasing the effect that SES would have on the likelihood that students from this ethnic group would be pulled out of school. In addition, it seems extremely likely that students from different countries and regions would experience variable levels of familial responsibilities and cultural pressures, both of which contribute greatly to rates of dropout. Therefore, this finding should be examined further through a greater disaggregation of the effect of SES on students with different ethnic identities or regions of origin. Overall, these findings suggest that there are distinct differences in dropout rates by race/ethnicity, as suggested by my original theoretical constructs. While the "class not race" theory was useful in the examination of the difference between Black and White students, it did not fully explain Latino/White

distinctions. I assert that an examination of dropout should be not be limited to one theoretical construct, and further, that using different theories such as the ones outlined above can lead to more comprehensive and effective dropout prevention programs for each racial/ethnic group.

The Effects of Gender on Push/Pull Factors Leading to Student Dropout

As I predicted in hypotheses 13 and 15, there are strong and significant differences between girls and boys in the type of dropout that they experience. In the final model of Table 3, I find that even after controlling for student and school resources and other facilitators of student dropout, girls are over three times as likely as boys to report being pulled out of school (odds of 3.30). On the other hand, as would be suggested by the oppositional culture theories, the odds of a boy being pushed out of school are 1.69 higher than for a girl. Therefore, it appears that girls and boys experience different impetuses leading to their dropout that are strongly gendered.

Interestingly, however, the interactions I predicted between gender and SES in hypotheses 14 and 16 were not significant. Instead, it appears that the effects of gender on whether or not a student will be pushed or pulled out of school operate regardless of their social and economic class standing. While this finding does not undermine theories of oppositional collective identity or gender socialization, it does call into question the importance of class in creating gendered patterns of student dropout. Previous studies of oppositional culture, such as the ethnography conducted by Willis (1977), suggest that acting out among boys will be especially prevalent among lower class students. I find, however, that the non-significance of the interaction predicted in hypothesis 14 suggests that boys at all levels of the class structure are getting pushed out at higher rates. In addition, I find that the interaction predicted in hypothesis 16 is also not significant. Thus, it appears that for girls, there are also factors that lead to being pulled out of school which operate regardless of a student's economic resources. In the media,

teen pregnancy is often sensationalized as one of the biggest reasons that girls are pulled from school, and some research has linked this issue with low SES and low-income neighborhood effects (Crane 1991). While there may be a strong relationship between class and teen pregnancy leading to dropout, my findings suggest that focusing a great deal of attention on this single pull factor or alternately assuming dropout is an issue of lower class girls would ignore other factors which lead to girls with differing levels of SES being pulled from school.

My results do not suggest that class does not matter; in fact, SES is a significant predictor of whether or not a student will be pushed or pulled from school in every model in the analysis. I do believe, however, that assuming these push and pull factors only operate for boys and girls with low SES can lead to an incomplete knowledge of the ways that all students are affected by gendered impetuses to dropout. Students with lower SES are clearly at higher risk of dropout, but a class-only focus risks ignoring the different risk factors of dropout for boys and girls, some of which can also affect students of middle or high class standing.

CHAPTER 5

CONCLUSION

In this work, I proposed that one model of student dropout is too simplistic for both theoretic and practical reasons. Primarily, my results demonstrate that there are clear differences between certain groups of students and their likelihood of being either pushed or pulled out of school. These significant race and gender distinctions in push/pull factors leading to student dropout do support the idea that one parsimonious model of dropout does not capture some important variations in the reasons that students leave school. In addition, these differences suggest that one theory alone cannot explain the dropout patterns of diverse racial/ethnic or gender subgroups.

While this work had a clear focus on the problem of dropout and its implications for a variety of student groups, I assert that it has broader applicability. Many previous works on dropout at the high school level are primarily descriptive, and focus on pointing out patterns of student dropout. This paper, on the other hand, has attempted to explain the multitude of reasons that students leave school through the application of multiple broad theories to the specific problem of student dropout. As demonstrated in the above analysis, some previous theories used to examine differential outcomes for minority students, such as Wilson's (1987) concept of the effects of concentrated poverty, do explain patterns of dropout for Black students to a certain extent. However, for students who face additional barriers to their ability to commit to their education, these theories may not be able to capture the true complexity of the reasons that these students drop out.

Within the dropout literature, there has been a general trend toward offering class-related explanations for race-specific differences in rates of dropout. While this study does support the "class not race" argument for some groups of students in some cases, my analyses show that it is necessary to go beyond a class-only argument in order to understand the causes of dropout for certain groups of students. For example, in line with Rumberger (1983) and many others, I find that when SES is controlled for, the increased likelihood of either type of dropout for Black students is no longer significant. However, as Figure 1 shows, the story is more complex than just this "class not race" explanation. In fact, Black students are significantly more likely than White students to be pulled out, but only at low levels of SES; this implies that something beyond SES and the level of poverty in the school is affecting poor Black students and causing their significantly higher rate of dropout. Identifying and understanding what that factor is may be critically important to improving the graduation rates of these students, who often leave school in large numbers.

For Latino students, the relationship between class, race, and dropout is even more complex, due to the influence of different cultural norms and beliefs on many of these students. In this case, the "class not race" argument only applies to students who are pushed out of school. These pushed out Latino students cite reasons for dropout that are situated within the school, a location that is likely to be affected to a large extent by the influences of class and poverty, and to a lesser extent by the potential cultural differences of the students. Therefore, when individual class and structural poverty is controlled for, Latino students are no more likely to be pushed out of school. When it comes to Latino students who are pulled out, however, the "class not race" argument cannot be applied as the only explanation of differences in dropout rates. Even after controlling for SES, school poverty, and a variety of other common predictors of student

dropout, Latino students are still more likely than White students to be pulled out of school. Additionally, looking at differences within the Latino community adds a further level of complexity, as it is clear from both my research and the work of many others that the Latino community is far from homogeneous. In my analyses, I find that it is Latino students of Mexican descent who are more likely than White students to be pulled out; there is no significant difference between Latinos of non-Mexican descent and Whites. Finally, race and class also interact for Latino students who are pushed out, as increases in SES decrease the likelihood of pushout for Latinos significantly less than for Whites. While this interaction is significant for Latino students as a whole, further complexities arise when the same Mexican/non-Mexican descent model is analyzed. In this case, an increase in SES does not decrease the likelihood of pushout for Latinos of non-Mexican descent to the same extent that it does for Whites; however, this interaction is not significantly different for Latinos of Mexican descent and Whites. Overall, then, it is clear that the "class not race" argument cannot be uniformly applied to explain differences in Black or Latino student dropout rates.

Using theories of cultural difference to explore Latino dropout, I show that not only does this group evidence unique patterns of dropout, but these patterns can be explained through theoretical constructs which have not previously been extensively utilized in quantitative studies of student dropout. Cultural differences in the Latino community outlined by a number of qualitative studies of Latino adolescents may help to explain the higher likelihood of pullout for these students as compared to their White classmates. Additionally, through the use of Ogbu's (2004) theory of oppositional culture in addition to theories of the effect of gender socialization on female students, I contend that the stark differences in dropout patterns between boys and girls can be explained more thoroughly. This paper, therefore, expands the current literature

through the use of these theories to explore the reasons that different groups of students are more or less likely to leave the educational system before attaining their high school diploma.

The practical application of this research is clearly in the realm of dropout prevention policy. The public education system will necessarily be forced to adapt as American society becomes more socially and culturally complex. Lowering rates of student dropout has become one of the primary goals of many educational reformers, but it has become clear that one type of dropout prevention program will not suffice to address the variety of different reasons that students drop out. For this reason, understanding the diverse factors that can lead to issues such as dropout has become increasingly important, and studies such as this may help to inform future dropout prevention programs, thus rendering them more effective.

Additionally, these findings suggest a need for further examination of how the causes of student dropout differ between racial/ethnic subgroups, especially within the Latino community. It is especially important for future research to examine the reasons that Mexican-descent Latinos were more likely to be pulled out than Whites, when there was no significant difference between "Other"-descent Latinos and their White classmates. Due to the fact that Mexican-descent students comprise the largest percentage within the Latino population, examination of the reasons for their high rates of dropout could have a positive effect on the educational attainment of the Latino community as a whole. Further, it is possible that a dataset without the numerical restrictions of this analysis would reveal even more distinction in dropout patterns of the non-Mexican Latino students.

This paper should be read not only by those who are interested in the specific problem of dropout, but also those who wish to explore related problems in each of the subgroups that I analyze in this work. For example, I contend that this work has demonstrated that there are

cultural systems within the Latino community that both contribute to a variety of social problems and extend beyond a simple “effects of poverty” explanation. Additionally, the idea of boys participating in an oppositional culture could be utilized beyond the school setting; for example, it may be able to provide explanations of adolescent male deviance in other areas of the social structure. Therefore, the empirical and theoretical contributions of this work extend beyond the problem of dropout, and may in fact guide future research on the ways that social problems affect racial/ethnic and gender groups in contrasting ways.

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