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# Social Mobility, Adolescents' Psycho-Social Dispositions, and Parenting

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## **Social Mobility, Adolescents' Psycho-Social Dispositions, and Parenting**

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*Abstract:* Psycho-social dispositions and parental influence are central in early status attainment models. We apply the Social Structure and Personality framework to investigate the contributions of adolescents' psycho-social dispositions to social mobility, and then the contributions of parents' socioeconomic status (SES) and parenting to adolescents' psycho-social dispositions. The Kaplan Longitudinal and Multigenerational Study includes data on two generations of respondents: the first generation of respondents was observed from seventh grade in 1971 until midlife, and the second generation, their children, was observed from adolescence to young adulthood. We find that upward social mobility is inhibited by poor psycho-social dispositions, particularly by negative self-feelings. SES, in turn, also affects psycho-social dispositions. Family income is more relevant than parental education for adolescents' locus of control, while parental education is more relevant (i.e., variance explained) for adolescents' negative self-feelings. Finally, our findings indicate that parenting can disrupt the cycle of social reproduction, with lower SES adolescents exhibiting lower levels of negative self-feelings if their parents are more attached or less authoritarian.

**Keywords:** social reproduction, status attainment, social psychology, parenting, socialization, child development

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## **Social Mobility, Adolescents' Psycho-Social Dispositions, and Parenting**

### **1. Introduction**

Stratification researchers theorized that psycho-social factors were central factors in some of the earliest status attainment models (Sewell et al., 1970), but the ways in which they are specifically implicated have less often been empirically investigated. The conundrum is that youth with lower socioeconomic status (SES), the persons whose upward social mobility is most dependent on positive psycho-social dispositions, are more likely than higher SES youth to feel less control over their lives and to feel depression and anxiety (Bodovski, 2014; Ross & Mirowsky, 2013). In this study, we investigate how adolescents' psycho-social dispositions contribute to their social mobility, and then how parents' SES and parenting contribute to adolescents' psycho-social dispositions. Just as psychological traditions can fail to recognize the centrality of structural forces in individuals' lives (Gergen, 2008), sociological emphasis on structural forces can eclipse the role of human agency and individual empowerment (Neckerman & Torche, 2007). The Social Structure and Personality (SSP) framework, presented in (McLeod et al., 2015), builds on House's (1977) attempt to unite isolated domains of social psychology by integrating sociology and social psychology. Building on the social psychological model of status attainment (Mortimer et al., 2017), the SSP framework facilitates a rich integration of multilevel processes in the study of the social psychology of inequality.

We use data from the Kaplan Longitudinal and Multigenerational Study (KLAMS), which began with a survey of seventh graders in Houston in 1971. This is one of the few large-scale intergenerational longitudinal studies in the US that follows cohorts of both parents and their children from adolescence to young adulthood. To first establish how our psycho-social measures are implicated in social mobility, we investigate whether and how adolescents' locus of

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control and self-feelings moderate the relationship between their SES as an adolescent and their SES as an adult (H1a-c). Shifting focus within the cycle, we next examine whether family income or parental educational attainment are more relevant for adolescents' locus of control and self-feelings (H2a-b). Finally, interested in parents' ability to disrupt the cycle of social reproduction, we investigate whether parenting moderates the relationship between family SES and adolescents' psycho-social dispositions (H3a-b). With rising tides of conservatism in the US and Europe, increasing inequality, and dwindling structural supports (Inglehart & Norris, 2016; Piketty & Saez, 2004), individual agency and empowerment are increasingly important for upward social mobility.

Intergenerational data, essential for studies of social reproduction, is rare. This longitudinal data facilitates investigation into status attainment and more robust adjustment for selection processes. The National Longitudinal Study of Youth (NLSY) is close in design to KLAMS but representative of the nation. Yet, unlike NLSY, KLAMS focuses on the adolescent offspring of both male and female first generation respondents, which allows for a more comprehensive analysis of the influence of differences in family SES and parenting. Finally, our focus, adolescent psycho-social dispositions, is an international priority that has received insufficient research and policy attention (Becker & Birkelbach, 2018; Collishaw et al., 2016; Lawrence et al., 2016; Patton et al., 2016). Drawing from the status attainment, social psychology, child development, and parenting literatures, this study contributes a multilevel focus on social reproduction and socialization. With a systematic application of the SSP framework and a focus on psycho-social dispositions, we contribute theoretically and empirically to the social mobility literature.

## **2. Background**

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## ***2.1 Summary of Study***

Elder (1994, 1998) describes the key principles of life course theory as historical time and place, the timing of lives, linked or interdependent lives, and human agency. Adolescence, central in each of our analyses, is an essential life stage in studies considering social mobility. Adolescents are still under the influence of the prior generation but are also making decisions that will reverberate through their future life stages. We capitalize on data from an under-utilized intergenerational study, KLAMS, to investigate how psycho-social dispositions and parenting are implicated in the social reproduction of inequality. KLAMS' original cohort was first surveyed as adolescents in the 1970s. Between 1994 and 2002, a seventh wave of data was collected from the original cohort and a first wave of data was collected from their offspring (most of whom were adolescents at the time). We call the original cohort "first generation respondents" and their children "second generation respondents."

McLeod and colleagues (2015) extend and narrow life course theory in their Social Structure and Personality (SSP) framework. This framework of the social psychology of inequality aims to identify how aspects of the larger social system affect individuals and then how individuals affect social systems. The SSP framework involves three principles. In the *SSP Psychological Principle*, psychological processes are identified to determine how macro-level conditions influence individuals. While the sociological literature usually uses "macro" to reference societal structures, McLeod and colleagues employ the components of macro-social conditions (such as income, education, or occupation) as influences of individual outcomes of interest. We apply this principle by investigating whether first generation respondents' psycho-social dispositions differentiate how their SES as an adolescent relates to their SES as an adult. The *SSP Components Principle* attempts to understand which components of macro-social

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conditions are most relevant for individual outcomes. We investigate whether family income or parents' educational attainment are more relevant for second generation respondents' psycho-social dispositions as adolescents. The *SSP Proximity Principle* identifies proximate experiences in which individuals resist macro-level influences. We apply this principle by investigating how the psycho-social dispositions of second generation respondents are shaped by their family SES and the parenting style of their parent. More specifically, we examine the relationship between parenting (attachment, involvement, authoritative discipline, authoritarian discipline) and adolescents' psycho-social dispositions across the family SES distribution. Not assuming the relationship is static, we specifically investigate whether parenting moderates the relationship between family SES and adolescents' psycho-social dispositions. Figure 1 provides a conceptual model of the study.

Insert Figure 1 About Here

## ***2.2. Psychological Principle: Contributions of Adolescents' Psycho-Social Dispositions to Social Mobility***

Julian Rotter (1954) introduced the term "locus of control" to describe differences in the degree to which people perceive themselves as having control over their own lives. People with more external control attribute life outcomes to forces external to themselves, such as fate, destiny, or powerful others, while people with more internal control, feel responsible for their successes and failures (Ross & Mirowsky, 2013). A long line of research shows that more external control results from low SES, as a result of differences in culture, life experiences, socialization, and actual material limitations (Conger et al., 2009; Cook et al., 2005; Houle & Martin, 2011; Mabry & Kiecolt, 2005; Mirowsky et al., 1996; Shifrer, 2019; Shifrer & Sutton, 2014). And then, external control

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produces lower SES through poorer academic, health, and psychological outcomes (Falci, 2011; Mortimer, 2012; Offerhaus, 2013; Pudrovska et al., 2005; Ross & Broh, 2000; Spengler et al., 2016).

The concept of "negative self-feelings" was developed by Howard B. Kaplan and is widely employed in deviance research, as well as the sociologies of emotions, education, and health (Love, 2014). It combines self-derogation, depression, and anxiety but is more specifically meant to capture a distressful affect resulting from negative evaluations of the self (Pals & Kaplan, 2013). This measure also recognizes the close relationship between low self-esteem and depression (Rosenberg et al., 1989). All the aspects of negative self-feelings are more prevalent across low SES adolescents (Bodovski, 2014; Cook et al., 2005; Falci, 2011; Houle & Martin, 2011; Porche et al., 2016; Twenge & Campbell, 2002). Negative self-feelings are likely to inhibit upward social mobility because low self-esteem and depression associate with poorer physical health (Miller et al., 2007; Trzesniewski et al., 2006), increased criminality (Trzesniewski et al., 2006), and lower educational and economic prospects (Cornaglia et al., 2012; Harter, 2012; Porche et al., 2016; Trzesniewski et al., 2006). For these reasons, external control and negative self-feelings are likely to be key mechanisms in the reproduction of social disadvantage.

In alignment with the SSP Psychological Principle's emphasis on examining the "psychological processes that determine 'how, and to what extent macro-social phenomena affect the individual'" (McLeod et al., 2015, p. 6), we investigate whether and how the adolescent psycho-social dispositions of first generation respondents moderate the relationship between their SES as an adolescent and their SES as an adult. Wang et al. (1999) use data from the National Longitudinal Study to show that negative social psychological indicators (external control, low self-esteem) influence adult SES

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even net of measures of childhood SES. Andersson & Bergman (2011) use a sample of Swedish individuals to show that task persistence, a correlate of internal control, relates positively to adult SES even net of adolescent SES and intelligence. Data from the British Cohort Study of 1970 shows internal control and self-esteem independently and positively predict adult SES (von Stumm et al., 2009), and that internal control mediates the relationship between childhood SES and status attainment (Bohmann, 2019). We build on these previous findings by focusing on a distinctive and diverse US sample, and by statistically interacting adolescent SES with adolescent psycho-social dispositions rather than just including SES as a control variable. **Psychological Principle**

### **Hypothesis—Moderating Influence of Psycho-social dispositions on Social Mobility**

**(H1).** The positive relationship between SES as an adolescent and SES as an adult is smaller for respondents with higher levels of external control (H1a) or higher levels of negative self-feeling (H1b). External control and negative self-feelings will retain independent moderating effects even when considered in tandem (H1c).

### **2.3. Components Principle: Contributions of SES to Adolescents' Psycho-Social Dispositions**

SES is a relative measure of an individual's macro-social position and can be conceptualized in a multitude of ways, with social class often juxtaposed against SES (Wohlfarth 1997). Bradley and Corwyn (2002) describe SES as building on social class's emphasis on economic position by incorporating prestige. Krieger, Williams, and Moss (1997) describe social class as differences in social relationships that precede differences in occupation, income, wealth, and education. Some disciplines emphasize differences in capital (Bradley and Corwyn 2002). Both studies that use composite measures of SES (Ahlin and Antunes 2015; Bandura et al. 2001; Falci 2011; Maqsd and Rouhani 1991; Moilanen and Shen 2014; Ross, Mirowsky, and



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Cockerham 1983) and measures of single SES components, such as educational attainment (Conger et al. 2009; Mirowsky and Ross 1983; Ross and Willigen 1997; Ward 2013), income (Lachman and Weaver 1998; Lever, Pinol, and Uralde 2005; Ross and Mirowsky 1992), and occupation (Kalil and DeLeire 2002) connect lower SES to more external control. Mirowsky et al. (1996) focused on education and income but did not consider their simultaneous contributions.

We know lower SES contexts negatively influence adolescents' psycho-social dispositions but it is less clear which aspects of SES matter most. The SSP Components Principle encourages the identification of the components of macro-social conditions most relevant for micro-level outcomes (McLeod et al., 2015). We adjudicate between two classic measures of SES, the measures of SES available in the data: parents' educational attainment and family income. Family income materially relates to the degree to which life is within one's control (Mittal & Griskevicius, 2014), as well as to the extent to which the adolescent is able to present a self that inspires positive evaluations from others and positive self-feelings (Duncan & Magnuson, 2001; Gecas & Schwalbe, 1983; Luhtanen & Crocker, 1992). Yet, educated parents' higher levels of dominant cultural capital may translate to more clear expectations regarding children's educational attainment, as well as a manner of interacting that suggests respect for children's own aspirations (Lareau, 2003), and ultimately children's sense of control over their own lives. And then, more highly educated parents may be better equipped to provide techniques for life and emotion management (Menaghan & Parcel, 1991; Ward, 2013), and to expose children to dominant culture norms surrounding internal control and positive self-feelings (Gan et al., 2007; Wang & Ollendick, 2001). Although research

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more often focuses on how family income relates to achievement (Duncan & Magnuson, 2001), Shifrer (2019) finds family income associates more closely than parents' educational attainment with adolescents' locus of control. Menaghan & Parcel (1991), though, find parents' education independently relates to positive personality qualities even after controlling for parents' occupation and income. **Components Principle**

### **Hypotheses—The Relevance of SES for Adolescents' Psycho-Social Dispositions**

**(H2).** Although the previous literature is mixed, we hypothesize family income is more relevant for adolescents' external control (i.e., explains more variation) than parents' educational attainment because income provides concrete means for controlling one's life (H2a). With knowledge useful for managing more subjective aspects of psycho-social dispositions, parents' educational attainment is more relevant for adolescents' negative self-feelings than family income (H2b).

### ***2.4. Proximity Principle: Contributions of Parenting to Adolescents' Psycho-Social Dispositions***

As much as poorer psycho-social dispositions are central in the entrenched cycle of reproduced disadvantage, both resulting from and predicting lower SES (Andrew & Hauser, 2011; Conger & Dogan, 2007; Doren & Grodsky, 2016; Elder et al., 1992; Reynolds & Johnson, 2011), life course theorists recognize individuals as "agents of their own lives" (Elder, 1994). Families are more well positioned than any other social institution to disrupt the cycle of social reproduction (Mortimer & Finch, 1996; Taylor et al., 2004). In accordance with the SSP Proximity Principle's focus on the proximate experiences through which individuals resist or reproduce structural forces (McLeod et al., 2015), we take a contemporaneous perspective

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(Mortimer et al., 2017) to investigate how first generation respondents who are parents intervene in the relationship between family SES and their adolescents' psycho-social dispositions.

The degree of attachment parents build with their children has well-documented psychological benefits for children (Fomby & Sennott, 2013; Oldfield et al., 2016; Rosenfield et al., 2005; Schleider et al., 2015; Smokowski et al., 2015; Stafford et al., 2016). Among adolescents of a similar family SES, adolescents whose parents are involved in their education may have lower external control and negative self-feelings (Crosnoe et al., 2002; Gregg & Washbrook, 2011; Hango, 2007). School is a central realm during childhood, and parents who discuss school with their children may communicate their offspring are worthy of their time (Hair et al., 2008). Parent-child discussions may also allow for direct instruction in, or modeling of, beneficial traits and behavior (Barber et al., 2005; Fergusson et al., 2008; Ross & Broh, 2000; Sim, 2000). Lower SES parents who engage in these parenting practices may reduce the extent to which their offspring experience negative self-feelings or external control (Marin et al., 2008; Shifrer, 2019; Smokowski et al., 2015).

Interwoven with how parents communicate to their children, disciplinary style may also differentiate psycho-social dispositions for adolescents with similar family SES. Some studies find parental control fosters self-discipline and internal control in offspring (Jacobson & Crockett, 2000; Whitbeck et al., 1997), while others find parental control promotes external control (DeGarmo et al., 1999; Grolnick & Ryan, 1989) and depression (Barber et al., 2005). The distinction may lie in whether parents exert control through authoritative discipline, a consistent reasoning approach, or through authoritarian discipline, a more harsh inconsistent approach (Caprara et al., 2010; Feldman & Rosenthal, 1991; Gecas & Seff, 1990; Jocoson & McLoyd, 2015; Lamborn et al., 1991;

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Lareau, 2003; Soenens et al., 2006; Trusty & Lampe, 1997; Whitbeck et al., 1997). While many studies document how parenting relates to children's psycho-social dispositions, we examine this relationship across the distribution of family SES.

We expect that parenting may moderate (i.e., relate multiplicatively rather than just additively) how family SES relates to adolescents' psycho-social dispositions. Previous research finds cultural qualities differentiate how family SES relates to health (Brown et al., 2016; Farmer & Ferraro, 2005) and educational (Battle & Lewis, 2002; Beattie, 2002; Sirin, 2005) outcomes, presenting the possibility that positive parenting interventions can disrupt the negative relationship between a lower family SES and adolescents' psycho-social dispositions. Family SES moderating the influence of parenting is an alternative interpretation of the same statistical approach aimed at identifying whether parenting moderates the influence of family SES. As such, previous studies that find the positive parenting efforts of higher SES parents are more effective (Kalil et al., 2012), or that certain parenting strategies are more influential for the outcomes of higher SES youth than lower SES youth (Domina, 2005; McNeal, 2001) may also support the possibility that the combined influence of family SES and parenting is multiplicative rather than additive. **Proximity Principle Hypothesis—Parenting Disrupting Reproduction of Social Disadvantage (H3).** We expect that parenting moderates how family SES relates to adolescents' psycho-social dispositions with parents who are highly attached, highly involved, or highly authoritative increasing the degree to which a higher SES reduces (i.e., the interaction coefficient is negative and significant) adolescents' external control (H3a) or negative self-feelings (H3b). We expect parents who are highly authoritarian, in contrast, will decrease the degree to which a higher SES reduces (i.e., the interaction coefficient is positive and significant) adolescents' external control (H3a) or negative self-feelings (H3b).

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### **3. Data and Methods**

We use data on first generation respondents and their children (second generation respondents) from an intergenerational study KLAMS (Pals & Kaplan, 2013). KLAMS began with an in-class survey of 7,627 seventh graders in 18 randomly selected schools in the Houston Independent School District in 1971 (described as Time 1 in this study). Representing 50% of all seventh grade children in the district that year, most of these first generation respondents were 12-13 years old. Of these 7,627 first generation respondents, 4,605 were surveyed in the seventh wave of data collection about 25 years later (between 1994 and 1998, described as Time 2 in this study). *Analytic Sample 1*, used for analyses focused on the social mobility of first generation respondents, includes the 4,605 first generation respondents surveyed at both Times 1 and 2. There were no missing values on the dependent variable for these analyses (Time 2 SES). We use all 7,627 first generation respondents who participated at Time 1 to construct measures of Time 1 SES; because there were 844 first generation respondents surveyed at Time 2 who had not been surveyed at Time 1, we are able to use 5,449 first generation respondents to construct measures of Time 2 SES (detailed in Online Table 2).

The children of the first generation (7,519 second generation respondents) were first interviewed between 1994 and 2002 (Time 2 in this study). They ranged in age from 11 to 37, but most were 12 to 16 years old. To understand how family SES and parenting shapes adolescents' psycho-social dispositions, *Analytic Sample 2* includes 3,416 second generation respondents, along with measures describing their parent who was a first generation respondent. Among first generation respondents who had children, we only retain one child per family (for reasons described below), negating the need to adjust for clustering. We first exclude 800 second generation respondents who were over 18 during their parents' Time 2 survey, as first generation

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respondents were only asked to describe parenting for offspring 18 or younger. We then exclude 3,221 second generation respondents who were not the oldest sampled child from their family, as first generation respondents were asked to focus on their oldest 11-18 year old child if they felt they parented their children differently. Finally, we exclude one of each of 82 twins (randomly selected) so that these families do not unduly weight the results and to maintain single level data. Of the 3,416 second generation respondents, we exclude an additional 22 cases when predicting their external control, and 26 cases when predicting their negative self-feelings, because of missing values on these dependent variables.

Insert Table 1 About Here

We provide descriptive statistics on first generation respondents at Time 1 in Table 1, and on first and second generation respondents at Time 2 in Table 2. To understand selection into Analytic Sample 2 (i.e., selection into parenthood and our other inclusion criteria described in the previous paragraph), statistics on first generation respondents are stratified by analytic sample. The characteristics of first generation respondents in each sample are largely similar with the exception that first generation respondents linked to a second generation respondent have lower average SES, are more likely to be married, and have more children in their household. Zero to thirty-five percent of cases were missing across first generation variables, with missingness highest on the measures describing the parenting they experienced as youth (these measures did not load onto a common factor and so were not combined into a scale). The only second generation variables with missing values—psycho-social dispositions, family structure—were missing for less than 1% of second generation respondents. We address missing values on independent variables with multiple imputation by the MICE system of chained equations (White et al., 2011).

Insert Table 2 About Here

### **3.1. Measures**

First generation respondents described their *family income at Time 1* in their adolescence by responding 'yes' or 'no' to two questions: "Do you have a rich family?" and "My family is pretty poor." We recoded these variables into a three category measure of family income: 1) Poor, 2) Neither poor nor rich, 3) Rich. First generation respondents described their *family income at Time 2* through categorical responses describing both their own and their spouse's income (ranging from 1 = 'Under \$3,000 per year' to 14 = '\$75,000 or more per year'). We first constructed variables recoding each category to its median dollar value, and then summed these measures. To capture salient differences when using this variable as a predictor in regression modeling, we divided the summed variable by ten-thousand, such that the variable increases in units of \$10,000. Because the benefits of family income are contingent on household size (Organisation for Economic Co-operation and Development, 2018), our models also include control variables for relationship status and number of children in the household.

We measure *parents' educational attainment at Time 1* through the maximum value of first generation respondents' responses to two questions, "What is the most schooling your mother or step-mother (father or step-father) has had?" This measure retains the original variables' four categories: 1) Did not graduate from elementary school, 2) Graduated from elementary school but not from high school, 3) Graduated from high school, 4) Graduated from college. First generation respondents reported their own *educational attainment at Time 2*, in response to "How many years of formal schooling have you completed?" To address small cell sizes and for more meaningful categories, we collapsed the original eleven-category variable into seven categories: 1) Junior high or less (combining 'Some junior high' and 'Graduate junior

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high’), 2) Some high school, 3) High school (combining ‘Completed GED’ and ‘Graduate high school’), 4) Some college (combining ‘Graduated vocational or technical school’ and ‘Some college (undergraduate)’), 5) Graduated college, 6) Some post-graduate education, and 7) A post-graduate degree. We include ‘Some vocational or technical school’ with ‘Some high school’ because this category occurred below completing GED and graduating high school in the hierarchy of the original variable. Ideally, educational attainment would be measured in the same way at Times 1 and 2 but we are limited by the measures available in the data.

Finally, in order to understand the first generation’s social mobility, we constructed measures of *Time 1 SES* and *Time 2 SES* by averaging respective family income and educational attainment variables. For comparable scales before averaging, we constructed new versions of each measure of family income and educational attainment rescaled to range from 0 to 1. We represent each category on the new variable by the median cumulative proportion of cases within each category, with  $e$  representing the value on the original educational attainment variable and  $cp$  the cumulative proportion of respondents at each  $e$ , the new educational attainment variable equals:

$$\underline{cp_{e-1} + ((cp_e - cp_{e-1})/2)}$$

For instance, if the cumulative proportion of first generation respondents who attained a high school degree (or lower) is 0.40 and the cumulative proportion who attained some college (the next higher category) is 0.71, respondents who attained some college are coded as 0.56 on the new variable  $[0.40 + ((0.71 - 0.40)/2)]$  (fully detailed in Online Table 1). Rather than ordinal categories that inaccurately portray education or income differences as equally spaced, the new variables reflect each case’s education and income relative to others’ levels during the same time period. Fletcher & Han (2019) recently published an econometric defense that approaches like



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this result in measures that are comparable over time, specifically addressing temporal changes in the value and meaning of education and income. Because it is possible our results are contingent on our choice to construct measures of SES through averaging, we conduct sensitivity analyses with measures of SES constructed through cluster analysis. Previous studies have taken a similar approach to construct SES measures (Aungkulanon et al., 2017; Cabieses et al.; Kennedy et al., 2007). Cluster analysis is an exploratory technique aimed at clustering cases into groups similar or dissimilar along specified measures (Everitt et al., 2011). As recommended by Everitt et al. (2011), we use a partitioning method of clustering (Kmeans specifically) and the Euclidean measure of distance. We estimate each cluster analysis eight times, specifying from three to ten clusters, using the Caliski and Harabasz pseudo-F index to determine the number that produces the most distinct clusters (six for Time 1 and nine for Time 2). To determine the order of the clusters (with lowered number clusters indicating lower SES), we first estimate the mean value of each SES component within each cluster, rank those means across clusters, and then sum each clusters' ranks (detailed in Online Table 2). To adjudicate between clusters with the same rank sum, we also estimate a sum of ranks that includes the rank of each cluster's mean on the SES measure constructed by averaging. Our confidence in the reliability of our constructed measures of SES is increased by the fact that the clusters order in the same way regardless of which sum of ranks we use.

This paragraph describes our analytic approach for constructing all scale variables used in this study. See the Appendix for a full list of items used to construct all scales. We first recode survey items for directionality. For survey items used to construct parent attachment, authoritative discipline, and authoritarian discipline, we recode some variables (detailed in Appendix) for uniformity of range (e.g., a three-point scale is recoded to 0, 0.5, and 1 to facilitate

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combining with dichotomous items). This is a conservative approach given some studies combine continuous and categorical survey items (e.g., (Austin, 2020)). For scales that combine categorical variables, we use polychoric principal component analysis (which does not assume an underlying continuous structure (Kolenikov and Angeles 2004)). For remaining scales, we use factor analysis. For scales combining only dichotomous items, we report the Kuder-Richardson (KR) coefficient of reliability—otherwise, we report the Cronbach's alpha coefficient. Whereas an alpha greater than 0.70 is considered reasonable, KR coefficients need only be greater than 0.50 (Glen 2016). For respondents missing on more than three survey items, the scale was set to missing as bias is a likely result of constructing "pro-rated" scales (Mazza, Enders and Ruehlman 2015).

We measure adolescents' psycho-social dispositions with *external locus of control* and *negative self-feelings* scales. The questions used in these scales were identically phrased across adolescent surveys for the first and second generations. The external control scales average 8 dichotomous reports of adolescents' sense that their life outcomes are not within their control and their general sense of pessimism. KR reliability coefficients are 0.83 for the first generation and 0.84 for the second generation. The negative self-feelings scales average 33 dichotomous self-reports of depression, low self-esteem, anxiety, distraction, escapism, and externalizing behaviors. Although combining these affects is less common in the social psychology literature, our confidence in this measure is increased by the fact that it loads on the same latent factor and through its use in previous peer-reviewed studies (Kaplan et al., 2001; Kaplan & Lin, 2000; Kaplan & Lin, 2005; Stiles & Kaplan, 2004; Stiles et al., 2000). KR reliability coefficients are 0.53 for the first and 0.58 for the second generation. Finally, we standardize each measure to increase comparability across measures and to more tangibly evoke effect size, allowing us to

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interpret findings in terms of differences in standard deviations (SDs). This study's hypotheses and analyses build on findings from previous literature that a lower SES relates to poorer psycho-social dispositions for adolescents. Sensitivity analyses in Online Table 3 show that these measures from the KLAMS data conform to this previous literature, with the adolescent psycho-social dispositions of both first and second generation respondents significantly lower if their Time 1 SES was lower.

Parenting is measured with four scales that average reports from first and second generation respondents, likely improving measure validity. We use second generation respondents' answers to the survey items that align with the gender of the first generation respondents (mother for female, father for male). The *parental attachment* scale uses 17 items to measure the degree to which affection and open communication are evident in the relationship between the parent and the adolescent ( $\alpha=0.84$ ). The *parental involvement in education* scale uses 15 items to measure the extent to which the first generation respondent is involved in their children's educational issues ( $\alpha=0.78$ ). The *authoritative discipline* scale uses 19 items to measure whether the first generation respondent employs consistent rules and disciplines by recognizing good behavior with praise or physical affection ( $\alpha=0.83$ ). The *authoritarian discipline* scale uses 13 items to measure whether the first generation respondent maintains unclear expectations and disciplines through anger, contempt, or physical punishment ( $\alpha=0.68$ ). These two disciplinary styles load as distinct factors. We standardize each parenting measure. This study's hypotheses and analyses build on a previous literature that relates family SES to parenting styles. Sensitivity analyses in Online Table 3 show these measures from KLAMS data conform to that previous literature. Relative to first generation respondents with higher adolescent SES, first generation respondents with lower adolescent SES

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exhibit significantly lower levels of attachment with their offspring, involvement in their education, and authoritative discipline, as well as significantly higher levels of authoritarian discipline.

*Controls* describing Time 2 include first generation respondents' relationship status and number of marriages, as well as the number of children in the household and whether both biological parents of the second generation respondent live in the household. We also include controls for the second generation respondents' birth order and age when their parent completed the Time 2 survey. Controls focused on the adolescence of first generation respondents (Time 1) include family SES, whether they lived with both biological parents, the parenting they experienced (one scale detailed in the Appendix and seven dichotomous reports that did not load onto a single factor), and their psycho-social dispositions (described in previous paragraph). Finally, we control for the gender of first and second generation respondents, and the race of first generation respondents.

### ***3.2. Analytic Plan***

First, we investigate how first generation respondents' psycho-social dispositions as adolescents moderate their social mobility (H1a-c) with four models: 1) a first model showing the baseline relationship between their SES as an adolescent (Time 1) and their SES as an adult (Time 2) with control variables included, 2) a second model adding a statistical interaction between their adolescent external control and their adolescent SES, 3) a third model adding a statistical interaction between their adolescent negative self-feelings and their adolescent SES, and 4) a fourth model including both statistical interactions in the same model. All these models control for first generation respondents' gender and race. Because these results could be

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contingent on our choice to construct SES measures through averaging, we also estimate these models using measures of SES constructed through cluster analysis.

To examine whether family income or parental educational attainment is more relevant for adolescents' psycho-social dispositions (H2a-b), we first use two linear regression models to predict the external control and negative self-feelings of second generation respondents with both Time 2 measures of SES (family income and parent's educational attainment). These models are also adjusted for second generation respondents' gender and birth order, as well as all control variables that describe the adolescence of first generation respondents (Time 1). To further assess the relevance of each measure of SES for adolescents' psycho-social dispositions, we post-estimate squared semipartial correlations, using Williams's (2003) PCORR2 package. We report the values in the 'SemiP<sup>2</sup>' column, i.e., the variance in the dependent variable that is not estimated by the other predictors in the model but is estimated by the predictor of interest (Williams, n.d.). The alternative for assessing relative strength of predictors, standardized regression coefficients, is problematic, particularly for categorical predictors (Menard, 2011). Of note, variance explained, or 'dispersion importance,' is not the only measure of variable importance; 'level importance,' or effect size, is a measure of variable importance that is contingent on the size of the coefficient (i.e., the effect on the level of the outcome measure) (Achen 1982).

Finally, to understand how parents might intervene or differentiate how family SES relates to adolescents' psycho-social dispositions (H3a-b), we predict second generation respondents' adolescent psycho-social dispositions with linear regression models (Online Tables 4-11). The first models show the main effects of SES and parenting on adolescents' psycho-social dispositions, while the second models include statistical interactions between SES and

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parenting to determine if parenting moderates how SES relates to adolescents' psycho-social dispositions. In addition to all controls used in models focused on H2a-b, the first and second models include controls for Time 2 measures of the relationship status and number of marriages of first generation respondents, the number of children in the household, whether both biological parents of the second generation respondent live in the household, and the second generation respondent's age when their parent completed the Time 2 survey. The additional controls included in models focused on H3a-b are not appropriate for models focused on H2a-b because they would function as potential mediators in the relationship between family SES and adolescents' psycho-social dispositions rather than confounders/alternative explanations. Recent high-profile articles advocate for examining how group differences in outcomes vary across the distribution of the predictor of interest, rather than relying on a single interaction effect (Breen, Holm, and Karlson 2014; Mustillo, Lizardo, and McVeigh 2018). If the interaction in the second model is statistically significant, suggesting that differences in the parenting behavior moderates the way family SES relates to adolescents' psycho-social outcomes, we post-estimate predicted mean psycho-social outcomes at the lowest (5<sup>th</sup> percentile) and highest (95<sup>th</sup> percentile) levels of each parenting behavior, at the 5<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, and 95<sup>th</sup> percentiles of family SES. We use Long and Freese's (2014) *mlincom* command to show whether the relationship between family SES and adolescents' psycho-social dispositions is significantly different depending on parenting, at each level of family SES. This facilitates our ability to determine if H3a and H3b are supported, i.e., if parenting compensates for the negative effect of a lower SES on adolescents' psycho-social dispositions. We also use the *mlincom* command from (Long & Freese, 2014) to determine the statistical significance of the difference in adolescents' psycho-social dispositions between adolescents with a family SES at the 25<sup>th</sup> percentile and adolescents

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with a family SES at the 75<sup>th</sup> percentile, among adolescents experiencing the lowest and highest levels of each measure of parenting. This provides another perspective of how parenting moderates the relationship between family SES and adolescents' psycho-social disposition by specifying whether each line's slope is significantly different from zero.

## **4. Results**

### ***4.1. Contributions of Adolescents' Psycho-Social Dispositions to Social Mobility***

To investigate how adolescents' psycho-social dispositions moderate the relationship between adolescent SES and adult SES (H1a-c), Table 3 shows linear regression models predicting Time 2 SES for first generation respondents. In Model 1, we affirm adolescents' SES as an adolescent (Time 1) relates positively (0.26) to their SES as an adult (Time 2). In Model 2, the interaction between Time 1 SES and adolescents' external control is statistically significant and negative (-0.05). This means that each one-SD increase in external control decreases the positive relationship between Time 1 and Time 2 SES by 0.05. Similarly, Model 3 shows that each one-SD increase in negative self-feelings decreases the positive relationship between Time 1 and Time 2 SES by 0.07. Considering these psycho-social traits in tandem in Model 4, the negative effect of adolescents' external control on the positive relationship between Time 1 SES and Time 2 SES is no longer statistically significant. While the negative moderating effect of adolescents' negative self-feelings is also slightly reduced, the interaction coefficient for negative self-feelings remains significant. Consistent with our hypotheses, the positive relationship between SES as an adolescent and SES as an adult is smaller for respondents with higher levels of external control (H1a) or higher levels of negative self-feeling (H1b), but the negative moderating influence of an external control is accounted for by the negative moderating influence of these adolescents' heightened negative self-feelings (counter to H1c). Our

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confidence in these findings is increased by the similarity of results, regardless of whether we use measures of SES constructed by averaging (Models 1-4) or by cluster analysis (Models 5-8).

Insert Table 3 About Here

#### ***4.2. Contributions of SES to Adolescents' Psycho-Social Dispositions***

To investigate whether family income or parental educational attainment are more relevant for the psycho-social dispositions of second generation respondents as adolescents (H2a-b), Model 1 in Table 4 predicts adolescent external control, and Model 2 predicts negative self-feelings. Adolescents' external control decreases significantly (-0.03 SDs), with every \$10,000 per year increase in family income (Model 1). The relationship between family income and adolescents' negative self-feelings, in contrast, is only marginally significant. Higher levels of parental educational attainment relate significantly to both outcomes, with adolescents with more highly educated parents exhibiting lower external control (Model 1) and lower negative self-feelings (Model 2) on average than adolescents with less educated parents. We use semi-squared partial correlations to further assess the relevance of each SES component for adolescents' psycho-social dispositions. Family income, with a larger semi-squared partial correlation, appears to explain more of the variation in adolescents' external control than parents' educational attainment (Model 1) (supporting H2a). Semi-squared partial correlations in Model 2, in contrast, suggest that parents' educational attainment explains more of the variation in adolescents' negative self-feelings than family income (supporting H2b).

Insert Table 4 About Here

#### ***4.3. Contributions of Parenting to Adolescents' Psycho-Social Dispositions***

To explore whether parenting behaviors moderate how SES relates to adolescents' psycho-social dispositions, specifically by compensating for the negative relationship between a



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lower SES and adolescents' psycho-social dispositions, we first estimate regression models predicting the external locus of control and negative self-feelings of second generation respondents as adolescents (Online Tables 4-11). These analyses focus on the psycho-social dispositions of second generation respondents as adolescents, and the parenting of their parent who was a first generation respondent, at Time 2. The interactions between family SES and each parenting measure are never statistically significant when predicting adolescents' external locus of control (Online Tables 4-7), suggesting parenting does not moderate how family SES relates to adolescents' external control. In contrast, when predicting adolescents' negative self-feelings, the interactions between family SES and parental attachment (Online Table 8) and parental involvement in education (Online Table 9) are negative and statistically significant, just as the interaction coefficient for family SES and authoritarian parenting is positive and statistically significant (Online Table 11). While these findings support Hypothesis 3b, differences in authoritative parenting do not appear to moderate how family SES relates to adolescents' negative self-feelings (Online Table 10). To more fully understand how these types of parenting differentiate the relationship between family SES and adolescents' negative self-feelings, Figures 2 through 4 show predicted means post-estimated from these regression models. We use solid trend lines for parenting behaviors perceived as more positive (e.g., high attachment, high involvement, low authoritarian discipline) and dashed trend lines for the opposite extremes of these parenting behaviors. We indicate the statistical significance of the difference by parenting style in adolescents' psycho-social dispositions at each level of family SES, and then whether the change in adolescents' psycho-social dispositions across the SES distribution is significantly different from zero next to each parenting legend.

Insert Figure 2 About Here

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Figure 2 focuses on how differences in parental attachment moderate the relationship between family SES and adolescents' negative-self feelings. At each level of family SES, adolescents whose parents exhibit the highest levels of attachment have significantly lower negative self-feelings than adolescents whose parents exhibit the lowest levels of attachment. Narrowing the focus on the lowest SES youth (5<sup>th</sup> percentile), the predicted mean negative self-feelings of youth with the most highly attached parents (-0.29) is significantly lower ( $p < 0.001$ ) than the predicted mean negative self-feelings of youth with the least attached parents (0.59). This supports H3b. The relationship between family SES and adolescents' negative self-feelings is actually reversed by differences in parental attachment. Among adolescents whose parents are highly attached, lower SES adolescents have significantly higher negative self-feelings than higher SES adolescents ( $p < 0.05$ ), as we would expect. Yet, among adolescents whose parents are least attached, lower SES adolescents have significantly lower negative self-feelings than higher SES adolescents ( $p < 0.05$ ).

Insert Figure 3 About Here

Figure 3 focuses on how differences in parental involvement moderate the relationship between family SES and adolescents' negative-self feelings. Counter to H3b, parental involvement does not compensate for the negative relationship between a lower family SES and adolescents' negative self-feelings, with the difference by parental involvement in adolescents' negative self-feelings not statistically significant in lower SES families (5<sup>th</sup> and 25<sup>th</sup> SES percentile). In fact, among the lowest SES youth, the predicted mean negative self-feelings of youth with the most involved parents (0.10) is slightly higher than the predicted mean negative self-feelings of youth with the least involved parents (0.01); nonetheless, this difference, as already stated, is not statistically significant. The differences by parental involvement in

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adolescents' negative self-feelings are only significant in middle and higher SES families, with these adolescents' negative self-feelings significantly lower if their parent is highly involved. Like differences in parental attachment, the relationship between family SES and adolescents' negative self-feelings is reversed by differences in parental involvement. Among adolescents whose parents are highly involved, lower SES adolescents have significantly more negative self-feelings than higher SES adolescents ( $p < 0.05$ ), as we would expect. Yet, among adolescents whose parents are least involved, lower SES adolescents have significantly lower negative self-feelings than higher SES adolescents ( $p < 0.05$ ).

Insert Figure 4 About Here

Figure 4 focuses on how differences in parental authoritarian discipline moderate the relationship between family SES and adolescents' negative-self feelings. The negative self-feelings of adolescents appear to benefit from lower levels of authoritarian discipline at each level of family SES. H3b is supported, with the predicted mean negative self-feelings of lower SES youth (5<sup>th</sup> or 25<sup>th</sup> percentile) with the least authoritarian parents (respectively, -0.43 and -0.52) significantly lower ( $p < 0.001$ ) than the predicted mean negative self-feelings of lower SES youth with the most authoritarian parents (respectively, 0.72 and 0.74). Like differences in parental attachment and involvement, the relationship between family SES and adolescents' negative self-feelings is reversed by differences in parental authoritarian discipline. Among adolescents whose parents are least authoritarian, lower SES adolescents have significantly higher negative self-feelings than higher SES adolescents ( $p < 0.05$ ), as we would expect. Yet, among adolescents whose parents are the most authoritarian, lower SES adolescents have significantly lower negative self-feelings than higher SES adolescents ( $p < 0.05$ ).

Insert Figure 5 About Here

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## **5. Discussion**

Embedding SSP theories on the social psychology of inequality within status attainment theory, this study investigates how adolescents' psycho-social dispositions contribute to their social mobility, and then how parents' SES and parenting contribute to adolescents' psycho-social dispositions. Results demonstrate that adolescents' psycho-social dispositions matter for social mobility, with upward social mobility particularly inhibited for adolescents with negative self-feelings. Not only do adolescents' psycho-social dispositions differentiate the relationship between adolescent and adult SES but, with the cycle of social reproduction, they are a product of adolescent SES. We find differences in family income are more relevant than parents' education for adolescents' external control, while differences in parents' educational attainment are more relevant than family income for adolescents' negative self-feelings. Finally, our findings indicate that parenting can disrupt the cycle of social reproduction in some cases, with a lower SES less detrimental for adolescents' negative self-feelings if their parents are more attached or less authoritarian.

### ***5.1. Contributions of Adolescents' Psycho-Social Dispositions to Social Mobility***

We find that adolescents' negative self-feelings significantly inhibit their upward social mobility. While adolescents with more external control also experience inhibited upward social mobility, this negative moderating influence is explained by the negative moderating influence of their similarly heightened negative self-feelings. In other words, the positive relationship between a person's SES as an adolescent and SES as an adult is weaker for persons with more negative self-feelings. These findings demonstrate the SSP Psychological Principle, i.e., the principle that "psychological processes" may "determine 'how, and to what extent macro-social phenomena affect the individual'" (McLeod et al., 2015, p. 6). SES represents a macro-social

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phenomena but its effect is moderated by individuals' psychological processes. This is a clear indicator of the importance of social psychological phenomena, particularly negative self-feelings, in processes surrounding stratification and social mobility.

## ***5.2. Contributions of SES to Adolescents' Psycho-Social Dispositions***

We find that both adolescents' external control and negative-self feelings appear to be improved by parents with higher levels of educational attainment, whereas only adolescents' external control appears to be improved by a higher family income. And then, family income explains more of the variation in adolescents' external control than parents' educational attainment, whereas parents' educational attainment explains more of the variation in adolescents' negative self-feelings. A study using national data on the US similarly finds family income associates more closely with adolescents' locus of control than parents' occupations and educational attainment (Shifrer, 2019); negative self-feelings were not considered. These findings support our hypotheses and the emphasis of the SSP Components Principle on identifying the macro-social conditions most relevant for micro-level outcomes (McLeod et al., 2015). SES encapsulates material, cultural, and social differences, and it appears different aspects of SES are important in their own ways. Income is an aspect of SES that more closely approximates tangible resources and power. In the case of external control, low SES youth may accurately recognize limitations in the degree to which they control their life outcomes. Some even argue that external control, or attributing failures to external forces, can provide psychological relief (Glavin & Schieman, 2014), just as seeming psychosocial competence can mask negative physiological responses to stress (Brody et al., 2013; Chen et al., 2015; Miller et al., 2015). Parents' educational attainment may shape

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adolescents' psycho-social dispositions, independently of family income, through dominant cultural norms related to self-management and the value in maintaining a positive self-image. Answering the call from (McLeod et al., 2015) to "link macro, meso, and micro levels of analysis," findings like these broaden our understanding of the multi-dimensional effects of macro-level hierarchies on individuals' psyches.

### ***5.3. Contributions of Parenting to Adolescents' Psycho-Social Dispositions***

Overall, our findings suggest that parents can disrupt the cycle of social reproduction in some ways, namely by reducing the negative self-feelings of lower SES adolescents through higher levels of parental attachment and lower levels of authoritarian discipline. These findings provide some support for the SSP Proximity Principle's emphasis that individuals resist or reproduce structural forces through proximate experiences (McLeod et al., 2015). They also support life course theory's centering of the potential for agentic human behavior to shape life trajectories (Elder, 1994). In contrast, we do not find that parenting moderates how family SES relates to adolescents' external control. Yet, our first set of findings indicate negative self-feelings drive the moderation of how adolescent SES relates to adult SES rather than external control, perhaps suggesting external control is simply less salient than negative self-feelings in the whole cycle of social reproduction. Differences in levels of authoritative discipline do not moderate how family SES relates to external control or negative self-feelings.

In a finding that suggests parenting is not a sufficient remedy for social reproduction, parental involvement in education only significantly benefits adolescents' negative self-feelings if they are higher SES. Previous studies similarly find parental involvement matters more for higher than lower SES students (Domina, 2005; McNeal, 2001), but these studies focus on achievement outcomes rather than psycho-social dispositions. With parental involvement

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multidimensional, parental involvement through high aspirations, for instance, is uniformly beneficial, whereas parental involvement through contact with the school relates negatively to academic achievement (Fan, 2001). Researchers functionally conceptualize of contact with the school as proactive efforts by parents to support their child's success (Domina, 2005). Contact with the school, though, often reflects reactive steps to a child who is already struggling academically or behaviorally. This type of parental involvement may be more common among lower SES parents, whose children are more likely to be struggling in school, and yet who face more barriers toward involvement, such that involvement reflects reaction to dire situations.

Our findings also seem to indicate that "poor parenting" is less detrimental for the negative self-feelings of lower SES adolescents, with the negative self-feelings of lower SES adolescents significantly lower than those of higher SES adolescents among adolescents whose parents are least attached, the least involved, and the most authoritarian. This study builds on the previous literature on SES differences in parenting style. But notions of "good" parenting shift over time and space, and, as such, may not consistently relate to better outcomes for children (Harris, 1998). It may be that lower SES parents are less attached, less involved, and more authoritarian for good reason or with good intentions (Lareau, 2003), reasons and intentions their offspring recognize. Lower SES adolescents may have different expectations of their parents than higher SES adolescents as a result of their distinctive contexts and peers. For instance, with authoritarian discipline more common in lower SES families than in higher SES families (Friedson, 2016; Prevoo & Tamis-LeMonda, 2017; Ryan et al., 2016), authoritarian discipline may be perceived by lower SES children as normal and even as an indicator of their parents' investment in their upbringing (Davidov & Khoury-Kassabri, 2013; Rudy & Grusec, 2006). Higher SES parents and adolescents, on the other hand, are potentially more aware of dominant

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cultural narratives surrounding "good parenting," such that a higher SES parent who is not attached, not involved, or more authoritarian is experiencing real dysfunction. Similarly, their higher SES offspring may perceive these styles of parenting more critically, such that their self-feelings are more negatively impacted than those of lower SES adolescents. These findings represent interesting points of future consideration for studies on social class, parenting, and socialization.

#### **5.4. Limitations**

Some limitations merit mention, beginning with issues of measure validity and reliability. First, a more comprehensive measure of SES would be ideal, incorporating occupational prestige, for instance, along with income and educational attainment. Family SES is only measured at two time-points for first generation respondents and one for second generation respondents, presenting the possibility the measure does not accurately reflect the trajectory of respondents' social class. An individual's SES varies over time (Duncan & Magnuson, 2001) but true social mobility is rare across generations, let alone the span of one person's childhood years (Neckerman & Torche, 2007). This study would also benefit from income data that was collected continuously rather than categorically, or at least in terms of categories that increase at regular intervals. Only 4,605 of the original 7,627 first generation respondents were surveyed during our study's Time 2 (about 25 years later). Respondents who attrit may be relatively disadvantaged such that our findings are biased by the relative advantage of the respondents in our sample. In this case, the strength, at least, of the positive relationship between Time 1 SES and Time 2 SES should be interpreted with caution.

Combining depression and self-evaluation in the negative self-feelings scale leaves it unclear which emotion came first. The degree to which social causation or social selection are



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relevant often depends on the type of psycho-social dispositions emphasized in the study (Johnson et al., 1999). With some finding external control correlates with negative self-feelings (Kliewer & Sandler, 1992), and others not (Mirowsky & Ross, 1990), this study contributes an independent exploration of each. For some cases, parenting behaviors are observed at the same time as adolescent psycho-social dispositions, leaving temporal order unclear. Ideally, these measures capture some time-invariant qualities of parenting. Similarly, with subjective social status more salient for psycho-social dispositions than objective social status (Elgar et al., 2016; Quon & McGrath, 2015), it is possible first generation respondents with higher negative self-feelings are more likely to describe their families as 'poor.'

In addition to focusing on Houston and not relying on probability sampling, findings from this study are limited in generalizability because the survey question on parenting instructed respondents to focus on their oldest child. The current applicability of this study is limited by its focus on adolescents in high school in the early 1990s. Elder (1998) documents the importance of historical context for understanding the opportunities and constraints individuals experience in their life course and human development. On the other hand, it is unlikely that the measures of psycho-social dispositions are outdated, as differences in these measurements are more conceptually than temporally driven (Bursik & Martin, 2006). Nonetheless, different measures of psycho-social dispositions could yield different results (Ward, 2013). Twenge (2006) found anxiety and depression have increased across generations in the US, and it is possible SES disparities in psycho-social dispositions are more stark today, with inequality in the US increasing (Western & Rosenfeld, 2011). Contemporary patterns in these processes may also differ because of shifts in parenting norms and social media use. Parents today, particularly middle class mothers (Romagnoli & Wall, 2012), are increasingly likely to engage in 'intensive

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parenting' or 'helicopter parenting.' Intensive parenting describes parents' attempts to manage and control risk factors in order to enable optimal outcomes for offspring (Shirani et al., 2012), with more resilient children a specific goal (Hoffman, 2010). Lareau (2003) finds that middle class parents' concerted cultivation, perhaps akin to intensive parenting, produced children willing to challenge authority. In these ways, future studies may find parenting contributes more substantially to the psycho-social dispositions of higher SES youth. Alternatively, critics argue intensive parenting produces 'helpless' children (Barron, 2016), such that we might expect fewer disparities by SES in psycho-social dispositions among contemporary youth.

Focus on increased internet and social media use coincides with arguments that the psycho-social struggles of adolescence have increased over time (Cornaglia et al., 2012), with unceasing demands for public-ready presentations of self, the encroachment of the peer group into the home, and increased risk of cyberbullying or sexting. Most conclude these concerns are overstated (Gross, 2004), with major adolescent themes remaining constant despite these social changes (Boyd, 2014). This suggests gaps in psycho-social dispositions may be more marked among contemporary youth than the youth in this study, as higher SES youth tend to have more access to these technologies (Schradié, 2012). Nonetheless, while excessive internet or social media use may relate to poorer psycho-social dispositions (Livingstone, 2008), studies find the average adolescent user experiences increased social connections and access to information (Bushman & Huesmann, 2006). Ultimately, these temporal changes in our modes of social interaction suggest the importance of building on the findings of this study as new data becomes available.

## **5.5. Conclusion**

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Although we find that adolescents' psycho-social dispositions are significantly implicated in their likelihood of upward mobility and that family SES significantly contributes to adolescents' psycho-social dispositions, we also find that parenting can disrupt the relationship between family SES and adolescents' psycho-social dispositions. This study applies a dynamic new theoretical framework on the social psychology of inequality from Jane McLeod and colleagues (2015): The Social Structure and Personality framework. This study also uses data from a rich under-utilized study, the Kaplan Longitudinal and Multigenerational Study (KLAMS). KLAMS is one of the few large-scale intergenerational longitudinal studies in the US that follows cohorts of both parents and their children from adolescence to young adulthood, and that includes offspring of both males and females from the first generation cohort. Future research should replicate these findings with more recent data, once available.

## **Appendix: Survey Items Used to Construct Scales**

**Negative Self-Feelings** (Generation 1 Time 1 (Kuder-Richardson reliability coefficient=0.83), Generation 2 Time 2 (Kuder-Richardson reliability coefficient=0.84))

### *Depression*

- Do you often feel downcast and dejected?
- On the whole, would you say you are a fairly happy person? (*reverse-coded*)
- Do you wish you could be as happy as others seem to be?
- Do you get a lot of fun out of life? (*reverse-coded*)
- Would you say that most of the time you feel in good spirits? (*reverse-coded*)
- My life is a lot more satisfying now than it used to be. (*reverse-coded*)

### *Low self-esteem*

- I certainly feel useless at times.
- I feel I do not have much to be proud of.
- I wish I could have more respect for myself.
- I sometimes wish I could be punished for the bad things I have done and start all over.
- Sometimes I think I expect too much of myself.

### *Anxiety*

- Do you often have trouble getting to sleep or staying asleep?
- I get nervous when things aren't just right.
- Are you often bothered by bad dreams?
- Are you often bothered by nervousness?
- Are you often bothered by shortness of breath when not exercising or not working hard?
- I worry a lot more now than I used to.

### *Distraction*

- Do you often have difficulty keeping your mind on things?
- Do you often lose track of what you were thinking?
- I spend a lot of time daydreaming.
- Do you often have trouble sitting still for a long time?
- Do you have a lot of accidents?
- Does your memory seem to be all right (good)? (*reverse-coded*)

### *Escapism*

- I would like to travel with a circus or carnival.
- Do you sometimes wish you were a little kid again?

### *Externalizing behaviors*

- Are you often troubled by your hands sweating so that they feel damp and clammy?
- Do you often bite your fingernails?
- Are you often bothered by pressures or pains in the head?
- Within the last year did you attempt to take your own life?
- Within the last year did you think about or threaten to take your own life?
- Do you often get angry, annoyed or upset?
- Do you like to spend a lot of time by yourself?
- Were you sent to a psychiatrist, psychologist, or social worker within the last year?

**External Control** (Generation 1 Time 1 (Kuder-Richardson reliability coefficient=0.53),  
Generation 2 Time 2 (Kuder-Richardson reliability coefficient=0.58))

It's mostly luck if one succeeds or fails.  
You can do very little to change your life.  
By the time I am 30 I will probably have a good job and a good future ahead of me.  
(reverse-coded)  
Often I feel that I don't have enough control over the direction my life is taking.  
I doubt if I will get ahead in life as far as I would really like.  
There isn't much chance that a kid from my neighborhood will ever get ahead.  
I would do a lot better in life if society didn't have the cards stacked against me.  
If a kid like me works hard he can get ahead. (reverse-coded)

**Negative Relationship with Parent** (Generation 1 Time 1 (Kuder-Richardson reliability  
coefficient=0.62))

As long as I remember, my parents have put me down  
My parents do not like me very much  
My parents hardly trust me to do something on my own  
My parents are not interested in what I say or do  
My parents love me less when I'm bad than when I'm good  
Important what my parents think of me (reverse-coded)  
My parents punish me for something, other times they don't mind  
Experiences outside of home make me wonder if my parents' ideas are right or not

**Parent-Offspring Attachment** (Time 2 (alpha=0.84))

*Generation 2 Time 2 (0=Hardly ever or never, 0.5=Sometimes, 1=Often (recoded to  
range from 0 to 1))*

Show affection to your mother/father  
Mother/father openly show affection to you  
Discuss personal problems with your mother/father?  
Mother/father discusses her/his personal problems with you?

*Generation 2 Time 2 (0=False, 1=True):*

I feel close to my parents.  
I depend on my parents for advice and guidance.  
My parents and I often do things together that we all enjoy.  
I openly show affection to my parents.  
I find it easy to discuss problems with my parents.  
My parents try to understand my point of view.  
I want to be like my parents when I am an adult.  
If I were in trouble, I would tell my parents.  
My parents and I often talk about my future educational and job plans.

*Generation 1 Time 2 (0=Hardly ever or never, 0.5=Sometimes, 1=Often (recoded to  
range from 0 to 1))*

Child shows affection to you

You openly show affection to children  
Children discuss things that happened at school with you  
Children discuss personal problems with you

**Parent Involvement in Education** (Time 2 (alpha=0.78))

*Generation 2 Time 2 - How often would you say your mother/father (0=Hardly ever or never, 1=Sometimes, 2=Often):*

discusses things that happened at school?  
talks to your teachers to find out how you are doing at school?  
helps you with school work?  
attends the parent open house to meet your teachers?  
volunteers to help out at your school?  
encourages you to become involved in extracurricular activities at school?  
encourages you to do better in school?  
encourages you to be more popular at school?

*Generation 1 Time 2 - How often would you say you (0=Hardly ever or never, 1=Sometimes, 2=Often):*

talk to teachers to find out how they are doing at school?  
help with school work?  
attend the parent open house to meet teachers?  
volunteer to help out at the school?  
encourage to become involved in extracurricular activities at school?  
encourage to do better in school?  
encourage to be more popular at school?

**Authoritative Discipline** (Time 2 (alpha=0.83))

*Generation 2 Time 2 (0=False, 1=True)*

My parents believe children should be raised according to firm rules.  
Parent(s) have definite rules about not smoking?  
Parent(s) have definite rules about not drinking alcohol?  
Parent(s) have definite rules about not using drugs?  
Parent(s) have definite rules about homework?  
Parent(s) have definite rules about not hanging around with certain kinds of kids?  
Parent(s) have definite rules about time for being in at night?  
Parent(s) have definite rules about eating dinner with the family?  
Parent(s) have definite rules about dress and hair?  
Parent(s) have definite rules about time spent watching television?  
Parent(s) have definite rules about helping around the house?

*Generation 2 Time 2 (0=Hardly ever or never, 0.5=Sometimes, 1=Often (recoded to range from 0 to 1))*

When you have been especially good, how often does your mother/father:  
kiss or hug you?  
let you have something special to eat?  
praise you?

let you have extra privileges?

buy you something special?

*Generation 2 Time 2 (0=Hardly ever or never, 0.5=Sometimes, 1=Often (recoded to range from 0 to 1))*

When you do something wrong, how often does your mother/father:

talk to you about what you did wrong?

encourage you to do better in the future?

How often would you say your mother/father knows where you are and who you are with when you are away?

*Generation 1 Time 2 (0=Hardly ever or never, 0.5=Sometimes, 1=Often (recoded to range from 0 to 1))*

When children have been especially good, how often do you:

kiss or hug them?

praise them?

How often would you say you:

allow children to leave the house without telling you? (*reverse-coded*)

know the parents of the children's best friends?

#### **Authoritarian Discipline (Time 2 (alpha=0.68))**

*Generation 2 Time 2 (0=Hardly ever or never, 0.5=Sometimes, 1=Often (recoded to range from 0 to 1))*

When you do something wrong, or something your mother/father does not like, how often does s/he:

act cold and unfriendly?

express anger or speak sharply?

make fun of you?

take away your privileges?

joke about it?

physically punish you?

send you to your room or make you stay alone?

*Generation 2 Time 2 (0=False, 1=True)*

I was often punished unfairly as a child.

My parents are too strict with me.

My parents hardly ever trust me to do something on my own.

My parents love me less when I am bad than when I am good.

Sometimes my parents will punish me for doing something that at another time they didn't mind me doing.

Very often I do not know whether my parents would approve or not approve of what I am doing.

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**Table 1: Descriptive Statistics on First Generation Respondents at Time 1**

	Analytic Sample 1	Analytic Sample 2	Range
Family income:			
Poor	0.07	0.07	
Neither poor nor rich	0.77	0.76	
Rich	0.16	0.16	
Parents' educational attainment:			
Did not finish elementary	0.02	0.03	
Did not finish high school	0.09	0.13	
Finished high school	0.40	0.35	
Finished college	0.48	0.48	
Socioeconomic status	0.51 (0.19)	0.50 (0.19)	[0.03, 0.92]
Negative self-feelings	-0.03 (0.99)	0.00 (0.99)	[-2.05, 3.35]
External locus of control	-0.09 (0.97)	-0.04 (0.98)	[-1.22, 3.66]
Male	0.46	0.42	
Race:			
White	0.62	0.58	
Black	0.27	0.29	
Mexican-American	0.10	0.12	
Other	0.02	0.02	
Lives with both biological parents	0.72	0.71	
Reports a negative relationship with parents	0.24 (0.20)	0.25 (0.20)	[0, 1]
Other reports on parents:			
Let me do what I want	0.50	0.52	
Children should be raised with firm rules	0.64	0.67	
Get nervous when I'm away	0.52	0.54	
Always expect a lot of me	0.62	0.62	
Agree how I should be raised	0.14	0.13	
When dislike what I do, feel bothered	0.32	0.31	
Don't know if they approve of what I do	0.58	0.59	

Source: Kaplan Longitudinal and Multigenerational Study.

Note: Analytic Sample 1 includes 4,605 first generation respondents. Analytic Sample 2 includes 3,416 first generation respondents linked to a second generation respondent. Standard deviations below means in parentheses.



**Table 2: Descriptive Statistics on First and Second Generation Respondents at Time 2**

	Analytic Sample 1		Analytic Sample 2		Range
<b>First Generation Respondents</b>					
Family income (ten thousands)	5.36	(3.34)	5.35	(3.20)	
Respondents' educational attainment:					
Junior high or less	0.02		0.02		
Some high school	0.07		0.08		
Completed high school	0.21		0.24		
Some college	0.38		0.40		
College degree	0.17		0.15		
Some graduate school	0.06		0.05		
Graduate degree	0.08		0.05		
Socioeconomic status	0.52	(0.24)	0.50	(0.23)	
Relationship status:					
Single	0.30		0.23		
In relationship	0.08		0.08		
Married	0.62		0.69		
Number of marriages:					
Zero	0.16		0.06		
One	0.61		0.67		
Two	0.19		0.22		
Three or more	0.04		0.05		
Number of children in household: <sup>a</sup>					
Zero	0.45		0.19		
One to two	0.44		0.64		
Three or more	0.11		0.16		
Parental attachment			-0.03	(0.98)	[-2.81, 1.57]
Parental involvement in education			-0.13	(0.99)	[-2.91, 2.27]
Authoritative discipline			-0.01	(0.98)	[-3.48, 1.88]
Authoritarian discipline			0.03	(0.93)	[-0.93, 5.11]
<b>Second Generation Respondents</b>					
Negative self-feelings			-0.01	(0.99)	[-1.76, 3.65]
External locus of control			-0.06	(0.98)	[-0.89, 4.58]
Male			0.50		
Lives with both biological parents			0.44		
Birth order:					
Middle child			0.13		
Oldest child			0.67		
Youngest child			0.07		
Only child			0.12		
Age when parent completed Time 2 survey			14.21	(2.53)	[11, 25]

Note: Analytic Sample 1 includes 4,605 first generation respondents. Analytic Sample 2 includes 3,416 first generation respondents linked to a second generation respondent. Standard deviations to the right of means in parentheses.

a-Analytic Sample 2 includes first generation respondents with no children because the number of children question focused on children living in the home while the parenting questions were not contingent on the child living at home.

**Table 3: Moderating Effect of Adolescents' Psycho-Social Dispositions on Social Mobility (RQ1) - Linear Regression Models Predicting First Generation Respondents' Socioeconomic Status (SES) as an Adult (Time 2)**

	Baseline Model		External Control as Moderator		Negative Self-Feelings as Moderator		Both as Moderators	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
	Model 1	Model 2	Model 3	Model 4				
Time 1 SES (averaging)	0.26 ***	(0.02)	0.26 ***	(0.02)	0.27 ***	(0.02)	0.27 ***	(0.02)
Adolescent external control	-0.05 ***	(0.00)	-0.02 **	(0.01)	-0.05 ***	(0.00)	-0.04 ***	(0.01)
Adolescent negative self-feeling	-0.01 **	(0.00)	-0.01 **	(0.00)	0.02 **	(0.01)	0.02 +	(0.01)
<b>External control X Time 1 SES</b>			<b>-0.05 **</b>	<b>(0.02)</b>			<b>-0.02</b>	<b>(0.02)</b>
<b>Negative self-feelings X Time 1 SES</b>					<b>-0.07 ***</b>	<b>(0.02)</b>	<b>-0.06 **</b>	<b>(0.02)</b>
Respondent is male	-0.01 *	(0.01)	-0.01 *	(0.01)	-0.01 *	(0.01)	-0.01 *	(0.01)
Respondent's race (ref=White):								
Black	-0.11 ***	(0.01)	-0.11 ***	(0.01)	-0.11 ***	(0.01)	-0.11 ***	(0.01)
Mexican-American	-0.09 ***	(0.01)	-0.09 ***	(0.01)	-0.09 ***	(0.01)	-0.09 ***	(0.01)
Other	-0.12 ***	(0.03)	-0.12 ***	(0.03)	-0.12 ***	(0.03)	-0.12 ***	(0.03)
Constant	0.43 ***	(0.01)	0.42 ***	(0.01)	0.42 ***	(0.01)	0.42 ***	(0.01)
	Model 5	Model 6	Model 7	Model 8				
Time 1 SES (cluster analysis)	0.45 ***	(0.03)	0.45 ***	(0.03)	0.45 ***	(0.03)	0.45 ***	(0.03)
Adolescent external control	-0.54 ***	(0.04)	-0.33 **	(0.10)	-0.54 ***	(0.04)	-0.49 ***	(0.11)
Adolescent negative self-feeling	-0.12 **	(0.04)	-0.12 **	(0.04)	0.24 *	(0.10)	0.21 +	(0.11)
<b>External control X Time 1 SES</b>			<b>-0.06 *</b>	<b>(0.03)</b>			<b>-0.01</b>	<b>(0.03)</b>
<b>Negative self-feelings X Time 1 SES</b>					<b>-0.10 ***</b>	<b>(0.02)</b>	<b>-0.09 **</b>	<b>(0.03)</b>
Respondent is male	-0.14 +	(0.07)	-0.13 +	(0.07)	-0.13 +	(0.07)	-0.13 +	(0.07)
Respondent's race (ref=White):								
Black	-1.16 ***	(0.09)	-1.15 ***	(0.09)	-1.15 ***	(0.09)	-1.15 ***	(0.09)
Mexican-American	-0.89 ***	(0.13)	-0.88 ***	(0.13)	-0.89 ***	(0.13)	-0.89 ***	(0.13)
Other	-0.64 *	(0.30)	-0.68 *	(0.30)	-0.64 *	(0.30)	-0.65 *	(0.30)
Constant	3.77 ***	(0.12)	3.76 ***	(0.12)	3.74 ***	(0.12)	3.74 ***	(0.12)
R-squared	0.203		0.204		0.206		0.206	

Source: 4,605 first generation respondents from Kaplan Longitudinal and Multigenerational Study.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Table 4: Relevance of Different Components of Socioeconomic Status (RQ2) - Linear Regression Models Predicting Psycho-Social Dispositions of Generation Two**

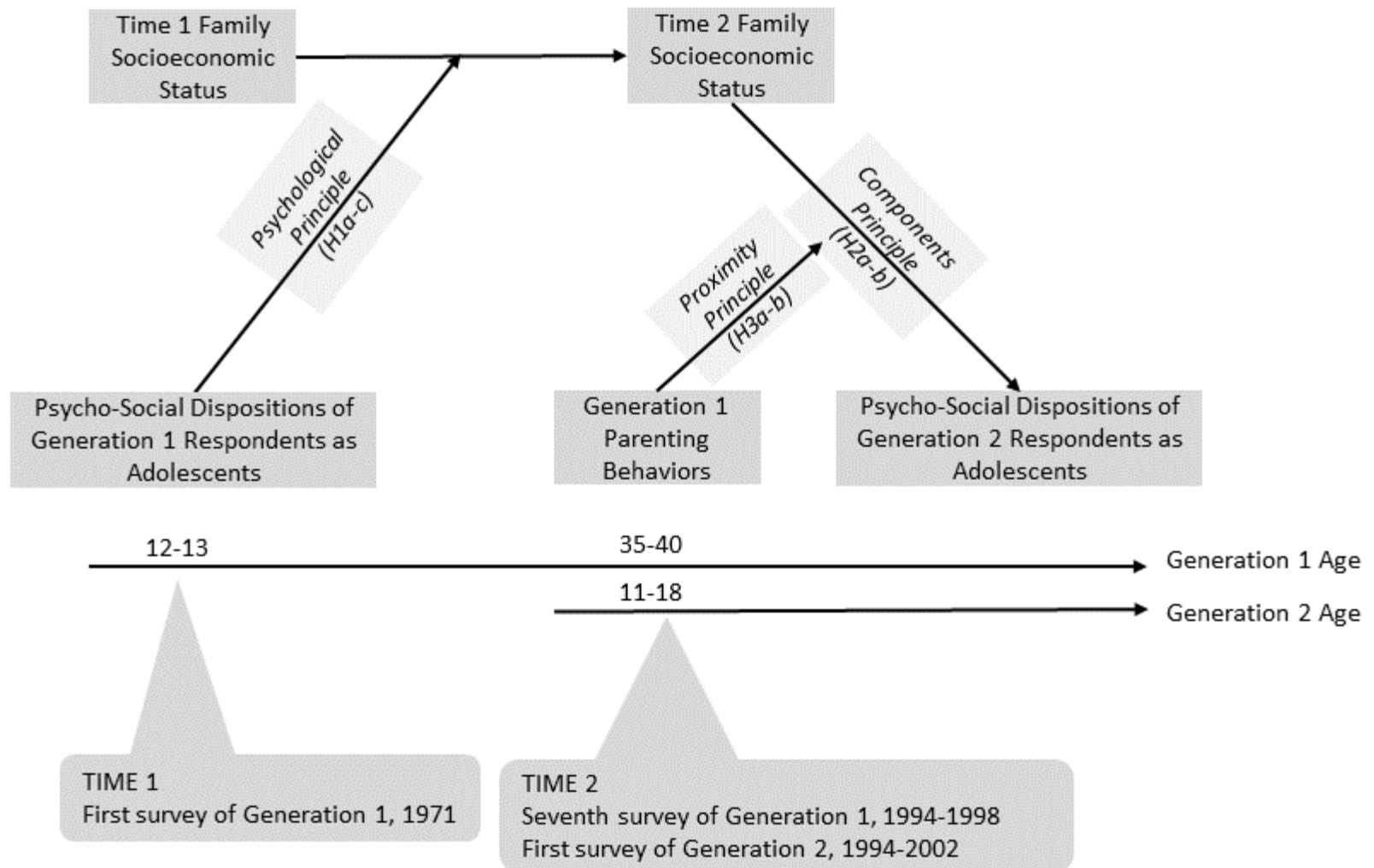
	Model 1: External locus of		Model 2: Negative self-	
	B	(SE)	B	(SE)
<b>Measures of Socioeconomic Status at Time 2</b>				
Family income <sup>a</sup>	-0.03 ***	(0.01)	-0.01 +	(0.01)
Educational attainment of first generation respondent (ref=Some college):				
Junior high or less	0.30 **	(0.10)	0.29 **	(0.10)
Some high school	0.16 *	(0.06)	0.05	(0.07)
Completed high school	0.06	(0.04)	0.03	(0.04)
College degree	-0.06	(0.05)	-0.13 *	(0.05)
Some graduate school	-0.10	(0.08)	-0.15 +	(0.08)
Graduate degree	-0.17 *	(0.08)	-0.27 **	(0.08)
Semi-squared partial correlations:				
Family income	0.0089***		0.0015*	
Educational attainment	0.0055***		0.0066***	
<b>Control Measures Describing Second Generation Respondent at Time 2</b>				
Male	0.16 ***	(0.03)	-0.09 **	(0.03)
Birth order (ref=Middle child):				
Oldest child	-0.18 ***	(0.05)	-0.17 **	(0.05)
Youngest child	-0.10	(0.08)	-0.19 *	(0.08)
Only child	-0.24 ***	(0.06)	-0.19 **	(0.07)
<b>Control Measures Describing First Generation Respondent at Time 1</b>				
Male	-0.07 +	(0.04)	-0.08 *	(0.04)
Parent's race (ref=White):				
Black	0.25 ***	(0.04)	0.07 +	(0.04)
Mexican-American	0.15 *	(0.06)	0.03	(0.06)
Other	0.30 *	(0.15)	0.18	(0.17)
Family socioeconomic status	-0.21 *	(0.10)	-0.17	(0.11)
Lives with both biological parents	-0.09 *	(0.04)	0.00	(0.04)
Reports a negative relationship with parer	0.20 +	(0.11)	0.08	(0.12)
Other reports on parents:				
Let me do what I want	0.00	(0.04)	0.05	(0.04)
Children should be raised with firm rules	0.11 **	(0.04)	0.01	(0.04)
Get nervous when I'm away	0.07 +	(0.03)	0.02	(0.04)
Always expect a lot of me	-0.05	(0.04)	-0.04	(0.04)
Agree how I should be raised	-0.05	(0.05)	0.07	(0.06)
When dislike what I do, feel bothered	0.04	(0.04)	0.05	(0.04)
Don't know if they approve of what I do	-0.03	(0.05)	0.00	(0.04)
Negative self-feelings	0.02	(0.02)	0.07 **	(0.02)
External locus of control	0.05 *	(0.02)	0.04 +	(0.02)
Constant	0.12	(0.10)	0.29 **	(0.11)
Second generation respondents (n)	3,391		3,388	

Source: Kaplan Longitudinal and Multigenerational Study.

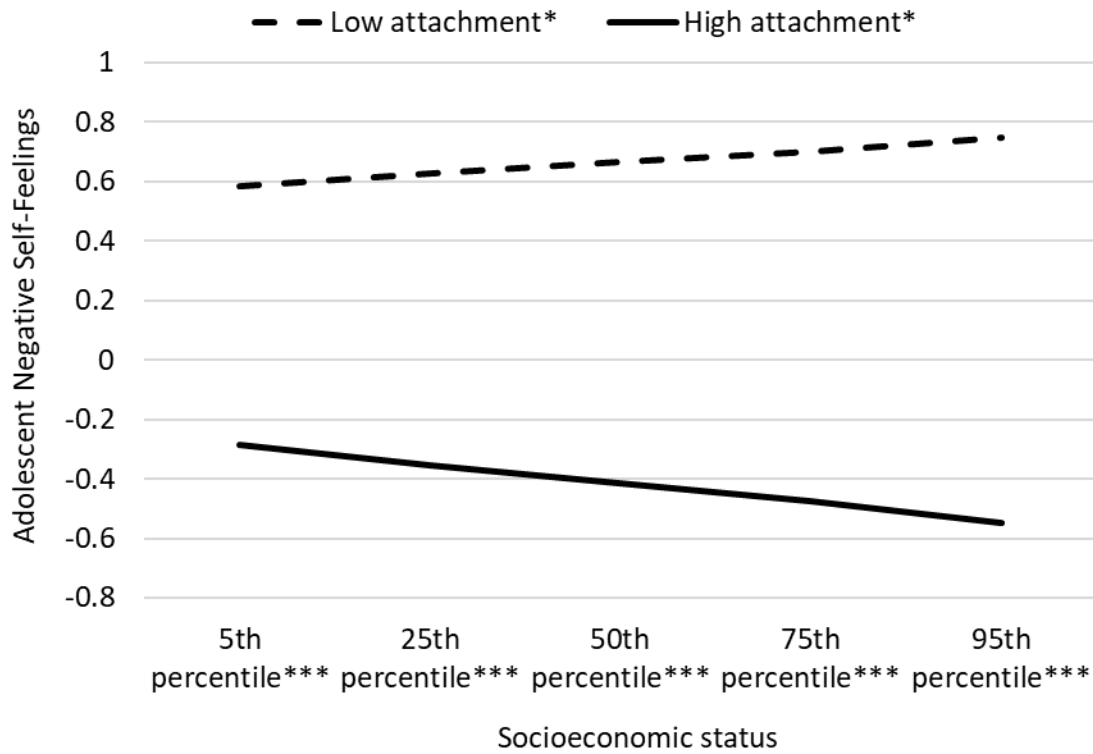
a-Family income is measured in units of \$10,000 per year.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Figure 1: Conceptual Model of Study**

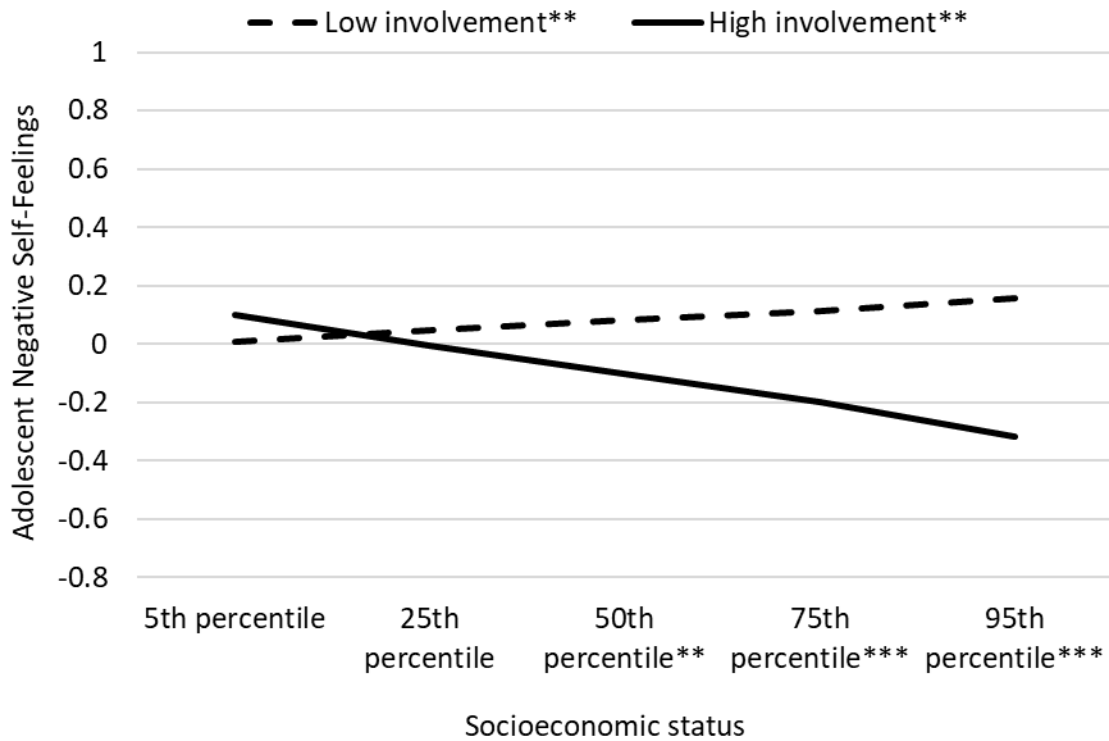


**Figure 2: Parental Attachment as Moderator of Relationship Between Family Socioeconomic Status and Adolescent Negative Self-Feelings (RQ3)**



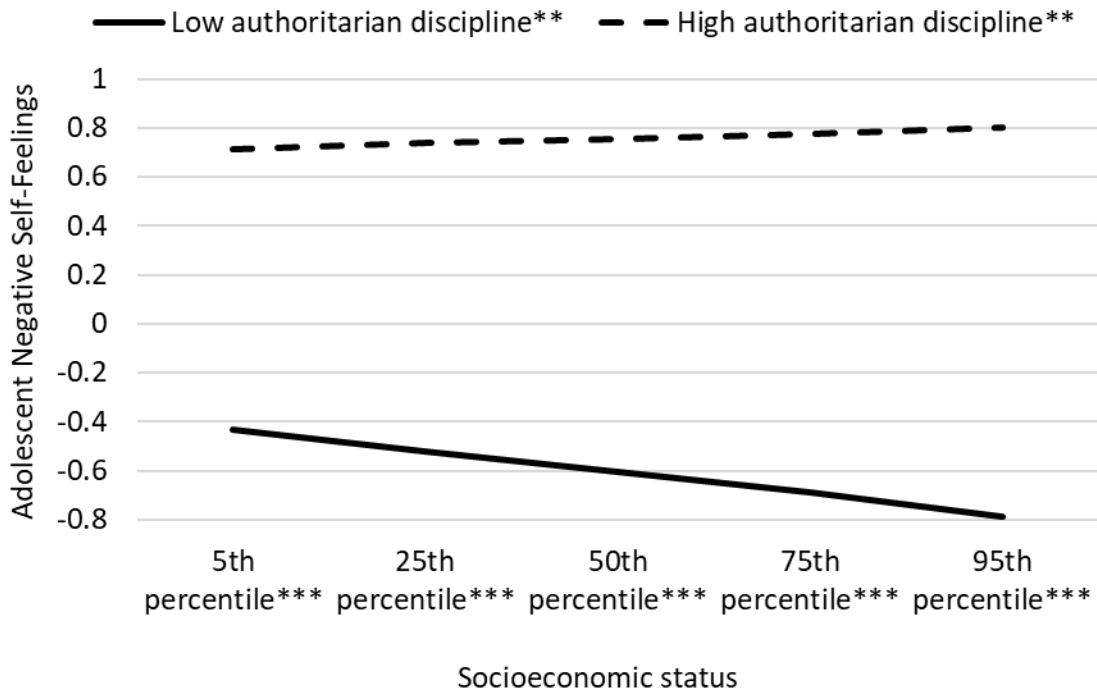
Note: These analyses focus on 2,929 second generation respondents and their parent who was a first generation respondent. Predicted means estimated from regression models in Online Table 8. Statistical significance estimates at each level of family socioeconomic status based on differences in estimated effect of low (5th percentile) and high (95th percentile) levels of the parenting measure. We indicate whether the change in adolescents' psycho-social dispositions across the SES distribution is significantly different from zero next to each parenting legend. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , + $p < 0.10$ .

**Figure 3: Parental Involvement in Education as Moderator of Relationship Between Family Socioeconomic Status and Adolescent Negative Self-Feelings (RQ3)**



Note: These analyses focus on 2,929 second generation respondents and their parent who was a first generation respondent. Predicted means estimated from regression models in Online Table 9. Statistical significance estimates at each level of family socioeconomic status based on differences in estimated effect of low (5th percentile) and high (95th percentile) levels of the parenting measure. We indicate whether the change in adolescents' psycho-social dispositions across the SES distribution is significantly different from zero next to each parenting legend. \*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10.

**Figure 4: Parental Authoritarian Discipline as Moderator of Relationship Between Family Socioeconomic Status and Adolescent Negative Self-Feelings (RQ3)**



Note: These analyses focus on 2,929 second generation respondents and their parent who was a first generation respondent. Predicted means estimated from regression models in Online Table 11. Statistical significance estimates at each level of family socioeconomic status based on differences in estimated effect of low (5th percentile) and high (95th percentile) levels of the parenting measure. We indicate whether the change in adolescents' psycho-social dispositions across the SES distribution is significantly different from zero next to each parenting legend. \*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10.

**Online Table 1: Construction of Time 1 and 2 Socioeconomic Status (SES)  
Components to Range from 0 to 1**

Original Measures	Proportion	Cumulative proportion	Value on new continuous measure
Time 1 (n=7,627 first generation respondents)			
Family income:			
Poor	0.08	0.08	0.04
Neither poor nor rich	0.76	0.85	0.47
Rich	0.15	1.00	0.92
Dad's educational attainment:			
Did not finish elementary	0.06	0.06	0.03
Did not finish high school	0.13	0.19	0.12
Finished high school	0.32	0.51	0.35
Finished college	0.49	1.00	0.76
Mom's educational attainment:			
Did not finish elementary	0.05	0.05	0.02
Did not finish high school	0.15	0.19	0.12
Finished high school	0.47	0.66	0.43
Finished college	0.34	1.00	0.83
Time 2 (n=5,449 first generation respondents)			
Family income:			
1,500	0.012	0.012	0.006
3,000	0.031	0.042	0.027
<i>Details on additional income levels available upon request</i>			
147,500	0.008	0.991	0.987
170,000	0.009	1.000	0.996
Respondents' educational attainment:			
Junior high or less	0.03	0.03	0.014
Some high school	0.08	0.10	0.066
Completed high school	0.22	0.33	0.217
Some college	0.38	0.71	0.519
College degree	0.16	0.87	0.790
Some graduate school	0.06	0.93	0.900
Graduate degree	0.07	1.00	0.965

Note: We use all 7,627 first generation respondents who participated at Time 1 to construct measures of Time 1 SES. Because there were 844 first generation respondents surveyed at Time 2 who had not been surveyed at Time 1, we are able to use 5,449 first generation respondents to construct measures of Time 2 SES.



**Online Table 2: Constructed Measures of Time 1 and Time 2 Socioeconomic Status (SES)**

<b>Time 1 (n=7,627 first generation respondents)</b>												
<b>Constructed by Averaging</b>	<b>Constructed by Cluster Analysis</b>											
	Cluster		Family income		Dad's educational attainment		Mom's educational attainment		Time 1 SES constructed by averaging		Ranks summed <sup>a</sup>	
	Number	Frequency	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Mean	1	485	0.04	1	0.29	2	0.26	2	0.12	1	5	6
0.50	2	1,476	0.50	5	0.18	1	0.19	1	0.32	2	7	9
Standard Deviation	3	2,318	0.47	4	0.43	3	0.42	4	0.44	3	11	14
(0.19)	4	768	0.44	2	0.76	6	0.39	3	0.53	4	11	15
Range	5	585	0.44	2	0.70	5	0.81	6	0.65	5	13	18
[0.04, 0.92]	6	995	0.92	6	0.62	4	0.62	5	0.78	6	15	21
<b>Time 2 (n=5,449 first generation respondents)</b>												
<b>Constructed by Averaging</b>	<b>Constructed by Cluster Analysis</b>											
	Cluster		Family income		Respondent's educational attainment		Time 1 SES constructed by averaging		Ranks summed <sup>a</sup>			
	Number	Frequency	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Mean	1	791	0.13	1	0.15	1			0.14	1	2	3
0.49	2	659	0.45	4	0.18	2			0.31	2	6	8
Standard Deviation	3	737	0.19	2	0.52	4			0.35	3	6	9
(0.24)	4	334	0.79	7	0.18	2			0.48	4	9	13
Range	5	637	0.50	5	0.52	4			0.51	5	9	14
[0.01, 0.98]	6	316	0.26	3	0.85	7			0.55	6	10	16
	7	677	0.80	8	0.52	4			0.66	7	12	19
	8	570	0.61	6	0.85	7			0.73	8	13	21
	9	682	0.90	9	0.86	9			0.88	9	18	27

Note: We are able to use more first generation respondents to construct each measure of SES than we include in Analytic Sample 1 (n=4,605), because respondents had to participate in both Times 1 and 2 to be included in Analytic a-For rankings, lower numbers represent lower SES and higher numbers represent higher SES. The left column of 'Ranks summed' does not include the Time 1 measure of SES constructed by averaging, whereas the right column does.

**Online Table 3: Key Differences in Analytic Sample 2 by Time 1 Socioeconomic Status**

	Time 1 Socioeconomic Status <sup>a</sup>		
	Lower	Higher	
<b>Time 1 (adolescence of first generation respondents)</b>			
First generation respondents' negative self-feelings	0.11	-0.08	***
First generation respondents' external locus of control	0.09	-0.13	***
<b>Time 2 (adolescence of second generation respondents)</b>			
Second generation respondents' negative self-feelings	0.09	-0.10	***
Second generation respondents' external locus of control	0.02	-0.15	***
First generation respondents' parenting:			
Parental attachment	-0.11	0.03	***
Parental involvement in education	-0.07	0.06	***
Authoritative discipline	-0.05	0.04	**
Authoritarian discipline	0.06	-0.05	**
Respondents (n)	1,780	1,636	

Source: Kaplan Longitudinal and Multigenerational Study.

Note: Standard deviations in parentheses below means. Analytic Sample 2 is for analyses predicting second generation outcomes (n=3,416 second generation respondents with measures on their linked first generation respondent (i.e., their parent)).

a-Lower and higher SES respectively represent cases below and above the median. Statistical significance estimates are from t-tests.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 4: Moderating Effect of Parental Attachment on the Relationship between Socioeconomic Status (SES) and Adolescents' External Locus of Control**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.44 ***	(0.09)	-0.44 ***	(0.09)
First generation respondent's parental attachment	-0.23 ***	(0.02)	-0.19 ***	(0.03)
Interacted with family SES at Time 2			-0.10	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.09	(0.07)	0.09	(0.07)
Married	0.10 +	(0.05)	0.10 +	(0.05)
First generation respondent's number of marriages (ref=Zero):				
One	-0.14 +	(0.07)	-0.14 +	(0.07)
Two	-0.25 **	(0.08)	-0.25 **	(0.08)
Three or more	-0.08	(0.10)	-0.08	(0.10)
Both bio parents of 2nd gen respondent in house	-0.08 +	(0.05)	-0.08 +	(0.05)
Number of children in household (ref=Zero):				
One to two	-0.07	(0.04)	-0.07	(0.04)
Three or more	-0.03	(0.06)	-0.04	(0.06)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.13 *	(0.05)	-0.13 **	(0.05)
Youngest	-0.06	(0.07)	-0.06	(0.07)
Only child	-0.18 **	(0.06)	-0.19 **	(0.06)
2nd gen's age when parent completed survey	0.00	(0.01)	0.00	(0.01)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	-0.10	(0.10)	-0.09	(0.10)
Lives with both biological parents	-0.09 *	(0.04)	-0.09 *	(0.04)
Reports a negative relationship with parents	0.20 +	(0.11)	0.20 +	(0.11)
Other reports on parents:				
Let me do what I want	-0.01	(0.04)	-0.01	(0.04)
Children should be raised with firm rules	0.11 *	(0.04)	0.11 *	(0.04)
Get nervous when I'm away	0.05	(0.04)	0.05	(0.04)
Always expect a lot of me	-0.04	(0.04)	-0.04	(0.04)
Agree how I should be raised	-0.04	(0.05)	-0.04	(0.05)
When dislike what I do, feel bothered	0.04	(0.04)	0.04	(0.04)
Don't know if they approve of what I do	-0.02	(0.04)	-0.02	(0.04)
Negative self-feelings	0.01	(0.02)	0.01	(0.02)
External locus of control	0.04 *	(0.02)	0.04 *	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	0.14 ***	(0.03)	0.14 ***	(0.03)
First generation respondent is male	-0.10 **	(0.04)	-0.11 **	(0.04)
First generation respondent's race (ref=White):				
Black	0.23 ***	(0.04)	0.23 ***	(0.04)
Mexican-American	0.15 **	(0.05)	0.15 **	(0.05)
Other	0.20	(0.18)	0.20	(0.18)
Constant	0.27 +	(0.14)	0.27 *	(0.14)

Note: 3,391 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 5: Moderating Effect of Parental Involvement in Education on Relationship between Socioeconomic Status (SES) and Adolescents' External Control**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.52 ***	(0.09)	-0.52 ***	(0.09)
First generation respondent's parental involvement	-0.06 **	(0.02)	-0.01	(0.04)
Interacted with family SES at Time 2			-0.10	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.10	(0.07)	0.10	(0.07)
Married	0.12 *	(0.06)	0.12 *	(0.06)
First generation respondent's number of marriages (ref=Zero):				
One	-0.09	(0.08)	-0.09	(0.08)
Two	-0.20 *	(0.09)	-0.20 *	(0.09)
Three or more	-0.07	(0.12)	-0.07	(0.12)
Both bio parents of 2nd gen respondent in house	-0.12 *	(0.05)	-0.12 *	(0.05)
Number of children in household (ref=Zero):				
One to two	-0.05	(0.06)	-0.05	(0.06)
Three or more	0.01	(0.08)	0.01	(0.08)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.15 **	(0.05)	-0.15 **	(0.05)
Youngest	-0.10	(0.09)	-0.10	(0.09)
Only child	-0.21 **	(0.07)	-0.21 **	(0.07)
2nd gen's age when parent completed survey	0.01	(0.01)	0.01	(0.01)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	-0.11	(0.11)	-0.10	(0.11)
Lives with both biological parents	-0.10 *	(0.04)	-0.10 *	(0.04)
Reports a negative relationship with parents	0.21 +	(0.11)	0.21 +	(0.11)
Other reports on parents:				
Let me do what I want	0.01	(0.04)	0.01	(0.04)
Children should be raised with firm rules	0.09 +	(0.04)	0.09 +	(0.04)
Get nervous when I'm away	0.08 *	(0.04)	0.08 +	(0.04)
Always expect a lot of me	-0.04	(0.04)	-0.04	(0.04)
Agree how I should be raised	-0.04	(0.05)	-0.03	(0.05)
When dislike what I do, feel bothered	0.06 +	(0.04)	0.06	(0.04)
Don't know if they approve of what I do	-0.03	(0.04)	-0.03	(0.04)
Negative self-feelings	0.03	(0.02)	0.03	(0.02)
External locus of control	0.04 +	(0.02)	0.04 *	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	0.14 ***	(0.03)	0.14 ***	(0.03)
First generation respondent is male	-0.09 *	(0.04)	-0.10 *	(0.04)
First generation respondent's race (ref=White):				
Black	0.20 ***	(0.04)	0.20 ***	(0.04)
Mexican-American	0.16 **	(0.06)	0.16 **	(0.06)
Other	0.21	(0.17)	0.21	(0.17)
Constant	0.19	(0.15)	0.19	(0.15)

Note: 2,987 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 6: Moderating Effect of Authoritative Discipline on the Relationship between Socioeconomic Status (SES) and Adolescents' External Locus of Control**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.49 ***	(0.09)	-0.49 ***	(0.09)
First generation respondent's authoritative discipline	-0.08 ***	(0.02)	-0.09 **	(0.04)
Interacted with family SES at Time 2			0.03	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.08	(0.07)	0.08	(0.07)
Married	0.13 *	(0.05)	0.13 *	(0.05)
First generation respondent's number of marriages (ref=Zero):				
One	-0.12	(0.08)	-0.12	(0.08)
Two	-0.24 **	(0.09)	-0.24 **	(0.09)
Three or more	-0.09	(0.11)	-0.09	(0.11)
Both bio parents of 2nd gen respondent in house	-0.12 *	(0.05)	-0.12 *	(0.05)
Number of children in household (ref=Zero):				
One to two	-0.05	(0.05)	-0.05	(0.05)
Three or more	0.00	(0.07)	0.00	(0.07)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.15 **	(0.05)	-0.15 **	(0.05)
Youngest	-0.08	(0.08)	-0.08	(0.08)
Only child	-0.21 **	(0.07)	-0.21 **	(0.07)
2nd gen's age when parent completed survey	0.01	(0.01)	0.01	(0.01)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	-0.12	(0.10)	-0.12	(0.10)
Lives with both biological parents	-0.11 **	(0.04)	-0.11 **	(0.04)
Reports a negative relationship with parents	0.22 +	(0.11)	0.22 +	(0.11)
Other reports on parents:				
Let me do what I want	0.00	(0.04)	0.00	(0.04)
Children should be raised with firm rules	0.11 *	(0.04)	0.11 *	(0.04)
Get nervous when I'm away	0.06	(0.04)	0.06	(0.04)
Always expect a lot of me	-0.03	(0.04)	-0.03	(0.04)
Agree how I should be raised	-0.04	(0.05)	-0.04	(0.05)
When dislike what I do, feel bothered	0.06	(0.04)	0.06	(0.04)
Don't know if they approve of what I do	-0.02	(0.04)	-0.02	(0.04)
Negative self-feelings	0.02	(0.02)	0.02	(0.02)
External locus of control	0.04 +	(0.02)	0.04 +	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	0.14 ***	(0.03)	0.14 ***	(0.03)
First generation respondent is male	-0.08 *	(0.04)	-0.08 *	(0.04)
First generation respondent's race (ref=White):				
Black	0.23 ***	(0.04)	0.23 ***	(0.04)
Mexican-American	0.13 *	(0.05)	0.13 *	(0.05)
Other	0.23	(0.17)	0.23	(0.17)
Constant	0.20	(0.14)	0.20	(0.14)

Note: 3,288 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 7: Moderating Effect of Authoritarian Discipline on the Relationship between Socioeconomic Status (SES) and Adolescents' External Locus of Control**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.49 ***	(0.08)	-0.49 ***	(0.08)
First generation respondent's authoritarian discipline	0.33 ***	(0.02)	0.37 ***	(0.03)
Interacted with family SES at Time 2			-0.08	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.11 +	(0.06)	0.11 +	(0.06)
Married	0.10 *	(0.05)	0.10 *	(0.05)
First generation respondent's number of marriages (ref=Zero):				
One	-0.13 +	(0.07)	-0.13 +	(0.07)
Two	-0.21 **	(0.08)	-0.21 **	(0.08)
Three or more	-0.13	(0.10)	-0.13	(0.10)
Both bio parents of 2nd gen respondent in house	-0.07 +	(0.04)	-0.07 +	(0.04)
Number of children in household (ref=Zero):				
One to two	-0.11 **	(0.04)	-0.11 *	(0.04)
Three or more	-0.12 *	(0.06)	-0.12 *	(0.06)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.13 **	(0.05)	-0.13 **	(0.05)
Youngest	-0.03	(0.07)	-0.03	(0.07)
Only child	-0.17 **	(0.06)	-0.17 **	(0.06)
2nd gen's age when parent completed survey	0.01 *	(0.00)	0.01 *	(0.00)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	-0.09	(0.10)	-0.09	(0.10)
Lives with both biological parents	-0.10 **	(0.03)	-0.10 **	(0.03)
Reports a negative relationship with parents	0.16	(0.11)	0.16	(0.11)
Other reports on parents:				
Let me do what I want	-0.01	(0.04)	-0.01	(0.04)
Children should be raised with firm rules	0.09 *	(0.04)	0.09 *	(0.04)
Get nervous when I'm away	0.04	(0.04)	0.04	(0.04)
Always expect a lot of me	-0.01	(0.04)	-0.01	(0.04)
Agree how I should be raised	-0.04	(0.05)	-0.04	(0.05)
When dislike what I do, feel bothered	0.04	(0.04)	0.04	(0.04)
Don't know if they approve of what I do	-0.02	(0.03)	-0.02	(0.03)
Negative self-feelings	0.01	(0.02)	0.01	(0.02)
External locus of control	0.04 +	(0.02)	0.04 +	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	0.11 ***	(0.03)	0.11 ***	(0.03)
First generation respondent is male	-0.05	(0.04)	-0.05	(0.04)
First generation respondent's race (ref=White):				
Black	0.17 ***	(0.04)	0.17 ***	(0.04)
Mexican-American	0.16 **	(0.05)	0.16 **	(0.05)
Other	0.13	(0.17)	0.13	(0.17)
Constant	0.24 +	(0.13)	0.23 +	(0.13)

Note: 3,391 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 8: Moderating Effect of Parental Attachment on the Relationship between Socioeconomic Status (SES) and Adolescents' Negative Self-Feelings**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.14	(0.09)	-0.14	(0.09)
First generation respondent's parental attachment	-0.31 ***	(0.02)	-0.24 ***	(0.03)
Interacted with family SES at Time 2			-0.16 *	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.10	(0.07)	0.10	(0.07)
Married	0.12 *	(0.05)	0.12 *	(0.05)
First generation respondent's number of marriages (ref=Zero):				
One	-0.12	(0.07)	-0.12	(0.07)
Two	-0.20 *	(0.08)	-0.20 *	(0.08)
Three or more	0.00	(0.10)	0.00	(0.10)
Both bio parents of 2nd gen respondent in house	-0.12 **	(0.05)	-0.11 *	(0.05)
Number of children in household (ref=Zero):				
One to two	0.02	(0.04)	0.01	(0.04)
Three or more	0.11 +	(0.06)	0.10 +	(0.06)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.11 *	(0.05)	-0.11 *	(0.05)
Youngest	-0.10	(0.07)	-0.10	(0.07)
Only child	-0.09	(0.06)	-0.09	(0.06)
2nd gen's age when parent completed survey	0.02 ***	(0.01)	0.02 ***	(0.01)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	0.01	(0.10)	0.01	(0.10)
Lives with both biological parents	0.01	(0.04)	0.01	(0.04)
Reports a negative relationship with parents	0.04	(0.11)	0.04	(0.11)
Other reports on parents:				
Let me do what I want	0.04	(0.03)	0.04	(0.03)
Children should be raised with firm rules	0.00	(0.04)	0.00	(0.04)
Get nervous when I'm away	0.01	(0.04)	0.01	(0.04)
Always expect a lot of me	-0.04	(0.03)	-0.04	(0.03)
Agree how I should be raised	0.07	(0.05)	0.07	(0.05)
When dislike what I do, feel bothered	0.02	(0.04)	0.02	(0.04)
Don't know if they approve of what I do	-0.01	(0.04)	-0.01	(0.04)
Negative self-feelings	0.07 **	(0.02)	0.07 **	(0.02)
External locus of control	0.03	(0.02)	0.03	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	-0.10 **	(0.03)	-0.10 **	(0.03)
First generation respondent is male	-0.09 *	(0.04)	-0.10 **	(0.04)
First generation respondent's race (ref=White):				
Black	0.01	(0.04)	0.01	(0.04)
Mexican-American	0.00	(0.06)	0.00	(0.06)
Other	0.05	(0.16)	0.05	(0.16)
Constant	-0.01	(0.14)	0.00	(0.14)

Note: 3,388 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 9: Moderating Effect of Parental Involvement in Education on the Relationship between Socioeconomic Status (SES) and Adolescents' Negative Self-Feelings**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.21 *	(0.10)	-0.20 *	(0.10)
First generation respondent's involvement in education	-0.05 **	(0.02)	0.06	(0.04)
Interacted with family SES at Time 2			-0.23 **	(0.08)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.09	(0.08)	0.09	(0.08)
Married	0.15 *	(0.06)	0.14 *	(0.06)
First generation respondent's number of marriages (ref=Zero):				
One	-0.13	(0.09)	-0.13	(0.09)
Two	-0.24 *	(0.10)	-0.24 *	(0.10)
Three or more	-0.01	(0.12)	0.00	(0.12)
Both bio parents of 2nd gen respondent in house	-0.17 **	(0.05)	-0.16 **	(0.05)
Number of children in household (ref=Zero):				
One to two	-0.03	(0.07)	-0.02	(0.07)
Three or more	0.09	(0.08)	0.09	(0.08)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.13 *	(0.06)	-0.13 *	(0.06)
Youngest	-0.09	(0.09)	-0.09	(0.09)
Only child	-0.09	(0.07)	-0.10	(0.07)
2nd gen's age when parent completed survey	0.03 ***	(0.01)	0.03 ***	(0.01)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	-0.03	(0.11)	-0.02	(0.11)
Lives with both biological parents	0.00	(0.05)	0.00	(0.05)
Reports a negative relationship with parents	0.08	(0.11)	0.08	(0.11)
Other reports on parents:				
Let me do what I want	0.06	(0.04)	0.06	(0.04)
Children should be raised with firm rules	-0.01	(0.04)	-0.01	(0.04)
Get nervous when I'm away	0.04	(0.04)	0.04	(0.04)
Always expect a lot of me	-0.05	(0.04)	-0.05	(0.04)
Agree how I should be raised	0.05	(0.06)	0.06	(0.06)
When dislike what I do, feel bothered	0.06	(0.04)	0.05	(0.04)
Don't know if they approve of what I do	-0.01	(0.04)	-0.01	(0.04)
Negative self-feelings	0.08 **	(0.02)	0.08 **	(0.02)
External locus of control	0.03	(0.02)	0.03	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	-0.08 *	(0.03)	-0.08 *	(0.03)
First generation respondent is male	-0.07 +	(0.04)	-0.08 +	(0.04)
First generation respondent's race (ref=White):				
Black	-0.01	(0.05)	-0.01	(0.05)
Mexican-American	0.00	(0.07)	0.01	(0.07)
Other	0.04	(0.17)	0.04	(0.17)
Constant	-0.09	(0.16)	-0.08	(0.16)

Note: 2,986 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10



**Online Table 10: Moderating Effect of Authoritative Discipline on the Relationship between Socioeconomic Status (SES) and Adolescents' Negative Self-Feelings**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.23 *	(0.09)	-0.23 *	(0.09)
First generation respondent's authoritative discipline	-0.05 **	(0.02)	-0.02	(0.04)
Interacted with family SES at Time 2			-0.06	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.11	(0.07)	0.11	(0.07)
Married	0.15 **	(0.06)	0.15 **	(0.06)
First generation respondent's number of marriages (ref=Zero):				
One	-0.07	(0.08)	-0.07	(0.08)
Two	-0.17 +	(0.09)	-0.17 +	(0.09)
Three or more	0.01	(0.11)	0.02	(0.11)
Both bio parents of 2nd gen respondent in house	-0.18 ***	(0.05)	-0.17 ***	(0.05)
Number of children in household (ref=Zero):				
One to two	-0.02	(0.05)	-0.02	(0.05)
Three or more	0.09	(0.07)	0.09	(0.07)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.13 *	(0.05)	-0.13 *	(0.05)
Youngest	-0.11	(0.08)	-0.11	(0.08)
Only child	-0.11	(0.07)	-0.11	(0.07)
2nd gen's age when parent completed survey	0.03 ***	(0.01)	0.03 ***	(0.01)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	-0.06	(0.11)	-0.05	(0.11)
Lives with both biological parents	0.01	(0.05)	0.01	(0.05)
Reports a negative relationship with parents	0.06	(0.11)	0.06	(0.11)
Other reports on parents:				
Let me do what I want	0.05	(0.04)	0.05	(0.04)
Children should be raised with firm rules	0.00	(0.04)	0.00	(0.04)
Get nervous when I'm away	0.01	(0.04)	0.01	(0.04)
Always expect a lot of me	-0.03	(0.04)	-0.03	(0.04)
Agree how I should be raised	0.06	(0.05)	0.06	(0.05)
When dislike what I do, feel bothered	0.04	(0.04)	0.04	(0.04)
Don't know if they approve of what I do	-0.01	(0.04)	-0.01	(0.04)
Negative self-feelings	0.08 **	(0.02)	0.08 **	(0.02)
External locus of control	0.03	(0.02)	0.03	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	-0.09 *	(0.03)	-0.09 *	(0.03)
First generation respondent is male	-0.06	(0.04)	-0.06	(0.04)
First generation respondent's race (ref=White):				
Black	0.01	(0.05)	0.01	(0.05)
Mexican-American	0.00	(0.06)	0.00	(0.06)
Other	0.05	(0.16)	0.05	(0.16)
Constant	-0.09	(0.15)	-0.09	(0.15)

Note: 3,285 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10

**Online Table 11: Moderating Effect of Authoritarian Discipline on the Relationship between Socioeconomic Status (SES) and Adolescents' Negative Self-Feelings**

	Model 1		Model 2	
	B	(SE)	B	(SE)
Family SES at Time 2	-0.21 *	(0.08)	-0.21 *	(0.08)
First generation respondent's authoritarian disciplin	0.43 ***	(0.01)	0.35 ***	(0.03)
Interacted with family SES at Time 2			0.19 **	(0.07)
<b>Controls Describing Time 2</b>				
First generation respondent's relationship status (ref=Single):				
In relationship	0.12 +	(0.06)	0.12 +	(0.06)
Married	0.12 *	(0.05)	0.12 *	(0.05)
First generation respondent's number of marriages (ref=Zero):				
One	-0.10	(0.07)	-0.10	(0.07)
Two	-0.15 +	(0.08)	-0.15 +	(0.08)
Three or more	-0.07	(0.10)	-0.07	(0.10)
Both bio parents of 2nd gen respondent in house	-0.12 **	(0.04)	-0.11 *	(0.04)
Number of children in household (ref=Zero):				
One to two	-0.05	(0.04)	-0.05	(0.04)
Three or more	0.00	(0.06)	0.00	(0.06)
Second generation respondent's birth order (ref=Middle):				
Oldest	-0.12 *	(0.05)	-0.12 *	(0.05)
Youngest	-0.07	(0.07)	-0.07	(0.07)
Only child	-0.07	(0.06)	-0.07	(0.06)
2nd gen's age when parent completed survey	0.03 ***	(0.00)	0.03 ***	(0.00)
<b>Controls Describing First Generation Respondents at Time 1</b>				
Family SES	0.02	(0.10)	0.02	(0.10)
Lives with both biological parents	0.00	(0.04)	0.00	(0.04)
Reports a negative relationship with parents	-0.01	(0.12)	-0.02	(0.12)
Other reports on parents:				
Let me do what I want	0.04	(0.03)	0.04	(0.03)
Children should be raised with firm rules	-0.03	(0.04)	-0.03	(0.04)
Get nervous when I'm away	0.00	(0.04)	0.00	(0.04)
Always expect a lot of me	-0.01	(0.03)	-0.01	(0.03)
Agree how I should be raised	0.06	(0.05)	0.06	(0.05)
When dislike what I do, feel bothered	0.02	(0.04)	0.02	(0.04)
Don't know if they approve of what I do	-0.02	(0.04)	-0.02	(0.04)
Negative self-feelings	0.06 **	(0.02)	0.06 **	(0.02)
External locus of control	0.03	(0.02)	0.03	(0.02)
<b>Sociodemographic Controls</b>				
Second generation respondent is male	-0.15 ***	(0.03)	-0.15 ***	(0.03)
First generation respondent is male	-0.02	(0.04)	-0.02	(0.04)
First generation respondent's race (ref=White):				
Black	-0.07 +	(0.04)	-0.07 +	(0.04)
Mexican-American	0.02	(0.06)	0.02	(0.06)
Other	-0.04	(0.16)	-0.04	(0.16)
Constant	-0.03	(0.13)	-0.02	(0.13)

Note: 3,388 second generation respondents linked to first generation respondents.

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05, +p<0.10