RE-INTRODUCING THE FRUSTRATION INTO STATUS FRUSTRATION THEORY

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ABSTRACT

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Albert Cohen proposed status frustration theory in his work, *Delinquent Boys: The Culture of the Gang* (1955). Status frustration theory argues that four factors—social class, school performance, status frustration, and reaction formation—contribute to the development of delinquency. However, this theory was heavily criticized for not being testable. Few studies have examined Cohen’s status frustration theory since that time (Elliott 1966; Elliott and Voss 1974; Kelly and Balch 1971; Liu and Lin 2007; Reiss and Rhodes 1963; Thornberry, Moore and Christenson 1985), though problems exist with the previous works. None of these studies were able to test a full model of status frustration theory. Key components were not included or all of the components were not simultaneously included in the analyses. The operationalization of social class has been problematic as well. Cohen specified that social class is not only a financial or socioeconomic measure. Rather, Cohen suggested that the examination of social class should also include family culture and child-rearing components as Cohen proposed that the socialization patterns of social class are the key determinants of student success. The current project examines a fuller model of Cohen’s status frustration theory, by incorporating conceptualizations of disadvantage, parenting styles, school performance and status frustration that better reflect Cohen’s constructs. Additionally, the project extends Cohen’s theory by applying the model to both males and females. Longitudinal multivariate regression is employed using the National Educational Longitudinal Survey (NELS 88:92) from students’ 8th, 10th, and 12th grade school years. This dataset is a nationally representative, school-based survey which is especially useful for a test of Cohen’s theory given the mutual focus on the academic environment. Ultimately, status frustration theory was able to predict delinquency for males and females with some limitations. Generally, status frustration, as a concept, partially mediates the effect of school performance on delinquency, although there was some variation by gender.
This work is dedicated to the one person and reason I have for everything I do: my daughter.
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When Albert Cohen released *Delinquent Boys: The Culture of the Gang* (1955), in which he developed status frustration theory, it was revered as a thought-provoking attempt to explain delinquency and the emergence of delinquent subcultures among working class males; however, it was heavily criticized as well. In the simplest of terms, Cohen argued that four factors—social class, school performance, status frustration, and reaction formation—contributed to the development of delinquency and delinquent subcultures (1955). The theory states that children come to school either equipped with the tools for success in America’s educational system or not and that this is because of their social class and socialization. Students’ failure can lead to status frustration which, in turn, prompts those failing to reject mainstream goals by either avoiding school altogether or engaging in delinquency. Cohen’s status frustration theory (1955) was heavily criticized for not being testable as it required a historical perspective (Kornhauser 1978; Shoemaker 1990). In addition to being vocal about Cohen’s historical approach to his theory, the reviewers claimed that certain elements of status frustration theory required empirical, psychological data which was unobtainable (Kitsuse and Dietrick 1959; Kornhauser 1978; Rabow 1966). Researchers still made attempts to consider status frustration theory but were not able to test the full theory (Elliott 1966; Elliott and Voss 1974; Kelly and Balch 1971; Liu and Lin 2007; Reiss and Rhodes 1963; Thornberry, Moore and Christenson 1985). I propose to re-examine the utility of status frustration theory for predicting delinquency by testing a more complete model of status frustration theory using data that were
not available during earlier studies. I will use the National Educational Longitudinal Survey (NELS 88:92) which is a nationally representative, school-based survey especially suited for a test of Cohen’s theory given the focus on the academic environment.

Cohen (1955), in his status frustration theory, contends that middle-class goals and benchmarks of success are universal goals and pervasive throughout society. Emphasis on these universal middle-class’ goals creates an environment in which some have more advantage or disadvantage than others. Specifically, he pointed out that lower-class, or working-class, boys are at a distinct disadvantage as they are not likely to possess the skills or habits by which to be competitive in a middle-class world. While this disadvantageous status would be cumbersome in many arenas of life, Cohen posited that it would be particularly evident in academics (1955). Explaining the theory in the context of the classroom, he suggested that low-class boys would not achieve success in a middle-class oriented education system, presenting them with an impasse as they would have internalized the middle-class goals imparted to them yet been unable to reach them. Their failure to achieve success according to the universal goals, or middle-class measuring rod, is attributable to their deficient intellectual, emotional, and behavior abilities due to their socialization as compared to their middle-class counterparts. This dilemma is what Cohen called status frustration whereby lower-class boys recognize their inability to meet the standards of the middle-class measuring rod. In an attempt to resolve their status frustration, some boys will then engage in reaction formation which is the rejection of the middle-class standards. Through reaction formation low-class boys turn to delinquent behaviors as a means of resolving the conflict presented by status frustration (1955).
Cohen’s (1955) theory attempts to explain the manner by which disadvantage is exacerbated in a specific social context. In the school environment the impact of disadvantage in the socialization of lower-class boys is especially damaging. Specifically, Cohen (1955) concentrated on the context of the classroom environment as the way by which the school environment may create or magnify the risk for delinquency among lower-class boys.

While researchers have previously tested portions of Cohen’s status frustration theory (Elliott 1966; Elliott and Voss 1974; Kelly and Balch 1971; Liu and Lin 2007; Reiss and Rhodes 1963; Thornberry et al. 1985), there have been limitations to their work.

First, Cohen’s conceptualization of key variables has not been utilized in the previous work. Social class is a common variable in sociological research and is generally captured as a financial measure. However, Cohen (1955) had a more complicated view of how social class should be gauged and believed that this directly influenced students’ school experiences and delinquent outcomes. Cohen’s conceptualization of social class includes family culture and parenting elements coupled with financial information. This definition has not been used in the previous examinations of status frustration (Elliott 1966; Elliott and Voss 1974; Kelly and Balch 1971; Liu and Lin 2007; Reiss and Rhodes 1963; Thornberry et al. 1985) and should be tested before drawing conclusions about the explanatory power of status frustration.

The second limitation is associated with an incomplete model. Cohen (1955) suggested two intervening variables: school performance and school involvement. These have not been tested with other elements of Cohen’s overall theory (1955).

Thus these examinations have failed to measure the theory in its entirety which generally was due to a lack of available data or information. For example, researchers have
disregarded the concept of reaction formation, used deprivation measures as a proxy for frustration, or neglected any representation of frustration from their models.

Finally, as Cohen concentrated his theory on males the present research tests status frustration theory among a sample of boys and girls. In its original formulation Cohen (1955) argued that status frustration theory was applicable solely to boys, citing societal expectations for girls which did not require success in school (1955). However, social norms have changed drastically since Cohen’s proposition of status frustration. Specifically, the norms and expectations for girls and women have become more in-line with boys and men. This suggests that status frustration should now apply to females.

Few studies have examined Cohen’s status frustration specifically (Elliott 1966; Elliott and Voss 1974; Kelly and Balch 1971; Liu and Lin 2007; Reiss and Rhodes 1963; Thornberry et al. 1985), none of which have been able to test a full model of the theory. The current project examines a more complete model of Cohen’s status frustration theory. The key to this is more appropriate measurements and conceptualizations of disadvantage, school performance, and delinquency. Additionally, the project extends Cohen’s theory by applying the model to both males and females.
BACKGROUND

Previous work has only examined limited models of status frustration theory. In their evaluation, Reiss and Rhodes (1963) examined the relationship between status deprivation and delinquency using over 12,500 questionnaires from 7th through 12th grade students in Davidson County, Tennessee. The student responses were combined with official school, Juvenile Court, and attendance information for the data analysis. Supportive of status frustration theory, the researchers established that juveniles do compare themselves to their peers. However, their conclusions are somewhat limited as the authors used a crude measure of deprivation as a proxy for status frustration. The authors used a single item which asked if the respondent felt the other students in their school had better clothes and a better house. While this does attempt to capture deprivation, deprivation is not the same as status frustration. It is possible for a person to recognize the difference between their belongings and those of another person. The crux of status frustration is that a person then takes issue with the differences if, and only if, they view those items as important or as representative of a goal they have not achieved. These nuances are not captured by only measuring deprivation. The authors recognized this when they concluded that their finding of a low relationship between status deprivation and delinquency could be attributed to their imprecise measure of deprivation. Another limitation was that Reiss and Rhodes (1963) only included measures of social class and delinquency, neglecting to measure reaction formation or any additional intervening variables (1955).

Kelly and Balch (1971) captured more of Cohen’s original theory by including Cohen’s (1955) intervening variables but neglected the concept of status frustration and were unable to obtain a measure of delinquent subcultures within their data source. Using a questionnaire that
was collected from 1,227 male high school sophomores coupled with official school transcripts and juvenile court records, the authors found no support for Cohen’s theory. The authors tested the direct relationships between social class, school avoidance, and delinquency. They also included relationships between social class and measures of school experience (academic performance, academic self-evaluation, affect toward school, and involvement in school activities). They concluded that the school experience measures do not serve as intervening variables between social class, school avoidance, and delinquency. The school experience measures were independently related to the dependent variables but did not affect the relationships between the independent (social class) and dependent (school avoidance and delinquency) measures. In other words, school experience did not mediate the relationship between social class and delinquency nor the relationships between social class and school avoidance (Kelly and Balch 1971). However, the authors’ conclusion that Cohen was not correct in his theory seems to be an overstatement as they neglected to measure status frustration, a key variable, in their analysis.

Finally, a recent study examined the relationship between strain and delinquency with a sample of over 2,000 Chinese 7th and 8th graders in Fuzhou, China (Liu and Lin 2007). The authors chose to survey the middle school students of this specific area for methodological reasons: there was a mix of poor and affluent families, the family structures included had one-child families as well as multiple-children families, and the schools these children attended were standard schools not requiring an admissions process. Additionally the authors noted that these three characteristics provide for a sample comparable to those in prior United States studies (Liu and Lin 2007). In the overall sample, Liu and Lin (2007) found a significant, positive
relationship between status-related strain and delinquency despite their control variables, placing their findings in line with Cohen’s (1955) argument. Moreover, this relationship is specific to strain related to status achievement in schools, the prospect of a college education, and the students’ expectations of their likely success in their later career and finances (Liu and Lin 2007).
STATUS FRUSTRATION THEORY AND CONCEPTUAL MODEL

Within status frustration theory, Cohen argued that four factors—social class, school achievement (considered to be both academic performance and participation), status frustration, and reaction formation—contributed to the development of delinquency and delinquent subcultures (1955). The theory, which is depicted in Figure 1, states that children come to school either equipped with the tools for success in America’s educational system or not and that this is due to their social class via parenting styles and socialization. Cohen’s hypothesis viewed failure at school as nearly inevitable for lower class students, especially boys (1955). If students buy into the mainstream values and goals the school system is predicated on but then fail to meet those goals, Cohen proposed that they run the risk of developing status frustration. The key, in the purest form of Cohen’s theory, to developing status frustration is that unsuccessful students recognize their failure to meet the goals and values to which they subscribe (1955). This recognition and the resulting status frustration leads students to reject mainstream goals, a reaction Cohen called reaction formation, by either avoiding school altogether or engaging in delinquency.

![Diagram of Albert Cohen’s (1955) status frustration theory](image)

**Figure 1.** Diagram of Albert Cohen’s (1955) status frustration theory
MEASUREMENT OF SOCIAL CLASS

Social class is a key component to Cohen’s theory. Previously, social class measures have been synonymous with socioeconomic status measures. As one possible reason for this interchanging of phrases, Davis et al. (1997) submitted that “social class” is a rather hollow term outside of a Marxian context, however it continues to be used in the literature (Bodovski 2010; Cheadle and Amato 2011). The most commonly used conceptualizations of socioeconomic status and social class are both based on status attainment (Farnworth et al. 1994). The first, Duncan’s (1961) socioeconomic index, was rooted in occupational prestige (Farnworth et al. 1994). The Hollingshead Index is also used regularly and builds on the idea of occupational prestige but also includes educational attainment (Farnworth et al. 1994). Often income is included in these examinations in conjunction with the Hollingshead Index (Bodovski 2010; Cheadle and Amato 2011). Studies within criminology have also used individuals’ income related to the poverty line (Jarjoura 1996), which Farnworth et al. (1994) call an underclass measure. A review from Davis et al. (1997) noted various measures ranging from income, wealth, and education occupational measures to measures regarding the area local to respondents. However, Cohen differed on how “social class” should be defined.

Social class and children

Cohen identified social class as not dependent simply on financial definitions but that it is also concerned with family culture and child rearing methodology (1955). Cohen argued that family culture and child rearing are the more salient factors in the determination of social class because of the emphasis he placed on elements of learning and socialization. More precisely,
Cohen proposed that the child rearing practices of lower-class families would encourage children to be spontaneous, aggressive, and to obey commands not because of the recognition of value in conformity but because obedience elicits a positive result for the child.

Cohen (1955) believed that spontaneity is encouraged through a lack of encouragement for foresight or planning ahead for the immediate time period as well as employment and life goals. Cohen (1955) also touched on aspirations stating that if plans for the future were made by those in the lower-class, which is not likely, they would be to maintain the present standard of living and not to improve or promote one’s station in life. Cohen (1955) believed that this meant that lower-class children are less likely to be guided by exact expectations for effort and achievement. This is contrary to middle-class children in that lower-class children are not constantly aware of what their parents want them to be or become and they are not motivated by what they do know of their parents’ expectations.

Among those in the lower-class, Cohen (1955) posited that fighting is more common. Lower-class children are likely to have seen their parents or other adults engage in a fight. Additionally, fighting is more likely seen as a legitimate and normal means to settling a dispute. Thus lower-class parents are more inclined to encourage their children to not only be able to stand up for themselves but also to fight and be aggressive as a way of handling problems in life (Cohen 1955).

Regarding obedience, Cohen (1955) believed that lower-class children obey commands because it generates an immediate positive response from their parents. He contrasts this with the emotional reason that he proposed for obedience from middle-class children, which is for love from their parents. For lower-class children, it is a logical and rational perspective. As
Cohen (1955) states, physical punishment is more common in lower-class households. Therefore, when a lower-class child decides to act, it is likely the child reasons, “if I obey, I won't get spanked”. Additionally, Cohen argues that children from lower-class families will spend more time on their own, resulting in greater unsupervised decision-making, when compared to middle-class children and who are more likely to operate within a structured, controlled environment and greater parental monitoring (Cohen 1955).

To contrast these points, Cohen said that middle-class children are socialized according to the following values and goals: drive and ambition; individual responsibility; achievement and success; deferred gratification, rationality, long-range planning, and budgeting; courtesy and self-control; control of violence or aggression; wholesome recreation; and respect for the property of others (Cohen 1955). Not only are these in opposition to the values instilled in lower-class children, there are several more expectations and values which should be met in order to be a “good” child and eventual adult (Cohen 1955). These disparities are the key to how Cohen envisioned social class as an active participant in the determination of delinquent outcomes.

These concepts, which Cohen attributed to social class, have been discussed in parenting literature as well. Specifically, Cohen was articulating ideas which are now known as parenting styles. Baumrind (1971, 1989, 1991) detailed three different parenting styles. These are authoritative, authoritarian, and permissive parenting. Maccoby and Martin (1983) add the concepts of responsiveness and demandingness. Under this precept, authoritarian parents have much control over their children and are especially restrictive (Maccoby and Martin 1983). In this parenting style, parents are quite demanding of their children but lack responsiveness to
them. Very little democracy exists and commands from parents often follow a “because I said so” justification and the expectation that their rules are to be followed without question (Maccoby and Martin 1983).

Authoritative parents maintain firm control over their children but are more responsive to them. This can be demonstrated by the children’s power of decision-making, or the democracy in the relationship. Parents set strict rules and then expect their children to abide by those rules (Maccoby and Martin 1983) but ultimately the children have the choice to follow their parents’ rules. They are able to ask their parents questions and parents remain loving and nurturing. Discipline within this parenting style is supportive rather than punitive (Maccoby and Martin 1983).

Permissive parents have little to no control over their children, have few demands of their children, and rarely or sporadically punish them (Maccoby and Martin 1983). In this style of parenting, parents look more like friends than parents. They are very communicative with their children, have a nontraditional mindset, and do not require their children to act maturely (Baumrind 1991).

Lamborn and colleagues (1991) specified another category of parenting: neglectful parenting. This parenting style is noted by low ratings of both responsiveness and demandingness. Communication is not likely in this scenario and, in some cases, not even the children’s basic needs of life are met. Parents are uninvolved in their children’s lives and are emotionally unavailable to them (Lamborn et al. 1991).

Steinberg and colleagues (1991) found that authoritative parenting was the most beneficial for children and associated with middle-class background. The researchers
maintained that the factors which contribute to educational success were parental warmth (i.e., responsiveness), control (i.e., demandingness), and democracy. They also found these elements assisted with healthy psychological development (Steinberg 1990; Steinberg et al. 1989, 1991). Authoritarian, permissive, and neglectful parenting styles have been found to damage a child’s school engagement and achievement and to be associated with a lower-class background (Dornbusch et al. 1987; Lamborn et al. 1991; Steinberg et al. 1992). In these ways, findings from a growing literature on parenting styles are in line with Cohen’s theory of status frustration (1955).

Cohen (1955) recognizes that delinquency does not exist only among lower-class students or among male students alone. This is supported by longitudinal studies which have mixed findings showing the designation of being lower-class or lower-SES as increasing, decreasing, and being entirely unrelated to delinquency among other risky behaviors, such as substance use (Cassewell et al. 1991; Wright et al. 1999). In attempting to explain how delinquency can exist among middle-class males when his theory proposes that delinquency should only be present among lower-class males, Cohen (1955) reminds readers that social class is not based on financial definitions alone. It is certainly possible that families may be designated as middle-class because of a raise, bonus, or a change in employment, i.e., adding a second income, a change from part-time to full-time employment, etc. However, the difference in income designations does not necessitate nor indicate a change in the functioning and value system of the family. To illustrate, this proposed financial increase does not mean the children will suddenly be socialized to adhere to the many middle-class values as listed before. The children in this family will still have been raised to be spontaneous, aggressive, and
be acquainted with why obedience is important, to avoid unpleasant consequences. Therefore, Cohen’s emphasis on family culture and child rearing as the important elements of social class, would explain how delinquency could still occur among middle-class boys. As such, this examination of status frustration theory will distinguish among elements of family culture, child rearing, and income in testing Cohen’s theory.

The proposed research will thus use a more dynamic conceptualization of social class, incorporating monetary/financial and social/cultural dimensions in evaluating a more complete model of Cohen’s (1955) status frustration theory. Cohen (1955) believed that family culture and child rearing can represent the social class standing of a family and can improve the use of financial, income-only measures. These measures, social family culture and child rearing, will be used in conjunction with income information for the evaluation of these relationships. Thus, this project will address the following question: do the elements of social class, as defined by Cohen, predict delinquency? I hypothesize that socioeconomic status and parenting styles/socialization will have independent and direct influence on delinquency.
NEGLECT OF INTERVENING VARIABLES

Cohen (1955) originally proposed that there are three intervening variables at play within status frustration theory, which are academic performance, school involvement, and self-evaluation resulting in status frustration. According to Cohen (1955) lower-class students are at a distinct disadvantage in the school setting because they lack the skill set and habits necessary for success in a middle-class environment, as a result of coming from a lower-class home where self-discipline and order reinforcement of conformity are not emphasized (Cohen 1955). Thus, working-class children have not only lower interest in academic achievement but also lower abilities to achieve academically (Cohen 1955). Children from low-class families are also at a marked disadvantage due to financial resources, health care, proper nutrition, and social resources (Lee and Burkam 2002). Overall, students from lower-class families are disadvantaged before any interaction with the school environment occurs (Lee and Burkam 2002).

School performance and involvement

Previous findings indicate that Cohen’s intervening variables, specifically academic performance and school involvement, do have an effect on delinquency (Blumstein, Farrington, and Moitra 1985; Elliott and Voss 1974; Elliott, Huizinga, and Menard 1989; Farnworth, Schweinhart, and Berrueta-Clement 1985; Figueira-McDonough 1983; Kelly and Balch 1971; LaGrange and White 1985; Lane 1980; Thornberry et al. 1985; Wiatrowski, Griswold, and Roberts 1981; Wiatrowski et al. 1982). However, all of these variables together with elements of frustration and reaction formation have not been tested, which is required in order to
remain true to Cohen’s hypothesized relationships. Overall, Cohen’s (1955) intervening components have been partially represented in these examinations. Yet even with these attempts, the models were not completely reflective of the theory. Cohen (1955) did not theorize that these concepts work independent of one another, which makes their inclusion together essential to any evaluation of status frustration theory.

Cohen believed that the relationship between social class and delinquency could be mediated by academic performance or school involvement, such as participation in extracurricular activities. Other researchers have established that children with poor school performance are at a higher risk of delinquency (Blumstein et al. 1985; Brunner 1993; Elliott et al. 1989; Farnworth et al. 1985; Figueira-McDonough 1983; LaGrange and White 1985; Lane 1980; Richardson 2003; Richardson and Richardson 2005/2006; Siegel, Welsh, and Senna 2003; Thornberry et al. 1985, 1991; Wiatrowski et al. 1981, 1982). Greenberg’s work (1981) supported Cohen’s idea that schools create personal failure, showing that the grading and evaluation structure within schools contributed to student-perceived failure. Furthermore, he found that these failures lead to delinquency by lowering students’ self-esteem (Greenberg 1981). Further, Cohen (1955) theorized that the mechanisms through which these outcomes would occur were status frustration and reaction formation. To illustrate, if a student is performing well in school, that performance will reduce the likelihood that a low social class student would feel frustration as that frustration is suggested to result from failure to achieve middle-class goals. Satisfactory or high academic performance would be achievement of those goals. Therefore, academic performance would be expected to have a negative relationship with delinquency.
This could also be understood through a social control perspective. In Hirschi’s original conception social control theory proposed that delinquency occurs when an individual’s bond to society is either broken or weakened (Hirschi 1969). Control over choices could be oriented as outside of a person, in their relationship with society rather than their own self-control (Agnew 2001; Hirschi 1969). A key tenet of social control is that delinquency is not explained by the variation in motivations of people but can be explained by the variance in social control people experience (Agnew 2001; Hirschi 1969). If a student’s bond to society is strong via their success in that social control location, delinquency would likely be avoided. Social control maintains that the inverse is also true, that a low bond to school through failure would increase delinquency (Agnew 2001; Cernkovich, Giordano, and Rudolph 2000).

Research into school involvement, or extracurricular activity participation, has resulted in varied findings. Some researchers have found that extracurricular activity participation reduces delinquency (Agnew and Petersen 1989; Holland and Andre 1987; Landers and Landers 1978; Thornberry et al. 1991; Schmidt and Padilla 2003) while others have found that such participation can actually increase delinquency (Barber, Eccles, and Stone 2001; Begg et al. 1996; Eccles and Barber 1999; Mahoney, Stattin, and Magnusson 2001; Paetsch and Bertrand 1997). Cohen’s assertion that involvement should be considered in a model of status frustration is still justified, however. Cohen believed that if a lower-class boy chose to get involved in a school-related activity, whether sports or a club, the boy would acquire more middle-class skills and possibly reach more of his goals, decreasing any actual and/or perceived failure (Cohen 1955). For example, a student who is involved in school activities would be meeting a middle-class expectation, thus decreasing his likelihood to experience status
frustration and reducing his risk for delinquency. Following Cohen’s hypothesis, I expect school involvement will have an inverse relationship with delinquency (1955). Thus, this project will address the following questions: Do school performance and involvement mediate the relationship between social class and delinquency? It is hypothesized that social class, per Cohen’s description, will have a negative relationship with delinquency. Furthermore, it is anticipated that the relationship between social class and delinquency will reduce when controlling for student performance and involvement.
STATUS FRUSTRATION AND SCHOOLS

As an institution, the American education system is designed to compare students with one another using a standardized set of criteria for evaluation. Evaluation in school is based on what Cohen calls “a tempered version of the Protestant Ethic” (1955:87) wherein individuals are obliged to strive for success through ambition, rationality, self-discipline, and independence or self-reliance. The United States school system evaluates students’ performance based on middle-class benchmarks set by middle-class values, which lower-class, disadvantaged students are less prepared to achieve (Cohen 1955; Kelly and Balch 1971). According to Cohen (1955), this happens for several reasons. First, the goals of the school system are set by middle-class school board members and involved parents. Second, the teachers in the school likely come from a middle-class background as well. Finally, the dynamics and functionality of a school or classroom benefit from student conformity to middle-class values.

This standardized system creates a “measuring rod” by which all individuals are compared, a measuring rod which reflects middle-class values and norms. Thus classroom expectations and evaluation reflect these standards. Functionally, well-behaved, calm, responsive, and cooperative students are viewed more favorably by the teacher. Due to their lack of training at home in self-discipline and order, lower interest in academic achievement, and deficient reinforcement of the importance and value of conformity, children from a working-class background are more likely to be seen as a problematic students compared to their fellow classmates (Cohen 1955).

Following Cohen’s theory, when a student fails to achieve success, assessed via middle-class benchmarks, he will view himself negatively especially when he compares himself to his
classmates. To elaborate, Cohen (1955) believed that working-class boys would be located at the bottom of a class-based hierarchy in their schools. He also purported that all boys would have a certain acceptance level of middle-class values derived from, either, respect of middle-class people or internalization of those standards from his school environment. The extent to which a boy values middle-class standards and the departure between these values and his actual achievement creates status frustration (Cohen 1955). In other words, status frustration occurs as a result of differences between a person’s aspirations and expectations and their actual performance. In other words, status frustration is the psychological response to recognizing failure to meet goals. Cohen states that it is reasonable to assume that inferiority, resentment, and possible hostility, which he claims are all part of status frustration, can arise as well (1955). As a result, this student will look for a way to cope with these negative appraisals and feelings.

Cohen (1955) suggested that an individual who experiences status frustration would then respond to that frustration with reaction formation, by rejecting those middle-class values through school avoidance (the source of the frustration) and/or engaging in delinquency. Essentially, reaction formation is the adaptive and behavioral response to the psychological distress of status frustration. Relief can be found through reaction formation by disregarding the middle-class goals and either turning to delinquency or avoiding school. Status frustration is the internal struggle a student experiences when they recognize their failure to meet universal demands. Reaction formation is the external manifestation of their attempts to relieve that distress by engaging in alternative behaviors, or behaviors which go against the universal middle-class measuring rod.
By physically withdrawing from school, either by skipping classes or actually dropping out, the student avoids an unpleasant situation as a defense mechanism. If the student uses delinquent activity as a coping mechanism, he is actively rejecting middle-class expectations by carrying out acts that counter these expectations, as a type of rebellion in other words.

Dropping out of school or engaging in delinquency provides an opportunity for the student to reject or ignore the middle-class measuring rod, rendering them powerless as they no longer apply to that student. Not only are these reactions a way to get even with the school, and by extension the middle-class, but they also allow the student to rebuild self-esteem that was lost by failure in the school setting. In rejecting middle-class goals and expectations, the lower-class, frustrated student can define goals and expectations for themselves by which they can be successful. Simply put, the student may adopt the mentality that if they are not good at being good, they can be good at being bad. The act of success at something, even something deviant or criminal, may repair the psychological distress and status frustration the student earlier experienced.

Cohen’s work stems from Merton’s strain theory which maintains that cultural imbalance, cultural universalism, and a stratified social structure combine to produce anomie at a social level and strain at an individual level leading to delinquency (Kornhauser 1978; Merton 1938). Merton’s strain is defined as the frustration evoked by the inability to achieve high levels of success as defined by goals and values (Kornhauser 1978; Merton 1938). Strain could be motivated not only by blocked opportunities but also by the removal of positive and valued stimuli (Kornhauser 1978; Merton 1938). Cohen suggests that embracing delinquency via
reaction formation serves as an escape from status frustration, or strain, by providing expectations and goals that working-class boys can meet (Cohen 1955; Kornhauser 1978).

Agnew (2001) went on to develop a school-based strain model stating that general strain theory allows for the prediction of several sources of strain within the school environment which can accumulate and produce negative affect in individuals leading them to delinquency. Schools present a harmful combination of both positive and negative relationships. While many students enjoy positive peer relationships and experiences at school an abundant number of negative stimuli still exist, such as peer pressure, negative teachers, bullying, unfair grading or discipline practices, and many more (Agnew 2001). The school-sourced strain combines with other strain (family, poverty, inequality, relative deprivation) to lead to delinquency which can be mediated or alleviated by the positive experiences in school (Agnew 2001). Daniel Lee and Jeffrey Cohen (2008) performed a test of Agnew’s school-based strain model and found that certain school experiences, namely school atmosphere and administrative recognition, can reduce delinquency while others contributed to the level of delinquency by raising it. Lee and Cohen (2008) controlled for socioeconomic status but did not test any causal relationships. The finding, however, that administration recognition reduces delinquency is interesting in relation to Cohen (1955) because that recognition would be driven by success at school, which is quite analogous to status frustration theory.

Other researchers have completed work since the time of Cohen’s writing that is rooted in strain theory and carries echoes of status frustration but remain distinct analyses. Stiles, Liu, and Kaplan (2000) were able to establish that negative self-feelings, developed through self-assessments of deprivation and separate from negative affect, should be included in social-
psychological relationships with delinquency and crime. Using a cross-sectional design and a
6,000-respondent dataset, the key to this was the difference between feeling bad and the
recognition of one’s deficits while compared to other, recognition being a key to Cohen’s theory
as well (Stiles et al. 2000). This study, however, used a sample that was in early adulthood
when surveyed and had no ties to any school relationships.

These additional areas of work present a picture that suggests status frustration theory
should be capable of predicting delinquency. From the ideas of social control theory (Hirschi
1969; Richardson 2003; Richardson and Richardson 2005/2006) to strain theory’s (Agnew 2001;
Merton 1938; Lee and Cohen 2008) developments regarding school performance, the school
environment, and teachers, elements of status frustration theory are supported, although
explained differently. Testing outside of these frameworks also suggest that negative self-
assessments are appropriate in analyses (Stiles et al. 2000).

Overall it can be said that status frustration has been partially supported in segments.
Previous testing of status frustration theory used imprecise measures for several of Cohen’s key
concepts (Reiss and Rhodes 1963; Kelly and Balch 1971) limiting the conclusions that can be
drawn from their analyses. Work from Liu and Lin (2007), however, demonstrated a positive
relationships between delinquency and status-related strain, a conceptualization which seems
to echo Cohen’s ideas more precisely than other past attempts. In order to execute a more
complete examination, I will test the relationship between school performance and
delinquency while accounting for status frustration and reaction formation. Specifically I
question: does status frustration mediate the relationship between school
performance/involvement and delinquency and the relationship between school
performance/involvement and reaction formation? It is anticipated that the relationship between school performance and delinquency will disappear or reduce when status frustration and reaction formation are included.
INCLUDING GIRLS

In its original form, Cohen’s status frustration theory only focused on males. Cohen claimed that females were not applicable to the discussion because of societal norms claiming that because the expectations for females were far different than for males, the goals of females would not be the same. To elaborate, society dictated that women did not enter the work force under normal circumstances and therefore would not aspire to obtain a college education (Cohen 1955). Additionally, Cohen stated that because women were expected to care for the home, that their focus even within high school would be far different from that of male students. Women would place less importance on their grades in most subjects as it was more of a social and training ground for being a homemaker and wife (Cohen 1955). Previous authors have largely excluded girls in their examination of status frustration theory. Only one study has examined status frustration theory among boys and girls. Liu and Lin (2007) identify gender differences in their study; they find that boys have an increased chance of experiencing frustration due to their academic status, while girls were at greater risk for delinquency based on status regarding physical well-being, meaning health and physical attractiveness (Liu and Lin 2007). While female delinquency was related to strain over physical well-being, it still stands to reason that these elements are meaningful to the respondents to the point that not meeting these standards creates strain. The respondents from the Liu and Lin (2007) study were 7th and 8th graders. It is reasonable that as a student ages and progresses through the education system, academic performance would become more important to them, given that they have bought into middle-class goals and expectations. It is possible, then, that the source of strain
could change, moving beyond concern over health and looks by the time they are seniors in high school.

Several studies have verified a link between academic achievement and delinquency (Agnew 1985, 1992; Broder et al. 1981; Hughes et al. 1991; Lynam, Moffit, and Stouthammer-Loeber 1993; Rhodes and Reiss 1969). In their meta-analysis, Maguin and Loeber (1996) summarize that poor academic performance is related to both the prevalence and onset of delinquency for boys and girls. Additionally, improvements in academic performance have been associated with desistance from delinquency among boys and girls (Maguin and Loeber 1996). In general, Maguin and Loeber (1996) find more similarities than differences between genders. Males and females with low academic performance were found to have a higher frequency of delinquency as well as more severe offenses when defined as violent or nonviolent (Maguin and Loeber 1996). Their results found that the odds of delinquency for students with low academic performance were 2.07 to 2.11 times greater than that of high-academic performing students (Maguin and Loeber 1996).

Considering delinquency alone, researchers have found that the trajectories and life factors which lead to delinquency are similar for males and females (Belknap and Holsinger 2006; Dembo et al. 1992; Dodge, Bates, and Pettit 1990; Zahn et al. 2008). These things considered together suggest that status frustration could be experienced by females as well as males. It follows, then, that female adolescents are also looking to relieve this frustration and will do so through reaction formation techniques, leading to delinquency.
Changing Times

Cohen argued that the expectations of achievement for social class status were different for females than males (1955). Cohen’s status frustration theory was first published in 1955. He argued that the occupational achievement of a family was dependent on the male household head and the social status success of a woman was based on her marriage. Cohen (1955) argued therefore that social expectations of children were derived directly from the expectations of adults and females were not expected to meet the middle-class goals of occupational success, ambition, and self-reliance as were males.

Overtime, however, expectations, norms, and goals of women have changed in society. No longer do women only stay home, have children, and maintain a home generally. American families have increasingly become two-income households, inherently changing the norms of women. Oppenheimer described this change as a “quantum leap” (1994:297) in which the female work force, specifically among young wives, grew from 5 percent in 1900 to 20 percent in 1940, then inflated to nearly 70 percent of women between ages 20 and 54 in 1990. Further, single-parent families (Bianchi, Casper and King 2005; Oppenheimer 1994, 1997; Schoen et al. 2002) and cohabiting relationships with children in the home have grown as well (Bianchi et al. 2005; Oppenheimer 1994, 1997). Thus, recent research suggests that times and expectations have, in deed, changed for females and that their inclusion in an evaluation of status frustration is warranted. As Cohen believed that expectations of children echo those of adults, it is reasonable to believe that the middle-class goals held by schools for males have adjusted to include female students since the time of Cohen’s work.
The questions now become: are there differences in how status frustration theory applies to males and females? Are the relationships the same for females as they are for males? If female students are now expected to be successful in the same realms, such as employment, as male students, status frustration should operate similarly for females. It is anticipated that female patterns will resemble that of males but that their delinquency rates will be lower, especially so as this examination and status frustration theory do not account for strain over physical well-being which was shown to influence girls’ delinquency previously (Liu and Lin 2007).
CURRENT STUDY

Overall, Cohen’s status frustration (1955) has received limited support and warrants further examination. To that end, this project examines the viability of status frustration as a predictor of delinquency by using different data and by including concepts which Cohen suggested should act as intervening mechanisms in this relationship (1955). Next, I propose to test the ability of Cohen’s conception of social class in explaining delinquency. Cohen (1955) believed that social class was not merely a financial construct. Instead he suggested that family culture and child rearing were important elements in the classification of social class and how researchers conceptualize the impact of social class in various relationships. Finally, status frustration was only discussed in terms of working-class males by Cohen (1955) due to social norms at the time of his writings. This examination will consider status frustration theory among males and females. The following research questions and hypothesis will guide the project:

**Question 1**: Does social class, as defined by Cohen (1955), predict delinquency?

*Hypothesis 1a*: Socioeconomic status will have a negative relationship with delinquency.

*Hypothesis 1b*: Parenting/socialization measures will contribute significantly to the model’s explanatory power and reduce the effect of socioeconomic status on delinquency, indicating that parenting/socialization measures hold a separate, distinct relationship with semester delinquency from that of socioeconomic status.
**Question 2:** Does school performance mediate the relationship between social class and delinquency?

*Hypothesis 2:* The addition of school performance measures will mediate the relationships of socioeconomic status and parenting/socialization with delinquency by reducing the coefficient significantly.

**Question 3:** Does status frustration mediate the relationship between school performance and delinquency?

*Hypothesis 3a:* The school performance measures will have a negative relationship with semester delinquency.

*Hypothesis 3b:* The addition of status frustration measures will mediate the relationship between the school performance measures and delinquency by reducing the coefficient significantly.

**Question 4:** Does status frustration result in the rejection of mainstream values/goals and are individuals who reject mainstream values/goals at increased risk for delinquency? In the present analyses, I measure reaction formation as the degree to which students accept mainstream values and goals. Mainstream values and goals will serve as the proxy for reaction formation from this point forward.

*Hypothesis 4a:* Status frustration will have a negative relationship with mainstream values/goals.
**Hypothesis 4b**: Mainstream values/goals will have a negative relationship with delinquency.

**Question 5**: Is status frustration theory able to explain female delinquency in the same manner as male delinquency through the comparison of gender-specific results to the four previous questions?

**Hypothesis 5**: Status frustration theory will be able to predict female delinquency to the same extent as it does for males.

The current examination (Figure 2) will be the most complete test of status frustration theory to date and will utilize more accurate conceptualizations of key concepts in Cohen’s original theory. First, socioeconomic status will be used rather than social class because Cohen confounds social class and parenting style and socialization. Second, Cohen (1955) proposed that parenting and socialization should be considered to partially define social class, making a cultural argument. However, socioeconomic status and parenting styles should be considered related to one another yet as distinct concepts. Cohen argued that lower income families are more likely to adopt a certain parenting style setting up the children of lower socioeconomic families for failure in school and placing them at risk for delinquency. Yet, Cohen himself recognized that income and parenting style are not the same, arguing that even though income may increase the parenting style can remain the same. Similarly, not all low income families adopt problematic parenting styles. Therefore, parenting style and socialization will be treated separately in the analyses from socioeconomic status. Finally, reaction formation will be
included in the analyses as a proxy. Cohen argues that reaction formation is a response to status frustration however he does not make a clear theoretical distinction between reaction formation and delinquency. Reaction formation is the rejection of mainstream goals which can look like delinquency in a functional sense. Reaction formation could be argued as an emotional response while delinquency is a behavioral response to status frustration. Due to the lack of clarity for reaction formation I will represent the concept as a measure of mainstream values and goals. Controls will also be included for age, race, and previous delinquency.

**Figure 2.** Conceptual model for the current project
DATA

The current examination uses data from the National Educational Longitudinal Survey (NELS 88:92), collected by the National Center for Education Statistics (1994). National Center for Educational Statistics used a two-stage stratified probability sampling design in order to select a nationally representative sample of schools and students. School sampling was performed first and resulted in 1,734 school selections with 1,052 participating schools. Of the participating schools, 815 were public and 237 were private schools. The second stage generated a random selection of 26,435 students from the sampled schools, ultimately resulting in participation by 24,599 eighth-grade students during the first wave of participation. The students were then re-interviewed or completed a follow-up survey every two years. In addition to student responses, NELS 88:92 contains information about parents, the schools themselves, the student’s school performance and involvement, as well as other information. Additional data were obtained through school records, school administrator surveys, and parent surveys. These data are especially suited for testing status frustration theory as they include information which can represent all components of the theory, including school performance and attitudinal measures.

I will use three waves of the survey to facilitate a longitudinal analysis: 1988 (base year, 8th grade sample), 1990 (second wave, 10th grade sample) and 1992 (third wave, 12th grade). Table 1 illustrates the longitudinal design and the years from which each concept is taken. The available sample consists of 20,612 students in the third wave (1992) of data, with an average age of 18 years (mean age=18.42 years. The analytic sample includes 11,917 students and was derived from the third wave sample. Respondents were dropped from the analytic sample if
they did not have valid responses at all three waves of data collection. Additionally, students whose race/ethnicity was classified as American Indian or Alaska Native were eliminated from the total analytic sample due to small representation.
MEASURES

Dependent Variable

The dependent variable for the analyses is delinquency which is derived from student responses to two questions. I will define delinquency as any student who reported either of the following occurring during the first semester of the school year for which they were responding, 1992: got into a physical fight at school or got into a physical fight on the way to or from school. Additional information on all variables can be found in Appendix A.

<table>
<thead>
<tr>
<th>Table 1. Longitudinal Model Organization</th>
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<tbody>
<tr>
<td>1988 Data</td>
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<tr>
<td>Social Class</td>
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<td>- Parenting</td>
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<td>- SES</td>
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<td>Gender</td>
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<td>Race</td>
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<td>Previous Fighting</td>
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Independent Variables

Social class. Cohen’s conceptualization of social class was not financial alone but included family culture and parenting techniques (1955). However, for the sake of conceptual clarity in terms of the context of this examination, socioeconomic status and parenting styles should be considered related to one another yet as distinct concepts. As discussed previously,
Cohen argued that lower income families are more likely to adopt a certain parenting style setting up the children for failure in school and placing them at risk for delinquency (1955). However, he proposed all of this while acknowledging that income and parenting style are not the same thing, illustrating that even though income may go up the parenting style can remain the same. Similarly, not all low income families adopt problematic parenting styles (1955). Therefore, parenting style and socialization will be treated separately in the analyses from socioeconomic status.

Cohen (1955) recognized that the financial measures of social class were important to a child’s success. This examination includes a family socioeconomic status measure which utilizes household income, parents’ occupation and parents’ education, which were collected in the first wave of the survey (Mello 2009), primarily from the parent data (US Department of Education 1995). In cases where parent data were not available, student data were used. As Mello (2009) described, both mothers' and father's education levels included the following possible responses: did not finish high school (1), high school graduate or GED (2), graduated high school and less than four-year degree (3), college graduate (4), M.A. or equivalent (5), Ph.D., M.D. (6). Occupation was then coded for both parents according to the Duncan Socioeconomic Index (Duncan 1961). The possible responses for family income ranged from 1 to 15 where "1" equaled no income, "2" equaled less than $1000, "3" equaled $1000-2999, and so on up to "15" representing $200,000 or more (Mello 2009).

For the composite measure, parents' education, parents' occupation, and family income responses were standardized with a mean of 0. The standardized components of all nonmissing
values were then averaged to create a SES composite for each respondent. The SES measure is continuous ranging from -2.230 to 1.920 for the analytic sample.

**Parenting and socialization.** Cohen specified that lower social class children would have been socialized to be more spontaneous, and aggressive, and to have different reasons to be obedient (1955). While NELS 88:92 does not have variables indicating parent-supported aggression, the concept of spontaneity can be approximated using the 1988 data with the student and parent surveys. To represent spontaneity, I will measure the degree of control parents have over their student through the number of rules they report that the family has and enforces about television use, television programming, grades, and homework. There are six questions regarding rules coded such that “1” represents the parent’s report that the family has a rule in place and enforced for that item and “0” where there is no rule in place (see Appendix A for question details and information). Responses to these six questions are summed resulting in the rules variables having a possible range of 0 to 6 ($\alpha=.688$). From this, it follows that a high number of rules in the family reflects lower spontaneity, which Cohen (1955) describes as a lower-class parenting/socialization trait.

To capture more parenting characteristics two additional variables are used as individual measures. Likert-scale responses (0=false to 6=true) are available for the following statements: “My parent(s)/guardian(s) trust me to do what they expect without checking up on me” and “I often do not know why I am supposed to do what my parent(s)/guardian(s) tell me to do.” The first statement indicates the level of trust parents give to him or her, taking from a trait of authoritative parenting (Maccoby and Martin 1983) in that the parents give rules and then expect their children to follow those rules, reflecting mainstream socialization. The second
question, where a “true” response represents a student or adolescent who does not receive any explanations to the reasoning behind rules and guidelines, is demonstrative of authoritarian, permissive, and neglectful parents styles, and lower-class socialization (Baumrind 1991; Lamborn et al. 1991; Maccoby and Martin 1983).

School performance. School performance is generally represented by grade point average and other characteristics. Grade point average is considered in this project but it is incorporated into the status frustration measure. In an effort to avoid collinearity issues, grade point average will not be treated as a separate variable as well. However, beyond grades alone, students may also be considered a “success” in other school realms, such as athletics or clubs. Cohen recognized that working-class boys were less likely to participate in extra-curricular activities but that these activities provided a “competition for status in the eyes of the students themselves” (1955:119). The idea is that success in something related to school, even recreational, should buffer or lessen status frustration. While I cannot measure success in extra-curricular activities, measures of school involvement will be included in this examination. A count of the number of school activities a student participate in could be used following Kelly and Balch’s model (1971) but the amount of time a student is involved may be better suited as some activities require a higher level of engagement than others.

Rose-Krasnor and colleagues (2006) evaluated the explanatory power of extracurricular involvement comparing two different measures. Based on previous use, the first measures involvement as breadth, or the amount of activities in which a person is involved. The second, intensity, is the amount of time spent in such activities. Rose-Krasnor et al. (2006) compared both of these individually and simultaneously in order to ascertain which is the better
explanatory measure toward several outcomes, including risk-taking behaviors and school proficiency. The researchers found that both measures explain these outcomes sufficiently and may be representing different elements of extracurricular involvement (Rose-Krasnor et al. 2006). The researchers suggest that being involved in several activities might be beneficial to youth in that more activities might provide more developmental contexts. It is possible that not all activities provide the same skills and benefits. By “spreading out”, students might fill voids with involvement in several groups or activities (Rose-Krasnor et al. 2006). These authors went on to suggest that deeper involvement in any activity might contribute to the likelihood of success in that context (Rose-Krasnor et al. 2006). As such both of these measurement types are applicable to the current project and could contribute to the model at hand.

Therefore, extracurricular involvement will be measured as the number of activities a student participates in, as well as the total time spent on school sponsored activities in a week. Extracurricular involvement is measured during the 10th grade year (second wave of the survey). The number of activities, or breadth per Rose-Krasnor et al. (2006), is captured through several questions which ask about the participation of student in the current school year in a variety of activities. These activities include athletics, clubs, and academic-related groups (see Appendix A for a complete listing of variables). For each activity, the respondent could indicate if the activity was not available at their school, that they did not participate and if they participated or took a leadership role. For the purposes of this evaluation, each measure is coded such that 1 indicates the respondent participated in the activity, which will indicate any level of participation at all, and coded “0” if the respondent did not participate in that particular activity or if the activity was not offered at their school (Hoffmann 2006). Responses for each
activity are summed resulting in a variable reflecting extracurricular participation which ranges from 0 to 14, where a high number indicates a higher number of activities in which the respondent participated (α=.574). The intensity (Rose-Krasnor et al. 2006) of activity is captured by a question which simply asks “In a typical week, how much total time do you spend on all school sponsored activities?” Responses to this measure are on a scale of 0 to 7 where “0” indicates no involvement in school activities and “7” represents 25 hours or more spent per week in school sponsored participation.

*Status frustration.* Cohen (1955) proposed that status frustration would be born of a student’s recognition that they will not and cannot reach the standards of behavior and success as set forth by mainstream society. Their deficient ability to obtain societal successes would lead to status frustration. The present measure of status frustration is constructed in such a way that a “1” represents a student who has high aspirations, specifically reporting that they see themselves attending college at the very least, but has low grades, meaning less than a B average. The first item asked, “as things stand now, how far in school do you think you will get?” There were nine response categories ranging from, “less than high school graduation” to “college program: Ph.D., M.D., or other advanced professional degree.” The threshold for possibly being flagged for status frustration was response 5 “college program: less than two years of college.”

A grade point average (GPA) measure was constructed from student self-reports of grades from the four core subjects (Math, English, History, and Science) in the second wave of data collection (1990). This continuous variable is a point index ranging from .5 to 4.00. To clarify, “0.5” indicates that most grades were a D or below in the four areas and “4.0” indicates
the student received an A in all four subjects. The lowest possible grade response students were able to give indicated “mostly below D” which was assigned value “1” in the construction of this measure. I chose to not code any option as “0” because no responses clearly captured the receipt of straight Fs in the four courses. Additionally because this measure is based on four subjects and the nonmissing responses are averaged, it is unlikely that any student would truly have a value of “0” indicating all F grades across all subjects.

In constructing the status frustration measures, a GPA of 2.9 or less was considered to be a low GPA and could possibly be marked “1” for status frustration. Thus status frustration is measured with a dichotomous variable which identifies those students whose educational aspirations included college but were earning less than a B average in the four core subjects. This definition is in line with the work of Kao and Tienda (1998) who determined the average level of educational aspirations (some college). The average high school GPA of students who enroll in college was 3.10 (males) and 3.14 (females) (Noble and Sawyer 2004). In order to provide a more conservative estimate the B average threshold was selected.

Mainstream values/goals. As stated previously, a measure of mainstream values and goals will be used to roughly approximate reaction formation in these analyses. Reaction formation, as Cohen described it, is the rejection of mainstream values and goals. For the current project, however, the measurement will be the degree to which a student accepts mainstream values and goals and adopts them as their own in their senior year (1992). For this, NELS 88:92 includes measures on the importance of several areas of life and goals. First I utilize a measure asking “How important is each of the following to you in your life? …getting a good education.” Response categories for this were not important, some importance, or very
important. The second measure touched on academic expectations in the students’ senior year questioning “How far in school do you think you will get?” There were nine response categories ranging from, “less than high school graduation” to “college program: Ph.D., M.D., or other advanced professional degree.” For both questions, the importance of education and academic expectations, the responses were standardized and summed resulting in a range of -8.64 to 1.93. With this design, a higher response indicates a higher level of acceptance of mainstream values and goals.

**Control Variables**

*Race.* This study controls for race and age differences which prior research has associated with delinquency. Originally the possible responses for race included Asian or Pacific Islander (1), Hispanic (2), Black, not Hispanic (3), White, not Hispanic (4), and American Indian, Alaskan Indian (5). First, American and Alaskan Indian respondents were dropped from the sample. Then dichotomous variables were created for each of the remaining race responses (Asian or Pacific Islander; Hispanic; Black, not Hispanic; White, not Hispanic) where 1 indicates a respondent of that race or ethnic group.

*Age.* Age differences may not be as prevalent in this study as the sample is all high school seniors. The majority of the sample (52%) is 18 years old. However, for the purposes of this examination it is possible that those age outliers could be meaningful to the relationships being tested. For example, a student who has been held-back from graduation, and thus older, is likely to have lower grades than those students completing high school on time. The variable for age was derived from the NELS 88:92 (United States Department of Education National
Center for Education Statistics 1995) variable capturing the respondents’ birth year. An exact age for each respondent at the time of the survey cannot be obtained through the information available in the dataset. Therefore, these ages represent the age which each respondent became on their birthday of the year 1992, the survey year.

Gender. Controlling for gender is essential to this project and its contributions as I will extend status frustration theory to females as well as males within a more complete model which has not been previously done. Gender is captured at the earliest time point of a respondent’s participation with a self-report item where “1” represents male and “2” for female (as developed in the NELS construct). For cases in which the respondent did not answer, gender was derived from official school roster. For the analyses, models will be performed separately for males and females.

Previous fighting. It is possible that any relationship found in these analyses could be attributable to previous delinquency. Without controlling for the previous delinquent behavior of the students a large portion of the story could be missing. For instance, if a student has been involved in fights by 8th grade, his or her grades may be lower in high school and demonstrate a relationship with fighting in their senior year. Without including previous fighting this scenario would suggest that lower grades caused the fighting. Therefore, a control for previous fighting is included. This measure indicates “1” for those students who “got into a physical fight with another student” at least once according to their responses on the base year survey (1988, 8th grade). The inclusion of this measures means that all analyses will actually reflect the change in fighting from students’ 8th grade report to their senior year report.
ANALYTIC STRATEGY

The analyses include a series of nested multivariate logistic regression models predicting fighting during the first semester of the senior year. The first binary logistic regression model uses the control variables: race (dichotomous variables for Black, Hispanic, and Asian/Pacific Islander groups), age, and previous fighting. In the second model, delinquency is regressed on socioeconomic status and all controls from Model 1. The third model adds Cohen’s proposed facets of social class – parenting and socialization. In the fourth model, school performance measures are added. The fifth model adds status frustration to the model along with those previously included. The final nested model is completed with the addition of the mainstream values/goals measurement with all variables previously utilized. In order to more fully examine the relationship between status frustration and mainstream goals/values an ordinary least squares regression model will be performed to regress mainstream values and goals on status frustration, controlling for all other variables previously examined. Finally, in order to examine potential gender differences and assess the utility of status frustration in the explanation of female delinquency, all models will be repeated and examined separately for females.
RESULTS

The project examines the viability of Albert Cohen’s status frustration theory in predicting delinquency (1955). Status frustration theory has remained largely untouched following early reviews criticizing the type of data required as unobtainable. This project revisits status frustration theory using better-suited data, including concepts which Cohen suggested should act as intervening mechanisms in this relationship and representing status frustration in the analyses. Using National Educational Longitudinal Survey (United States Department of Education National Center for Education Statistics 1995) data, I test four questions and hypotheses, which are performed for both males and females using separate models. A fifth question is posed based on the gendered analyses.

Question 1: Does social class, as defined by Cohen (1955), predict delinquency?

Question 2: Does school performance mediate the relationship between social class and delinquency?

Question 3: Does status frustration mediate the relationship between school performance and delinquency?

Question 4: Does status frustration result in the rejection of mainstream values/goals and are individuals who reject mainstream values/goals at increased risk for delinquency?

Question 5: Is status frustration theory able to explain female delinquency in the same manner as male delinquency through the comparison of gender-specific results to the four previous questions?
Descriptive statistics

Table 2 presents the means and standard deviations for each variable in the analysis separately for males and females. As Table 2 reveals the sample of high school seniors is nearly a half-and-half mix of males and females (50.6%). Of the analytic sample, 18% of males and 6% of females have been involved in fighting in the first semester of their senior year. Roughly 75% of the sample is White, about 9% Black, 10% Hispanic, and 6% Asian or Pacific Islander, for both the male and female samples. Of male respondents, just over 27% reported having been in a fight during the base year of collection, respondents’ 8th grade year, while female reports placed their previous fighting rate at 7%. Males reported slightly lower socioeconomic status (mean= -0.094) than females (mean= 0.040) in this sample. The number of rules created and enforced (male mean= 4.210; female mean=4.070), respondents’ perceived trust from parents (male mean= 0.810; female mean= 0.810), and no explanation of expectations by parents (male mean= 0.280; female mean=0.250) all varied little according to gender.

Male and female students reported relatively similar levels of school involvement with males reporting participation in an average of 2.410 activities and females reporting participation in 2.580 activities. Male and female respondents report spending approximately equal amounts of time on school activities per week (male mean= 1.670 hours; female mean= 1.640 hours). Slightly more male respondents demonstrated status frustration (34%) while 31% of female participants gave responses indicating status frustration. Finally, female reports indicate more personal values reflective of societal mainstream values and goals (mean= 0.114)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Males (n=5884)</th>
<th>Females (n=6033)</th>
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<tr>
<td></td>
<td>range</td>
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<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fighting in Senior Year</td>
<td>0-1</td>
<td>0.180</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
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</tr>
<tr>
<td>Age</td>
<td>17-20</td>
<td>18.360</td>
</tr>
<tr>
<td>White</td>
<td>0-1</td>
<td>0.760</td>
</tr>
<tr>
<td>Black</td>
<td>0-1</td>
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</tr>
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<td>Hispanic</td>
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<td>0.100</td>
</tr>
<tr>
<td>Asian / Pacific Islander</td>
<td>0-1</td>
<td>0.060</td>
</tr>
<tr>
<td>Previous Fighting</td>
<td>0-1</td>
<td>0.270</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>-2.23 - 1.89</td>
<td>0.094</td>
</tr>
<tr>
<td># of Rules</td>
<td>0-6</td>
<td>4.210</td>
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<td>Trust</td>
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<tr>
<td>No Explanation of Expectations</td>
<td>0-1</td>
<td>0.280</td>
</tr>
<tr>
<td># of Extracurricular Activities</td>
<td>0-18</td>
<td>2.410</td>
</tr>
<tr>
<td>Time Spent on Extracurricular Activities</td>
<td>0-5</td>
<td>1.670</td>
</tr>
<tr>
<td>Status Frustration</td>
<td>0-1</td>
<td>0.340</td>
</tr>
<tr>
<td>Mainstream Values/Goals</td>
<td>-7.20 - 1.93</td>
<td>-0.018</td>
</tr>
</tbody>
</table>
than do males (mean= -0.018) on a standardized scale. See Appendix B for the correlation matrix.

Discussion regarding males

Question 1. First, does social class, as defined by Cohen (1955), predict delinquency among male high school students? Cohen (1955) confounded social class with parenting measures and socialization. He theorized that parenting measures and socialization are part of social class and should be considered together with financial measures (1955). However, for the sake of conceptual clarity, in this examination socioeconomic status and parenting styles are distinct measures. It is my contention that while these are related concepts, they should be understood separately. For the present analysis I hypothesize that social class will have a negative relationship with male delinquency. Specifically, socioeconomic status, parental rules, and trust will all have negative relationships with delinquency, measured as fighting in the senior year, while receiving no explanation from parents on expectations will have a positive relationship with fighting in the senior year. I expect the relationships between delinquency and socioeconomic status and delinquency and parenting/socialization to be distinct from one another.

The analyses from Model 3 of Table 3, which include socioeconomic status and the parenting measures, indicate that socioeconomic status and trust have the hypothesized significant negative relationships with delinquency. In other words, as socioeconomic status and perceived trust from parents increases, the likelihood of engaging in delinquency decreases by at least 31% for each unit increase in both cases. As expected males who receive no
Table 3. Binary logistic regression of fighting in senior year on predictor variables for males (n=5884)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>Exp(β)</td>
<td>β</td>
<td>Exp(β)</td>
<td>β</td>
<td>Exp(β)</td>
</tr>
<tr>
<td>Age</td>
<td>0.152 ***</td>
<td>1.164</td>
<td>0.084 ***</td>
<td>1.088</td>
<td>0.092 ***</td>
<td>1.096</td>
</tr>
<tr>
<td>Black</td>
<td>0.000</td>
<td>1.000</td>
<td>-0.177 ***</td>
<td>0.838</td>
<td>-0.195 ***</td>
<td>0.823</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.145 ***</td>
<td>1.156</td>
<td>-0.048 ***</td>
<td>0.953</td>
<td>-0.080 ***</td>
<td>0.923</td>
</tr>
<tr>
<td>Asian / Pacific Islander</td>
<td>-0.452 ***</td>
<td>0.636</td>
<td>-0.424 ***</td>
<td>0.654</td>
<td>-0.387 ***</td>
<td>0.679</td>
</tr>
<tr>
<td>Previous Fighting</td>
<td>1.059 ***</td>
<td>2.883</td>
<td>1.043 ***</td>
<td>2.838</td>
<td>0.991 ***</td>
<td>2.694</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>-0.358 ***</td>
<td>0.699</td>
<td>-0.375 ***</td>
<td>0.687</td>
<td>-0.358 ***</td>
<td>0.699</td>
</tr>
<tr>
<td># of Rules</td>
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<td>1.088</td>
<td>0.085 ***</td>
<td>1.089</td>
<td>0.084 ***</td>
<td>1.089</td>
</tr>
<tr>
<td>Trust</td>
<td>-0.430 ***</td>
<td>0.651</td>
<td>-0.424 ***</td>
<td>0.654</td>
<td>-0.423 ***</td>
<td>0.654</td>
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<tr>
<td>No Explain Expectations</td>
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<td>0.099 ***</td>
<td>1.104</td>
<td>0.098 ***</td>
<td>1.104</td>
</tr>
<tr>
<td># of Activities</td>
<td>-0.010 ***</td>
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<td>-0.009 ***</td>
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<td>0.007 ***</td>
<td>0.991</td>
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<tr>
<td>Time Spent on Activities</td>
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<td>0.958</td>
<td>-0.043 ***</td>
<td>0.958</td>
<td>-0.020 ***</td>
<td>0.958</td>
</tr>
<tr>
<td>Status Frustration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainstream Values/Goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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<td>-3.332 ***</td>
<td>0.036</td>
<td>-3.506 ***</td>
<td>0.030</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.066</td>
<td>0.080</td>
<td>0.093</td>
<td>0.094</td>
<td>0.094</td>
<td>0.111</td>
</tr>
</tbody>
</table>

Note: *=p<.05, **=p<.01, ***=p<.001
explanation of their parents’ expectations are 11% more likely to have fought in their senior year. These results support status frustration theory.

However, the number of rules variable holds a positive relationship with semester delinquency suggesting that for each additional rule enforced at home the likelihood of fighting increases by 9%. Although this finding is opposite than would be expected according to status frustration theory, it is possible that a higher number of rules enforced by parents could be motivated by problematic behavior. For example, if a student is coming home with bad grades parents might enforce more rules about completing homework and maintaining a certain grade point average. If this were the case then a positive association might be expected between the number of rules and delinquency.

Results thus far suggest that the parenting/socialization measure for middle-class traits (trust) and lower-class traits (no explanation of expectations) are both predictive of delinquency as hypothesized. Yet, the question remains if the parenting/socialization measures are distinct and separate from socioeconomic status. Nested F tests\(^1\) are used to determine if socioeconomic status and parenting/socialization not only hold significant relationships with delinquency but also are demonstrative of distinct relationships with the dependent variable. Nested F tests reveal that when considering male respondents the addition of the parenting/socialization measures from Model 2 to Model 3 (of Table 3) adds significantly to the model for delinquency (F=9.345, p<.001). This shows that the parenting/socialization measures contribute something unique and meaningful to the analyses that socioeconomic status alone does not do. It also supports that these measures should remain separate in analyses as they

\(^{1}\) Details and Table for Nested F tests provided in Appendix C
represent different mechanisms. Ultimately social class, as Cohen proposed, predicts
delinquency although socioeconomic status and parenting/socialization each have distinct and
direct effect on delinquency.

**Question 2.** Next I consider whether school performance mediates the relationship
to the model will
between social class and delinquency. Status frustration theory suggests that school
performance is partially determined by one’s social class and socialization, and that poor school
performance may result in status frustration, and ultimately reaction formation, and
delinquency. Therefore, I hypothesize that the addition of school performance to the model will
mediate the relationship demonstrated between socioeconomic status and delinquency.
Specifically I expect school performance to reduce the relationship between socioeconomic
status and delinquency between Model 3 and Model 4 (of Table 3), when such measures are
included.

The addition of school performance measures (extracurricular activity involvement and
time spent on those activities) reduces the coefficient for socioeconomic status. While I have
tested this relationship for socioeconomic status specifically, the model design also controls for
parenting and socialization. Thus, despite controlling for parenting/socialization, school
performance (extracurricular activity participation and grade point average) mediates the effect
of socioeconomic status on delinquency significantly (β= -0.375 in Model 3 to -0.294 in Model 4
of Table 3) as hypothesized.

**Question 3.** The next question considers the mediation power of status frustration in the
relationship between school performance and delinquency. While school performance was
considered a mediator in the previous question, status frustration theory states that the effect
of school performance on delinquency is indirect, occurring through status frustration. The occurrence and impact of status frustration is of prime concern in this examination of status frustration theory. I hypothesize that status frustration will mediate the relationships between school performance and delinquency.

In Model 5 (Table 3) a measurement of status frustration is added to the model. School performance is measured with two variables: activity involvement and time spent in extracurricular activities. The number of activities in which a male student is involved is negatively related to semester delinquency. This relationship is relatively unaffected by the addition of status frustration to the model. Similarly, the relationship between time spent on activities is negatively related to delinquency and is not mediated by status frustration. At this stage in the analyses, the number of activities and the amount of time spent in activities predicts delinquency in the direction which status frustration theory expects. However, status frustration theory also states that status frustration should mediate the relationship between school performance measures and delinquency which does not appear to be the case in these results. It is possible that this unexpected result is due to my measurements for school performance, based strictly on extracurricular involvement, and status frustration, a measure tied closely to academic achievement. Students could potentially be excelling in one realm of school life (involvement or academics) but not the other, which the data would not capture in the current operationalization of the concepts.

Question 4. Does status frustration result in the rejection of mainstream values/goals and are individuals who reject mainstream values/goals at increased risk for delinquency? According to status frustration theory, students who experience status frustration should
exhibit subsequent reaction formation, or a rejection of mainstream values and goals. While the available data does not provide the opportunity to measure actual rejection, I am able to examine this question using a scale of mainstream values and student respondents’ reported importance of these values. This scale is designed such that a higher number represents greater adherence to values and goals which society deems as acceptable or pro-social. To answer the primary question an examination of direct and indirect effects needs to be included. Following status frustration theory, I hypothesize that status frustration will be negatively related with mainstream values/goals. Further, I anticipate that mainstream values/goals will be negatively related to delinquency. Finally, status frustration and delinquency should be positively related. These results should then be analyzed together.

First to test the relationship between status frustration and mainstream values/goals, an Ordinary Least Square (OLS) regression was completed which allowed for controls based on all of the prior models. The results (shown in Table 4) suggest that the two items are negatively related (β= -0.292, p<.001). In line with status frustration theory, male students whose educational aspirations are disparate from their school performance report holding fewer mainstream values and goals than those who do not, controlling for all other factors. The next test examines the second hypothesis for this question. Results from the nested logistic regression models (shown in Table 3) demonstrate that mainstream values and delinquency are negatively related (β= -0.168, p<.001) such that for each additional value or goal a boy holds his likelihood of engaging in delinquency is decreased by 15%. This relationship is also in line with status frustration theory. The final element of this question is the direct relationship between status frustration and delinquency, which is anticipated to be a positive relationship. The
nested logistic regression models from Table 3 show that this relationship is positive ($\beta = 0.262, p < .001$) which indicates that male students whose goals and performance are incongruent are at higher risk of delinquency than male students who do not experience this disparity. In other words, all three relationships behave as hypothesized. Based the present analyses, status frustration theory is supported among males.

<table>
<thead>
<tr>
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<th>$\beta$</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Black</td>
<td>0.698 ***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.560 ***</td>
</tr>
<tr>
<td>Asian / Pacific Islander</td>
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</tr>
<tr>
<td>Previous Fighting</td>
<td>-0.281 ***</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>0.468 ***</td>
</tr>
<tr>
<td># of Rules</td>
<td>0.013 ***</td>
</tr>
<tr>
<td>Trust</td>
<td>0.093 ***</td>
</tr>
<tr>
<td>No Explanation of Expectations</td>
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</tr>
<tr>
<td># of Extracurricular Activities</td>
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<tr>
<td>Time Spent on Extracurricular Activities</td>
<td>0.118 ***</td>
</tr>
<tr>
<td>Status Frustration</td>
<td>-0.019 ***</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.599 ***</td>
</tr>
</tbody>
</table>

$R^2 = 0.120$

Note: *=p<.05, **=p<.01, ***=p<.001
Discussion regarding females

This project posed the same questions for female respondents as for male respondents. The overarching question for females is: can status frustration theory predict female delinquency? Ultimately, I hypothesize that as a result of changes in societal expectations for females, status frustration theory should operate similarly for females and males in accordance with the tenants of status frustration theory.

Question 1. First, does social class predict female delinquency? I hypothesize that social class will have a negative relationship with delinquency for females. According to status frustration theory I expect parental rules and trust will have negative relationships with female delinquency. Additionally I anticipate that receiving no explanations of expectations from parents will have a positive relationship with fighting in the senior year for females. First, for females, I hypothesize that the parenting/socialization measures and socioeconomic status will each be uniquely related to risk for delinquency.

The results in Model 3 of Table 5 indicate that socioeconomic status has a significant negative relationship with female delinquency controlling for parenting/socialization. For each 1-unit increase in socioeconomic status, females are 35% less likely to engage in delinquency. For females, the addition of one enforced rule at home decreases the chances of fighting by 6%. Similarly, for each unit increase in a female’s perceived trust from her parents, her likelihood for fighting decreases by 10%. Finally, girls who are not given explanations regarding parent expectations are 12% more likely to be delinquent than their peers whose parents talk to them about expectations. This suggests that the parenting/socialization measure for middle-class traits (trust) and lower-class traits (no explanation of expectations) are both predictive of
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
<th>Model 4</th>
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<th>Model 5</th>
<th></th>
<th>Model 6</th>
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<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( \text{Exp(( \beta ))} )</td>
<td>( \beta )</td>
<td>( \text{Exp(( \beta ))} )</td>
<td>( \beta )</td>
<td>( \text{Exp(( \beta ))} )</td>
<td>( \beta )</td>
<td>( \text{Exp(( \beta ))} )</td>
<td>( \beta )</td>
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<td>( \beta )</td>
<td>( \text{Exp(( \beta ))} )</td>
</tr>
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<td>0.092 ***</td>
<td>1.096</td>
<td>0.073 ***</td>
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<td>0.557 ***</td>
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<td>0.589 ***</td>
<td>1.802</td>
<td>0.580 ***</td>
<td>1.786</td>
<td>0.557 ***</td>
<td>1.745</td>
<td>0.719 ***</td>
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<td>1.554</td>
<td>0.448 ***</td>
<td>1.565</td>
<td>0.425 ***</td>
<td>1.530</td>
<td>0.419 ***</td>
<td>1.520</td>
<td>0.526 ***</td>
<td>1.692</td>
</tr>
<tr>
<td>Asian / Pacific Islander</td>
<td>0.769 ***</td>
<td>2.158</td>
<td>0.795 ***</td>
<td>2.214</td>
<td>0.780 ***</td>
<td>2.181</td>
<td>0.774 ***</td>
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<td>0.776 ***</td>
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<td>-0.057 ***</td>
<td>0.945</td>
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</tr>
<tr>
<td>Trust</td>
<td>-0.103 ***</td>
<td>0.902</td>
<td>-0.083 ***</td>
<td>0.920</td>
<td>-0.097 ***</td>
<td>0.908</td>
<td>-0.101 ***</td>
<td>0.904</td>
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<tr>
<td>No Explain Expectations</td>
<td>0.115 ***</td>
<td>1.122</td>
<td>0.108 ***</td>
<td>1.114</td>
<td>0.094 ***</td>
<td>1.099</td>
<td>0.120 ***</td>
<td>1.127</td>
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<td></td>
<td></td>
</tr>
<tr>
<td># of Activities</td>
<td>0.310 ***</td>
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<td>0.036 ***</td>
<td>1.037</td>
<td>0.050 ***</td>
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<td>-0.164 ***</td>
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<td>-0.141 ***</td>
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<td>1.454</td>
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<tr>
<td>Mainstream Values/Goals</td>
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<td></td>
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</tr>
<tr>
<td>Intercept</td>
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<td>-5.439 ***</td>
<td>0.004</td>
<td>-4.998 ***</td>
<td>0.007</td>
<td>-4.572 ***</td>
<td>0.010</td>
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<td>0.006</td>
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<td>0.109</td>
<td>0.114</td>
<td>0.118</td>
<td>0.126</td>
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</tr>
</tbody>
</table>

Note: *\( p<.05 \), **\( p<.01 \), ***\( p<.001 \)
delinquency as hypothesized. Additionally, the number of rules enforced at home is negatively related with delinquency as status frustration theory suggests. The relationship for the number of rules and delinquency was not as hypothesized for males. For males I suggest that the number of rules parents enforce could be influence by previous bad behavior causing an inverted relationship from that which was hypothesized. It appears from this analysis, though, that the risk of delinquency for females decreases as the number of rules enforced at home increases.

Next, nested F tests are used to determine if socioeconomic status and parenting/socialization not only hold significant relationships with female semester delinquency but, more importantly, also hold relationships which are distinct from one another. Nested F tests results (see Appendix C) reveal that for females the addition of the parenting/socialization measures from Model 2 to Model 3 (of Table 5) does not add significantly to the model for delinquency (F=1.501, n.s.). In other words, nested F test results indicate that including socioeconomic status and parenting/socialization does not provide any additional explanatory power beyond including only socioeconomic status. This finding is opposite the finding from the male subsample analyses. However, the coefficient for socioeconomic status is reduced in the model upon the inclusion of the parenting/socialization measures suggesting that these measures mediate the effect of socioeconomic status on delinquency for females. Based on these findings it may also be the case that socioeconomic status is more closely related to parenting styles for parents of female children. Question 2. Next I examine if school performance mediates the relationship between social class and female delinquency. Status frustration theory suggests that school performance is partially determined by one’s social class
and socialization which may result in status frustration and subsequent reaction formation and delinquency. Therefore, I hypothesize that the addition of school performance to the model will mediate the relationship demonstrated between socioeconomic status and delinquency among females. Specifically I expect school performance to reduce the effects of socioeconomic status regressed on delinquency, seen in Model 3 and Model 4 of Table 5, when such measures are included. When considering semester delinquency, the addition of school performance measures (extracurricular activity involvement and time spent in activities) does mediate the relationships between SES and female delinquency, reducing the coefficient for socioeconomic status (-0.429 in Model 3 to -0.389 in Model 4 of Table 5). Ultimately, this relationship works for females as it does for males and supports status frustration theory.

**Question 3.** The next question considers the mediation power of status frustration in the relationship between school performance and delinquency. I hypothesize that status frustration will mediate the relationships between the school performance measures and delinquency for females as it did for males, bolstering status frustration theory.

In Model 4 (Table 5) a measure of status frustration is added to the model. School performance is measured with two variables: extracurricular activity involvement and time spent in extracurricular activities. The effect of the number of activities in which a female student is involved on delinquency is mediated by status frustration as expected such that when status frustration is accounted for the relationship between the number of activities and delinquency drops (β= 0.310 in Model 4 to 0.036 in Model 5). The results demonstrate that the likelihood of a female student participating in delinquency drops from 36% to 4% once status frustration is included in the model. Conversely, the effect of time spent in extracurricular
activities on delinquency is not mediated by status frustration. However, status frustration theory postulates that accounting for status frustration should decrease the effects of school performance measures. Based on these analyses status frustration does not mediate the effect of either of the school performance measures on delinquency for males, and for females status frustration mediates the effect of participation in extracurricular activities on delinquency, but not the amount of time spent on those activities. Thus, the results only provide partial support of status frustration theory. A stipulation must be made regarding this conclusion, however.

For the purpose of this project, the types of extracurricular activities (varsity athletics, junior varsity athletics, special interest clubs, academic clubs, student government) were collapsed into one scale. However the nature of these activities varies in terms of their time and performance requirements as well as their applicability and impact on participating students’ futures. Additionally, I am measuring only participation in these activities, not success in the activities. It could be that due to my measurements for school performance, which is based strictly on extracurricular involvement, and status frustration, a measure tied closely to academic achievement. Students potentially could be succeeding in one realm of school life (involvement or academics) but not the other, which the data would not capture in the current operationalization of the concepts.

**Question 4.** Does status frustration result in the rejection of mainstream values/goals and are individuals who reject mainstream values/goals at increased risk for delinquency? According to status frustration theory, male students who experience status frustration should exhibit subsequent reaction formation, or a rejection of mainstream values and goals. Using a scale of mainstream values and student respondents’ reported importance of these values I
was able to demonstrate a positive relationship between status frustration and mainstream values/goals and a negative relationship between mainstream values/goals and delinquency. To answer the primary question an examination of direct and indirect effects needs to be included. I expect that status frustration will hold a negative relationship with mainstream values/goals. Additionally, I anticipate that mainstream values will have a negative relationship with delinquency. Finally, I hypothesize that status frustration will have a positive effect on delinquency. These results should then be analyzed together.

| Table 6. OLS regression of mainstream values/goals on predictor variables for females (n=6033) |
|---|---|
| Variables | β |
| Age | -0.083 *** |
| Black | 0.678 *** |
| Hispanic | 0.495 *** |
| Asian / Pacific Islander | 0.376 *** |
| Previous Fighting | -0.512 *** |
| Socioeconomic Status | 0.463 *** |
| # of Rules | 0.007 *** |
| Trust | 0.127 *** |
| No Explanation of Expectations | 0.007 * |
| # of Extracurricular Activities | 0.088 *** |
| Time Spent on Extracurricular Activities | 0.111 *** |
| Status Frustration | -0.109 *** |

Intercept | 0.988 *** |

R^2 | 0.121 |

Note: * = p<0.05, ** = p<0.01, *** = p<0.001
First to test the relationship between status frustration and mainstream values/goals, an Ordinary Least Squares (OLS) regression was completed which allowed for controls based on all of the prior models. The results (shown in Table 6) show that status frustration and mainstream values/goals are negatively related ($\beta = -0.379$, $p<.001$) for female students as they were for males. Female students whose educational aspirations are disjunctive from their school performance report holding fewer mainstream values and goals than those who do not, controlling for all other factors, as would be suggested by status frustration theory. The next test examines the second hypothesis for this question. Results from the nested logistic regression models (shown in Table 5) ultimately demonstrate that mainstream values hold a negative relationship with delinquency ($\beta = -0.135$, $p<.001$) such that for each additional value or goal a female student holds her likelihood of engaging in delinquency is decreased by 13%. This relationship is in line with status frustration theory. The final element of this question is the direct relationship between status frustration and delinquency, which is anticipated to be a positive relationship. The nested logistic regression models from Table 5 show that this relationship is positive and significant in the final model ($\beta = 0.433$, $p<.001$). This indicates that female students whose goals and performance are incongruent are at higher risk for delinquency. All of the three effects tested only one behave as hypothesized for female students, just as was shown for males. Based on the present analyses, status frustration theory is supported among females.
CONCLUSION

The question remaining, if status frustration theory is able to predict female delinquency (Question 5), has been held for the conclusion section as it calls for a broad conclusion regarding status frustration theory to be reached first. Status frustration theory maintains that four factors—social class, school performance, status frustration, and reaction formation—contribute to the development of delinquency. In its simplest form the theory states that children come to school either equipped with the tools for success in America’s educational system or not and that this is because of their social class and socialization. Student failure can lead to status frustration if the student values mainstream values/goals. Status frustration, in turn, prompts those failing to reject mainstream goals by engaging in delinquency.

To test this theory I have examined four main questions. First, can Cohen’s conceptualization of social class, a definition including both financial and parenting/socialization factors, predict delinquency? The theory details that school performance mediates social class and delinquency, which I test next. Status frustration theory also stipulates that status frustration should mediate the relationship between school performance and delinquency, which is the third question of this project. Finally, does status frustration affect delinquency through reaction formation, or mainstream values/goals specifically for this project, as status frustration theory postulates?

Within the male subsample, status frustration is generally supported. In fact, the only element of Cohen’s conceptualization which was completely unsubstantiated was his proposed definition of social class. Cohen (1955) called for financial information and
parenting/socialization factors to be used in combination when testing social class questions. However it is clear from the current analyses of male students that while finances/attainment and parenting/socialization are both predictive of delinquency, they are distinct concepts which should not be confounded into one measure. The measures of status frustration, mainstream values/goals, and delinquency operate generally as status frustration theory dictates. However, for males, status frustration did not mediate the effect of school performance measures on delinquency.

Finally, to address the fifth research question, I compare the results for males and females. Due to changes in societal expectations for females, I hypothesize that status frustration theory will be able to predict female delinquency to the same extent as it does for males. This hypothesis is also generally supported by the analyses. Two notable differences exist in the results between the male and female subsamples.

For female students, socioeconomic status and parenting/socialization measures are distinct concepts in terms of their influence on female delinquency. However, parenting styles appear to mediate a portion of the effect of socioeconomic status on delinquency for females while among males each has a distinct direct effect and there is no evidence of mediation. Additionally, the relationship between the number of activities in which a student participates and delinquency is different for males and females until the full model. The results suggest that for male students participation in more activities reduces their risk for delinquency until the full model. Once adherence to mainstream values/goals is controlled in the analysis, higher activity participation increases their risk for delinquency. Results for female students also demonstrate that more participation increases the likelihood of female delinquency. This risk is mediated by
status frustration but still remains a positive relationship. It could be the case that participation in extracurricular activities creates the opportunity for peer involvement and expands the opportunity for participation in delinquency. More detailed data would make examinations of this relationship possible and useful for parents, schools, and policy makers.

Another possible explanation could tie into Cohen’s stipulation that participation in activities on its own cannot properly represent a student’s performance. For instance a student could be involved in several extracurricular activities but not excelling in any of them, whereas a student could be involved in one activity and be one of the most successful students in the group. At the present time I am only able to measure participation rather than success and this may account for the unanticipated positive relationship between number of activities and delinquency. Unfortunately the current data source only allows for the capture of success in a sporting event in the form of captain or co-captain and for non-sporting organizations “success” could only be defined by holding a leadership position within the group. These thresholds would only allow for a few students to be defined as successful in relation to the number of people in a group or on a team, which could cause sample size issues. This finding is interesting as other theories would suggest that any participation or involvement in school activities should reduce risk for delinquency. For instance, social control maintains that a strong bond to school reduces delinquency (Agnew 2001; Cernkovich, Giordano, and Rudolph 2000). More in line with status frustration theory, Lee and Cohen (2008) found that administrative recognition, likely through some sort of success at school, reduces delinquency.

Ultimately it appears that status frustration theory is able to predict female and male delinquency. While Cohen’s status frustration theory accounts for only a small amount of
variance in delinquency, it has demonstrated utility in predicting delinquency and provided a meaningful mediator in relationships with school performance and delinquency. The concepts of status frustration and reaction formation could use further development and definition. However, the present examination suggests that status frustration theory should be revisited. As a theory, it could inform future research, especially questions concentrated on social class, education, assessment within America’s education system, and negative outcomes.

The present study highlights one potential mechanism by which school failure may result in risk for delinquency. If students recognize that the value and goal structure they have bought into is not reasonable for the ability level they hold, negative outcomes in the form of delinquency have been shown to occur. However, America’s educational policies and philosophies persist in expecting the same performance and values/goals from all students with little programming or resources dedicated to helping all students reach the same assessment standards. The present findings suggest that policy should address the needs of lower socioeconomic students for school success and also to maintain and expand services which target children who are not performing well in school. In other words, to reduce the likelihood of delinquent outcomes for lower socioeconomic students, policy makers need to place a priority on reducing the number of children living in low social class conditions by bettering their socioeconomic class through welfare, job assistance for parents, and the availability and affordability of quality childcare so their parents are able to succeed in those jobs. In addition, more direct educational programs may be useful to target at risk children, such as tutoring, mentoring, after-school programming, and even classes which target conduct and expectations
of behavior. These types of policies may improve the academic performance of students making it more likely they will consider themselves a “success” at school.

While this project improves on limitations which existed in previous studies, it contains limitations of its own. First, I have limited ability to fully operationalize all of Cohen’s (1955) variables. Specifically, status frustration and reaction formation are represented by proxies. While these approximations are the best the data will allow, they are not ideal. Also, the subcultural and school avoidance components to Cohen’s (1955) original work have not been included in this examination. Cohen (1955) proposed that reaction formation would lead to the development of a delinquent subculture, if one was not already in existence, or the joining of an existing subculture. This limitation could be resolved in future work, however. Finally, the school context, or school-level information, is not incorporated in this examination. The addition of official data on the socioeconomic variability of the schools could shed a different light on the dynamics of social class and how students compare themselves, their own social class, and their performance to others.
REFERENCES


Hughes, John, Robert Zagar, Robert Sylvies, Jack Arbit, Kenneth Busch, and Norman Bowers.  


<table>
<thead>
<tr>
<th>Measure</th>
<th>Question from Original Variable</th>
<th>R</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1988 Data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Class</strong></td>
<td>Total family income from all sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- SES</td>
<td>Are there family rules for your eighth grader about any of the following television-related activities?</td>
<td>1=Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>...What programs he/she may watch</td>
<td>2=No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>...How early or late he/she may watch television</td>
<td>6=Multiple responses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>...How many hours he/she may watch television overall</td>
<td>8=Missing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>...How many hours he/she may watch television on school days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Parenting/Socialization</strong></td>
<td>Are there family rules that are enforced for your eighth grader about any of the following activities?</td>
<td>1=Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>...Maintain a certain grade average</td>
<td>2=No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>...Doing homework</td>
<td>6=Multiple responses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Are the following mostly true or mostly false for you and your parents?</td>
<td>8=Missing</td>
<td></td>
</tr>
<tr>
<td>- Trust</td>
<td>... My parents trust me to do what they expect without checking up on me</td>
<td>1=True</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2=False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- No Explanation</td>
<td>... I often do not know why I am supposed to do what my parents tell me to do</td>
<td>6=Multiple responses</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8=Missing</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>What is your sex? (Mark one)</td>
<td>1=Male</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2=Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Which best describes you? (Mark one)</td>
<td>1=Asian or Pacific Islander</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2=Hispanic, regardless of race</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Previous Fighting

During the first semester of the current school year, how many times did any of the following things happen to you?
...I got into a physical fight with another student

0=Never
1=Once or twice
2=More than twice
6=Multiple responses
8=Missing

1990 Data

Status Frustration
(for construction)

As things stand now, how far in school do you think you will get?

1=Less than high school graduation
2=High school graduation only
3=Vocational, trade, or business school after high school: less than two years
4=Vocational, trade, or business school after high school: Two years or more
5=College program: Less than two years of college
6=College program: Two or more years of college (including two-year degree)
7=College program: Finish college (four- or five-year degree)
8=College program: Master’s degree or equivalent
9=College program: Ph.D., M.D., or other
For each of the school subjects listed below, mark the statement that best describes your grades from the beginning of ninth grade until now.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>R 1=Does not apply to me - I have not taken any classes in this subject yet</td>
</tr>
<tr>
<td>Math</td>
<td>2=Mostly A's</td>
</tr>
<tr>
<td>Math</td>
<td>3=About half A's and half B's</td>
</tr>
<tr>
<td>Math</td>
<td>4=Mostly B's</td>
</tr>
<tr>
<td>Math</td>
<td>5=About half B's and half C's</td>
</tr>
<tr>
<td>Math</td>
<td>6=Mostly C's</td>
</tr>
<tr>
<td>Math</td>
<td>7=About half C's and half D's</td>
</tr>
<tr>
<td>Math</td>
<td>8=Mostly D's</td>
</tr>
<tr>
<td>Math</td>
<td>9=Mostly below D</td>
</tr>
<tr>
<td>Math</td>
<td>10=Does not apply to me - my classes are not graded</td>
</tr>
</tbody>
</table>

96=multiple response
97=refusal
98=missing

School Involvement
- Activity Type

Please mark all that apply for EACH interscholastic activity and/or intramural activity that you have participated in THIS SCHOOL YEAR.

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intramural sports</td>
<td>1=School does not have</td>
</tr>
<tr>
<td>Intramural sports</td>
<td>2=Did not participate</td>
</tr>
<tr>
<td>Intramural sports</td>
<td>3=Participated in Intramural sports</td>
</tr>
<tr>
<td>Intramural sports</td>
<td>4=Participated on a JV/Freshman Team</td>
</tr>
<tr>
<td>Intramural sports</td>
<td>5=Participate on a Varsity Team</td>
</tr>
<tr>
<td>Intramural sports</td>
<td>6=Participated as a captain/co-captain</td>
</tr>
</tbody>
</table>

1=School does not offer
2=Did not participate
3=Participated
- **Activity Time**
  
  In a typical week, how much total time do you spend on all SCHOOL-SPONSORED extracurricular activities?

  - 0=None
  - 1=Less than 1 hours per week
  - 2=1-4 hours per week
  - 3=5-9 hours per week
  - 4=10-19 hours per week
  - 5=20 hours or more
  - 96=multiple response
  - 98=missing
  - 99=legitimate skip/not in wave

### 1992 Data

**Delinquency**

- **Semester Fighting**
  
  During the 1st semester I got into a physical fight at school
  During the 1st semester I got into a physical fight on the way to/from school

  - 0=never
  - 1=once or twice
  - 2=More than twice

**Reaction Formation**

- **Importance**
  
  How important is each of the following to you in your life?
  ...Getting a good education

  - 1=Not important
  - 2=Some importance
  - 3=Very important

- **Academic Expectations**
  
  How far in school do you think you will get?

  - 1=less than high school
  - 2=HS graduation only
  - 3=Less than two years of school (voc, trade, bus)
  - 4=Two years or more of school (voc, trade, bus)
  - 5=A degree from a voc, trade, or bus school
  - 6=Less than 2 years of college (college program)
  - 7=Two or more years of college, including 2-
81

year degree (college program)
8=Finish college, 4- or 5-year degree (college program)
9=Master's degree or equivalent (grad or prof school)
10=Ph.D., M.D., or other professional degree (grad or prof school)
11=Don't know

Age

When were you born?

Note: for column titled “R”, an R is used to indicate a variable which was reversed for the current analyses.
APPENDIX B

Correlation matrix for males (n=5884)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Fighting in Senior Year</td>
<td>1.00</td>
<td>0.04</td>
<td>-0.02</td>
<td>0.05</td>
<td>0.02</td>
<td>-0.04</td>
<td>0.21</td>
<td>-0.12</td>
<td>0.04</td>
<td>-0.07</td>
<td>0.06</td>
<td>-0.04</td>
<td>-0.07</td>
<td>0.03</td>
<td>-0.15</td>
</tr>
<tr>
<td>(2) Age</td>
<td>0.04</td>
<td>1.00</td>
<td>-0.06</td>
<td>0.07</td>
<td>0.04</td>
<td>-0.04</td>
<td>0.04</td>
<td>-0.17</td>
<td>-0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.04</td>
<td>0.02</td>
<td>-0.09</td>
</tr>
<tr>
<td>(3) White</td>
<td>-0.02</td>
<td>-0.06</td>
<td>1.00</td>
<td>-0.51</td>
<td>-0.60</td>
<td>-0.46</td>
<td>0.00</td>
<td>0.24</td>
<td>-0.05</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.05</td>
<td>-0.06</td>
<td>-0.08</td>
</tr>
<tr>
<td>(4) Black</td>
<td>0.05</td>
<td>0.07</td>
<td>-0.51</td>
<td>1.00</td>
<td>-0.10</td>
<td>-0.07</td>
<td>0.03</td>
<td>-0.18</td>
<td>0.07</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.03</td>
<td>0.10</td>
<td>0.04</td>
</tr>
<tr>
<td>(5) Hispanic</td>
<td>0.02</td>
<td>0.04</td>
<td>-0.60</td>
<td>-0.10</td>
<td>1.00</td>
<td>-0.09</td>
<td>0.01</td>
<td>-0.22</td>
<td>0.03</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.05</td>
<td>-0.04</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>(6) Asian / Pacific Islander</td>
<td>-0.04</td>
<td>-0.04</td>
<td>-0.46</td>
<td>-0.07</td>
<td>-0.09</td>
<td>1.00</td>
<td>-0.03</td>
<td>0.06</td>
<td>-0.02</td>
<td>0.01</td>
<td>0.00</td>
<td>0.04</td>
<td>-0.01</td>
<td>-0.06</td>
<td>0.08</td>
</tr>
<tr>
<td>(7) Previous Fighting</td>
<td>0.21</td>
<td>0.04</td>
<td>0.00</td>
<td>0.03</td>
<td>0.01</td>
<td>-0.03</td>
<td>1.00</td>
<td>-0.07</td>
<td>0.03</td>
<td>-0.10</td>
<td>0.10</td>
<td>-0.03</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.11</td>
</tr>
<tr>
<td>(8) Socioeconomic Status</td>
<td>-0.12</td>
<td>-0.17</td>
<td>0.24</td>
<td>-0.18</td>
<td>-0.22</td>
<td>0.06</td>
<td>-0.07</td>
<td>1.00</td>
<td>0.04</td>
<td>0.01</td>
<td>-0.03</td>
<td>0.19</td>
<td>0.18</td>
<td>-0.03</td>
<td>0.24</td>
</tr>
<tr>
<td>(9) # of Rules</td>
<td>0.04</td>
<td>-0.05</td>
<td>-0.05</td>
<td>0.07</td>
<td>0.03</td>
<td>-0.02</td>
<td>0.03</td>
<td>0.04</td>
<td>1.00</td>
<td>-0.06</td>
<td>0.01</td>
<td>0.03</td>
<td>0.01</td>
<td>0.07</td>
<td>0.01</td>
</tr>
<tr>
<td>(10) Trust</td>
<td>-0.07</td>
<td>0.00</td>
<td>0.01</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.10</td>
<td>0.01</td>
<td>-0.06</td>
<td>1.00</td>
<td>-0.18</td>
<td>0.07</td>
<td>0.03</td>
<td>-0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>(11) No Explanation of Expectations</td>
<td>0.06</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.01</td>
<td>0.02</td>
<td>0.00</td>
<td>0.10</td>
<td>-0.03</td>
<td>0.01</td>
<td>-0.18</td>
<td>1.00</td>
<td>-0.05</td>
<td>-0.05</td>
<td>0.01</td>
<td>-0.09</td>
</tr>
<tr>
<td>(12) # of Extracurricular Activities</td>
<td>-0.04</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.02</td>
<td>-0.05</td>
<td>0.04</td>
<td>-0.03</td>
<td>0.19</td>
<td>0.03</td>
<td>0.07</td>
<td>-0.05</td>
<td>1.00</td>
<td>0.40</td>
<td>-0.09</td>
<td>0.20</td>
</tr>
<tr>
<td>(13) Time Spent on Extracurricular Activities</td>
<td>-0.07</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.03</td>
<td>-0.04</td>
<td>-0.01</td>
<td>0.04</td>
<td>0.18</td>
<td>0.01</td>
<td>0.03</td>
<td>-0.05</td>
<td>0.40</td>
<td>1.00</td>
<td>-0.05</td>
<td>0.20</td>
</tr>
<tr>
<td>(14) Status Frustration</td>
<td>0.03</td>
<td>0.02</td>
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<td>-0.05</td>
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<td>-0.03</td>
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<tr>
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</table>

Note: Values in **bold** are significant at the p<.05 level or more.
### Correlation matrix for females (n=6033)

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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
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<td>(1) Fighting in Senior Year</td>
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<td>0.05</td>
<td>-0.02</td>
<td>0.04</td>
<td>0.11</td>
<td>-0.02</td>
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<tr>
<td>(4) Black</td>
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<td>0.03</td>
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<td>0.03</td>
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<td>0.05</td>
<td>0.01</td>
<td>-0.02</td>
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<tr>
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<td>0.05</td>
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<td>-0.01</td>
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<td>-0.07</td>
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<td>(13) Time Spent on Extracurricular Activities</td>
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<td>-0.12</td>
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<td>(15) Mainstream Values/Goals</td>
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</tr>
</tbody>
</table>

Note: Values in **bold** are significant at the p<.05 level or more.
APPENDIX C

Nested F-Test Results for the Addition of Parenting/Socialization Measures

\[ F = \frac{(R_2^2 - R_1^2)/k^2}{(1 - R_2^2)/(n - (k_1 + k_2) - 1)} \]


<table>
<thead>
<tr>
<th></th>
<th>Model 2 R²</th>
<th>Model 2 k</th>
<th>Model 3 R²</th>
<th>Model 3 k</th>
<th>N</th>
<th>F-Test Result</th>
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<td>0.093</td>
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<td>5884</td>
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<td>6</td>
<td>0.109</td>
<td>9</td>
<td>6033</td>
<td>1.50069</td>
</tr>
</tbody>
</table>

Note: * = p < .05, ** = p < .01, *** = p < .001