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Physical Attractiveness and the Accumulation of Social and Human Capital in Adolescence and Young Adulthood: Assets and Distractions

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Abstract

Beauty has a well-documented impact on labor market outcomes with both legal and policy implications. This monograph investigated whether this stratification is rooted in earlier developmental experiences. Specifically, we explored how high schools' dual roles as contexts of social relations and academic progress contributed to the long-term socioeconomic advantages of being physically attractive.

Integrating theories from multiple disciplines, the conceptual model of this study contends that physically attractive youths' greater social integration and lesser social stigma help them accumulate psychosocial resources that support their academic achievement while also selecting them into social activities that distract from good grades. A mixed-methods design, combining statistical analyses of the National Longitudinal Survey of Adolescent Health and qualitative analyses of a single high school, supported and expanded this model. The data revealed that the benefits of attractiveness flowed through greater social integration but were partially offset by social distractions, especially romantic/sexual partnerships and alcohol-related problems. Interview and ethnographic data further revealed that adolescents themselves understood how physical attractiveness could lead to favorable treatment by teachers and classmates while also enticing youth to emphasize socializing and dating, even when the latter took time from other activities (like studying) and marginalized some classmates. These patterns, in turn, predicted education, work, family, and mental health trajectories in young adulthood.

The results of this interdisciplinary, theoretically grounded, mixed methods study suggest that adolescence may be a critical period in stratification by physical appearance and that the underlying developmental phenomena during this period are complex and often internally contradictory. The monograph concludes with discussion of theoretical and policy implications and recommendations for future developmental research.

Physical Attractiveness and the Accumulation of Social and Human Capital in Adolescence and Young Adulthood

Chapter I: Introduction

Social stratification takes many forms, creating an inequitable distribution of resources and opportunities that divide the life chances of young people making their way toward adulthood. Historically, scholars interested in development have focused on race, gender, class, and other major forms of stratification that powerfully organize experiences in the proximate ecologies of development and lead to sharply divergent long-term trajectories (Duncan, Huston, & Weisner, 2007; Entwisle, Alexander, & Olson, 2005; García Coll & Marks, 2009; McLoyd, 1998). Yet, stratification can also occur along parameters far beyond the obvious socioeconomic and demographic factors. One example is stratification based on physical attractiveness.

Put simply, whether someone is "good" or "bad" looking to others seems to affect their socioeconomic prospects independent of many other factors, as evidenced by the well-documented wage premium for physical attractiveness among adults in the labor market (Hamermesh, 2011; Hosoda, Stone-Romero, & Coats, 2003). This role of physical attractiveness in socioeconomic inequality has become a major source of legal action in U.S. courts (Rhode, 2010), and it touches on some core issues in psychology, sociology, and related disciplines, including the link between self and other and the implications of this link for the individual life course and social life more generally (Elder, 1998; Erikson, 1968; Goffman, 1963).

The purpose of this monograph is to provide developmental insights into this role of physical attractiveness in socioeconomic stratification by exploring how it is rooted in earlier stages of the life course for both girls and boys. Specifically, we consider how physical appearance stratifies youth on academic achievement, a marker of progress, performance, and status in the educational system that is the logical precursor to wages and income in adulthood (Schneider & Stevenson, 1999). In doing so, we focus on adolescence as the stage of

development and high school as the stage of education. The motivation for this focus is two-fold. First, adolescence is a period of intense social activity in which young people are particularly likely to base self-assessments on social judgments. As a consequence, visible markers of status and value may take on added importance, and the social implications of having such markers (or not) can have heightened effects on young people in ways that reinforce or counter earlier childhood experiences (Crosnoe & Johnson, 2011; Steinberg & Morris, 2000). Second, high school serves as both a market of social relationships that mean a great deal to young people and the institutional context for the accumulation of academic credentials that are crucial for long-term educational attainment (Coleman, 1961; Frank et al., 2008).

Integrating theories from multiple disciplines, this study views physical attractiveness as linked to academic achievement in high school through *offsetting mechanisms* (or *pathways*), some that promote (e.g., close ties with teachers and peers) and some that disrupt (e.g., dating, partying) academic pursuits. Overall, we expect more promotion than interference, so that the net result is an academic benefit. Consequently, better looking youth of both genders will carry greater academic achievement into the transition to adulthood. This conceptual model will be tested through statistical analyses of the National Longitudinal Study of Adolescent Health (Add Health) and then refined through qualitative analysis of data collected from a single large high school (Lamar). Add Health is a large nationally representative study of adolescents. The study followed over 15,000 students from 7th through 12th grade through young adulthood, between the the mid-1990s and the late-2000s (Harris et al., 1999). The Lamar sample was drawn in 2006, specifically to complement Add Health with an intensive qualitative design. The end result is a developmentally-oriented perspective on the role of physical attractiveness in socioeconomic attainment that can guide future research in an area long dominated by economists and by

organizational and social psychologists and that can inform the increasing legal and policy activity related to this role.

Lookism, Economics, and the Larger Context of this Study

The most basic question driving this research is: To what extent is physical attractiveness a source of inequality in the U.S.? We build on the existing literature, reviewed next, by offering a developmentally-informed answer to this question.

In the legal field, this question was tackled in a 2010 book by Stanford law professor Deborah Rhode entitled *The Beauty Bias*. Its central message is that lookism—differential treatment based on physical appearance—is an overlooked yet powerful form of discrimination in American society that is highly similar, in practice and effect, to commonly recognized stratifying processes like racism and sexism. This argument has traction, as evidenced by recent legal reviews covering numerous lawsuits, many of which are framed within existing sex discrimination laws. As these reviews discuss, the power of this message has also been reflected in changes in local laws, including in California, Wisconsin, Maryland, Illinois, and other states, that explicitly protect workers from discrimination based on their physical appearance (Adamitis, 2000; Post, 2000; Steinle, 2006).

Americans are divided in their views about these legal and political developments. A telephone survey conducted by the Employment Law Alliance in 2005 found that, whereas nearly two-fifths of respondents thought that employers should have the right to deny employment based on appearance, fully one-third believed that individuals who are unattractive, overweight, and unconventional in dress or looks should have legal protection against discrimination. Commenting on the findings, a leading labor and employment lawyer noted "…employers and employees struggle over the authority of management to ensure customer

satisfaction versus an employee's right to, for instance, sport a nose ring and a tongue stud…" (Employment Law Alliance, 2005, p. 1).

The extant evidence base certainly supports Rhode's argument. For example, in one oft-cited study in the economics literature, Hamermesh and Biddle (1994) drew on national surveys from the U.S. and Canada in which interviewers rated respondents' physical appearance. Their analyses of these data demonstrated an advantage to being attractive, and disadvantage to being unattractive, in the labor market. For men, the disadvantage of being unattractive was greater than the advantage of being attractive. Those who were rated as less attractive earned nine percent less in hourly earnings than those with average looks; those who were rated as handsome, on the other hand, earned five percent more than those considered to be average looking. For women, the penalty for being unattractive was 5%, and the advantage of being attractive was 4%. Findings pointing to the same general conclusion—attractiveness, or the lack thereof, has a quantifiable impact on labor market outcomes—have been reported in more recent studies (Hamermesh, 2011; Hamermesh, Meng, & Zhang, 2002; Harper, 2000; Hosoda et al., 2003), within specific occupational categories like professor, lawyer, and military officer (Biddle & Hamermesh, 1998; Hamermesh & Parker, 2005; Mueller & Mazur, 1996), and for specific features of physical appearance like height and obesity (Han, Norton, & Stearns, 2009; Loh, 1993). Moreover, although these patterns are often thought to be stronger for women, especially White women, empirical evidence demonstrates that they tend to persist across broad segments of the population (Hamermesh, 2011; Han et al., 2009; Hosoda et al., 2003).

Theoretical Explanations for the Labor Market Effects of Physical Attractiveness

Two general theories lying at the intersection of psychology and sociology provide potentially useful explanations for this stratifying role of physical attractiveness in the labor market. First, status characteristics theory (Berger & Fişek, 2006; Webster & Driskill, 1983)

details how markers of valued statuses can generalize into a broad range of positive expectations for individuals. It emphasizes the *advantages* of being *attractive*. Second, the stigma perspective contends that devalued statuses can generate negative social experiences that are then internalized (Link & Phelan, 2001). It emphasizes the *disadvantages* of being *unattractive*. Our data allow us to explicitly test for the effects of each pole of the attractiveness continuum (i.e., status and stigma) compared to the middle of the continuum. Doing so is now viewed as absolutely crucial in the literature as reviewed by Hamermesh (2011) and evidenced by Griffin and Langlois (2006). Griffin and Langlois' experiments demonstrated that the "ugly is bad" contrast (comparing the unattractive to average in looks) mattered for more attributions than did the "beauty is good" contrast (comparing the attractive to average). Eliminating one pole, or the middle, from the comparison has the potential, therefore, to underestimate or obscure the significance of attractiveness as a stratifying force.

The first theoretical perspective, status characteristics theory, is focused on the processes through which certain individual characteristics can stratify groups through generalized ideas about individual competence, performance, and contribution that affect perceptions of others even when such characteristics do not truly produce competence, performance, and contribution. Such characteristics, which have an impact in general across a wide variety of interactions and situations, are labeled as "diffuse". According to the theory, diffuse status characteristics elicit expectations for high performance on a broad range of tasks unless the applicability of the status for the task is explicitly challenged (Berger & Fişek, 2006; Thye, Willer, & Markovsky, 2006; Wagner & Berger, 2002).

Characteristics like gender, race, and socioeconomic status (SES) are the most commonly studied diffuse status characteristics. Although less widely recognized, attractiveness also fits the definition and has sometimes been framed in this way. As summarized by Webster and Driskell

(1983, p. 141-142), attractive people are perceived to "possess almost all types of social advantages that can be measured," and even seemingly negative attributions, such as the attractive being rated as more likely to have extramarital affairs, suggest that "attractive people are seen as being better at doing something than unattractive ones" (see also Dion, Berscheid, & Walster, 1972; Patzer, 1985). Importantly, such expectations can translate into behavior. Snyder, Tanke, and Berscheid (1977, p. 659) have interpreted such behaviors as produced by *self-fulfilling prophecies*:

> Individuals may have different styles of interaction for those whom they perceive to be physically attractive and for those whom they consider unattractive. These differences in interaction style may in turn elicit and nurture behaviors from the target person that are in accord with the stereotype. That is, the physically attractive may actually come to behave in a friendly, likable, sociable manner—not because they necessarily possess these dispositions, but because the behavior of others elicits and maintains behaviors taken to be manifestations of such traits.

In their experiment, young men talking on the phone with a young woman after being shown a photo depicting her as attractive were rated by independent observers to be warmer and more sociable than when the caller had been depicted as unattractive.

Based on status characteristics theory, we thus expect that physically attractive people are viewed positively by others, that these positive attributions lead others to actually treat the good looking more positively, and that this positive treatment elicits more positive social behaviors from them. In a continuous cycle, this process elicits and reinforces socially positive behaviors. This sequence suggests that more attractive adults earn more money because such positive social interactions are rewarded with higher wages.

The second theoretical perspective, stigma, contends that visible markers of low status or value pose risks to individuals that are rooted in the social nature of identity. In short, a stigmatized characteristic can have negative consequences for the life course because it creates major challenges to healthy identity construction and maintenance. It increases the real or perceived negative feedback from social situations that an individual must then either integrate into the sense of self or explain away. The stronger the stigma, the greater these challenges are—raising the likelihood of a spoiled identity, in which the stigmatized trait dominates social interactions to such an extent that it becomes an outsized force in identity development. This spoiled identity is the opposite of the enhanced identity that can arise from having more valued (and higher status) characteristics (Goffman, 1963; Link & Phelan, 2001).

The lower end of the attractiveness continuum (ugliness) is a source of stigma. Indeed, in his classic work on stigma, Goffman (1963, p. 4) highlighted "abominations of the body" that lead to negative labeling. In particular, unattractiveness is a *discrediting* stigma, in that it is generally visible to others and can set off expectations and evaluations as soon as someone enters into a social interaction (as opposed to a *discreditable* stigma that may be less obvious; Goffman, 1963). Without effective coping strategies, such as prioritizing in-group comparisons or making external attributions, repeated negative experiences related to stigmatization may harm self-concept (Crocker & Wolfe, 2001; Major & O'Brien, 2005).

Based on the stigma perspective, we expect that physically unattractive people may be viewed negatively by others, be less often selected for investment and rewards, be treated in such a way that their performance suffers, and, as a result of their poor performance, be frozen out of additional investment and rewards. This sequence suggests that less attractive adults earn less money because of discrimination, opportunities that are withheld from them, and poorer work performance resulting from either of these outcomes.

Taking a Developmental Approach

The second question driving this study, which moves the discussion into developmental territory, is: How may adult socioeconomic stratification by looks be rooted in earlier experiences that lay the foundation for socioeconomic attainment?

Of course, adult experiences in the labor market are often connected back to the earlier experiences of children and youth in and around *schools*. After all, the most powerful predictor of labor market position is educational attainment, which itself is a product of years in the formal schooling system (Goldin & Katz, 2008). Thus, stratification by physical attractiveness in childhood and adolescence may be a precursor to similar stratification in adulthood with, for example, the higher grades of the good looking in high school foreshadowing and even contributing to their higher earnings later in life.

Ample evidence suggests that markers of status, value, and stigma can both enhance and disrupt the trajectories of young people through formal schooling (Crosnoe, 2011). Some research has also extended this basic pattern to physical attractiveness, although it has focused on children in elementary school, primarily from experimental studies of teachers' expectations for students' performance based on their physical appearance (e.g., see Ritts, Patterson, & Tubbs, 1992 for an early review and Wang, Treat, & Brownell, 2008 for recent evidence). In short, this literature demonstrates that the general tendency for attractive people to be positively perceived by others on a variety of dimensions (adjustment, social skills) extends to children and to the academic domain, with better looking elementary school-age children rated by others as having higher levels of academic competence (see the meta-analysis by Langlois et al., 2000).

Much less is known about how beauty affects adolescents in high school. Yet, as already noted, there are several reasons for us to expect that this developmental and educational stage is

a critical period for the relevance of looks. The critical nature of this period reflects its linking role in the life course, both looking back to childhood and looking forward to adulthood.

First, as just noted, physical attractiveness has been found to differentiate younger children on a variety of social and academic outcomes, suggesting that early experiences might put children on a trajectory into adolescence in which negative experiences related to looks accumulate. Possibly, adolescent experiences may largely reflect carry-over and, therefore, be less important to study than childhood for this topic. Yet, other factors suggest that adolescent experiences reflect more than carry-over. Indeed, the pubertal transition, which usually occurs by the time that high school begins, is one of the few periods in the life course in which dramatic changes in physical appearance are possible (Bogin & Varela-Silva, 2010; Cavanagh, 2004; Martin, 1996). The potential for ugly ducklings to turn into swans, and other kinds of changes, is important theoretically because it points to breaks in the cumulative process. Similarly, the start of high school is a transition period that, for many youth, serves as a turning point in which they can reinvent themselves or break with the past (Schiller, 1999). Even when it is not and even when looks do not change, entry into this new period likely marks a qualitative shift in the potential effects of attractiveness. Stakes rise as developmental change, including brain and identity development, increases the social orientation of young people and the importance they place on social acceptance, and as high school curricula become more structured and competitive than in earlier stages of schooling (Crosnoe & Johnson, 2011; Schneider, 2007; Steinberg, 2008).

Second, high schools are the most proximate feeder into the institutions of postsecondary education that have become increasingly crucial to future socioeconomic attainment (Schneider, 2007). Over the last three decades, the lifelong returns to higher education—in terms of the earnings premium of college graduates over high school graduates—has increased almost exponentially, and these returns have had significant implications for socioeconomic disparities

in diverse domains, including family formation and stability, health, and even mortality (Fischer & Hout, 2006; Golding & Katz, 2009; Mirowsky & Ross, 2003). As a result, high school academic progress has had increasing implications for the life course in the long term. In turn, social problems in high school that interfere with academic progress (including the potential stratifying role of attractiveness) and disrupt college matriculation can have cascading ramifications well beyond the high school years (Crosnoe, 2011; Masten & Cicchetti, 2010).

A major part of this linking role of high school in the life course in general and the critical nature of attractiveness in adolescence in particular is the dualistic nature of high schools in the U.S., which connects the aforementioned developmental and educational changes. Beginning with Coleman (1961), scholars have recognized that high schools organize opportunities for both social and academic achievement, arising from the fact that educating youth requires bringing together large numbers of teenagers into close proximity with each other for long periods of the day. The result is that high schools can be characterized as both academic and social hierarchies, with young people simultaneously jockeying for position in both. To the extent that social and academic opportunities in and around school are mutually conducive, factors that select youth into social opportunities will also improve their academic prospects. To the extent that they are not mutually conducive, some factors may be socially beneficial but academically problematic (Crosnoe, 2011; Staff & Kreager, 2008). As Coleman (1961, p. 338) wrote: “teachers exhort individuals to concentrate their energies in scholarly directions, while the community of adolescents diverts these energies into other channels.” This process reflects the tensions between social statuses (that are often short lived) and academic accomplishments (that cascade into adult SES).

In summary, our central theses are that (1) adolescence and high school are important (but understudied) developmental periods for research on how youths’ physical attractiveness

differentiates social and psychological experiences in ways that affect (both positively and negatively) their academic experiences; and, that (2) these experiences have important implications for their futures. These basic arguments lead to the third question driving this study: What are the social and psychological processes through which physical attractiveness stratifies the academic outcomes of adolescents in high school? This question is the heart of the conceptual model laid out in Chapter II that will organize our operationalization in Chapter III and our analyses in Chapters IV-VI.

Chapter II. Conceptual Model

The starting point for answering the question of *how* physical attractiveness has implications for academic achievement in high school is establishing that it *does* have academic implications. Interestingly, the extant literature is inconclusive about this issue.

Some community and national studies have found that observers' ratings of adolescents' attractiveness were associated with higher grades (Felson, 1980; Lerner, Delaney, Hess, Jovanovic, & von Eye, 1990). One of the best studies was by Lerner and colleagues (1990). Although focused on early adolescents, it is informative. The study followed approximately 150 primarily White 6th graders from a semirural community across three points of the school year. The investigators photographed the youth at each point and had large groups of college students rate them on a scale ranging from *1 = very unattractive* to *5 = very attractive*. At each time point, teachers rated the youths' scholastic competence on Harter's Teacher's Behavior Rating Scale (Harter, 1983). The youths' overall grade point averages (GPA) were also taken from their report cards at the close of the academic year. In structural equation models, physical attractiveness did not directly predict final GPA, but it did indirectly predict final GPA through the teacher's initial assessments of the child's academic competence. In particular, greater physical attractiveness predicted teachers' ratings of academic competence at the beginning of the school year. Teachers' initial ratings of youth, in turn, predicted their ratings at the middle and end of the school year. Furthermore, all three of the teachers' higher ratings predicted the youths' final GPAs. As Lerner and his colleagues (1990, p. 15) interpreted these results:

> "This temporal difference may have been due to the fact that PA [physical attractiveness] had its maximum influence on teachers' judgments about students' academic competence at a time (the beginning of the school year) when the

> teachers had less personal behavioral information about the students; thus, it may be that the teachers were most likely to rely on stereotypic associations between physical attractiveness and competence ... at this time."

In contrast, Sparacino and Hansell (1979) found that others' ratings of attractiveness were either not associated or were negatively associated with grades in a small, private high school and in two samples of Midwestern college students. Drawing on longitudinal samples from the early to mid 20th Century, Zebrowitz and colleagues (Zebrowitz, Andreoletti, Collins, Lee, & Blumenthal, 1998; Zebrowitz, Hall, Murphy, & Rhodes, 2002) reported associations between facial attractiveness and higher IQ scores in adolescence in the Berkeley/Oakland studies (Eichom, Clausen, Haan, Honzik, & Mussen, 1981) but no associations with educational attainment in these data or in the Crime Causation Study (Glueck & Glueck, 1963).

Conflicting findings in the literature suggest the need for new methodological approaches to answer the question of how physical attractiveness associates with academic achievement (e.g., contemporary national samples). Yet, they also could reflect the need to think in more nuanced ways about why and how physical attractiveness would matter to graded performance in high school; specifically, the potential academic benefits of physical attractiveness could mask potential academic risks, given the potentially competing social and academic demands of adolescence in general and high school in particular.

Following this logic, Figure 1 presents the conceptual model of this study. It posits paths between physical attractiveness and academic achievement in high school that are offsetting (i.e., both increasing and decreasing attractiveness-related academic disparities) and connects these processes to post-high school outcomes as adolescents transition into and through adulthood. In the sections that follow, each of the main pieces of this conceptual model will be delineated in turn. In the process, a set of hypotheses and/or exploratory questions will be put forward for each

piece. The hypotheses will be tested in Chapter IV with statistical analyses of the National Longitudinal Study of Adolescent Health (Add Health) as a means of establishing the basic contours of the stratifying role of physical attractiveness in adolescence and young adulthood, including basic social achievement mechanisms (or mediators) that link attractiveness to academic achievement in high school and assorted outcomes in young adulthood; a structural equation modeling framework allows for the estimation of direct and indirect effects along multiple pathways at the same time. The exploratory questions will be taken up in Chapter V with qualitative analyses of Lamar high school data that unpack the pieces of the conceptual model and point to new additions to it, including any mechanisms beyond the basic social achievement mediators tested initially in Add Health as well as sub-mechanisms that help to explain how those mediators work (e.g., what more nuanced processes may underlie the associations of attractiveness with social achievement observed in Add Health?). When possible, these newly identified and/or better understood mechanisms and sub-mechanisms are then tested in further quantitative analyses of Add Health (Chapter VI). This back and forth between hypotheses-testing in quantitative research and grounded theory exploration in qualitative research leads to a roadmap to guide future research, which we present in Chapter VII.

Of note is the fact that our conceptual model in Figure 1 does not explicitly include gender, even though gender was a main focus of this study at its onset. Past research and theory on a variety of related topics (e.g., popularity, social status) suggest that the social psychological importance of physical attractiveness likely differs by gender. A major theme of the developmental and social psychological literatures is that standards of appearance are much stricter for girls than boys and that girls are more harshly judged by such standards (Giordano, 2003; Magro, 1997; Martin, 1996; Ong, 2005; Wolf, 2002). Consequently, any study of or perspective on the stratifying role of attractiveness in adolescence would be remiss if it did not

consider gender as a context in which the effects of attractiveness play out. Surprisingly, although the expectation of gender as a moderator of such effects is theoretically grounded, it is not empirically grounded—most studies reveal either weak or non-existent gender differences (see Eagly, Ashmore, Makhijani, & Longo, 1991; Hamermseh 2011; and Langlois et al., 2000 for reviews). This pattern—theoretical expectations of moderation not bearing out empirically—also applies to race-ethnicity. Strong cultural assumptions, in part rooted in sociological and anthropological perspectives, point to race-ethnic differences in the assessment and valuation of attractiveness. To some extent, these assumptions are true, especially when considering body size of girls and women. Yet, race-ethnic differences in how attractiveness (especially facial attractiveness) is rated and experienced are far weaker than these assumptions suggest (Cunningham, Roberts, Barbee, Druen, & Cheng-Huan, 1995; Langlois et al., 2000; Rhodes, 2006).

In formulating this study, therefore, we paid special attention to gender and race-ethnicity as moderators of the pathways in our model, both in conceptualization and initial analyses. For example, the offsetting pathways were initially conceptualized to differ in strength by gender, and all of the statistical analyses were tested with two-way interactions (of gender × attractiveness, race-ethnicity × attractiveness) and three-way interactions (gender × race-ethnicity × attractiveness). In line with the literature, this focus on gender and race-ethnicity as moderators yielded almost no significant findings and few theoretical insights, beyond affirming that the stratifying role of attractiveness in our conceptual model is far more generalized than popular opinion supposes. In an effort to streamline this monograph, we have eliminated these extensive analyses and associated conceptual discussion, given the null findings; We instead focus on the generalizability of the phenomenon at the heart of our conceptual model across diverse segments of the population.

The Psychosocial Implications of Physical Attractiveness in Adolescence

Path A in our working conceptual model captures the potential for physical attractiveness to help youth achieve socially, in the form of interpersonal ties with others around school, formal and informal peer-based activities, and psychological strengths that facilitate sociability. These forms of social achievement imply greater social acceptance, higher social value, higher social status, and greater opportunities for forming connections with others (Barber, Eccles, & Stone, 2001; Crosnoe, 2011). The following hypothesis is based on this piece of the model:

Hypothesis A: Attractive youth will have higher social achievement at school, as defined by social ties, activities, and other psychosocial resources.

Specifically, we anticipate that attractive high school students will have more same-sex and opposite-sex friends, more positive perceptions of their relationships with teachers and peers, greater entrée into social activities linked to the school, and enhanced senses of their own social value. Past evidence does support the basic premise of this hypothesis but with caveats related to differences in methods and measurement.

First, several ethnographic and small-scale studies have correlated physical attractiveness with popularity in adolescence (Adler, Kless, & Adler, 1992; Becker & Luthar, 2007; Closson, 2009; Evans & Eder, 1993; Lease, Musgrove, & Axelrod, 2002; Vaillancourt & Hymel, 2006), and have linked adolescent perceptions of attractiveness with popularity, dating preferences, and dating/sexual experiences (Davies & Windle, 2000; Eyre & Millstein, 1999; Jones, 2001; Lammers, Ireland, Resnick, & Blum, 2000; Regan & Joshi, 2003; Roeser et al., 2008; Stone, Barber, & Eccles, 2008). The few non-representative studies using others' ratings of physical attractiveness, however, find mixed support for these patterns (Mazur, Halpern, & Udry, 1994; Udry & Billy, 1987; Vannatta, Garstein, Zeller, & Noll, 2009; Zimmer-Gembeck, Siebenbruner, & Collins, 2004). Possibly, self ratings reflect adolescents' use of social and romantic success as

a cue to their attractiveness. Others' ratings of physical attractiveness, therefore, need to be utilized more often in large, representative samples.

Second, sports and cheerleading have been shown to be highly visible and often coveted official school activities with clear in-group/out-group structures, and both have been associated with physical attractiveness in localized primarily qualitative studies (Bettis & Adams, 2003; Eder, 1985; Eder & Kinney, 1995; Eder & Parker, 1987; Merten, 1996a). Quantitative research has less often considered predictors of activity participation, generally focusing instead on their consequences (Feldman & Matjasko, 2005). Large-scale quantitative studies associating looks with participation in such visible activities in high school are particularly lacking. Social activities can also extend to the informal sector, capturing activities with peers that may provide social opportunities and, in the process, facilitate social integration. Dating is one example (Giordano, 2003). Importantly, such informal social activities may involve or be organized around risky behaviors, especially "party" behaviors like substance use and minor delinquency (Crosnoe, 2011; Staff & Kreager, 2008). Such behaviors are often unhealthy and threaten future prospects, but developmental research suggests that, when not taken to extreme, they can also be a means for youth to form and maintain social position in high school (Allen, Porter, McFarland, Marsh, & McElhaney, 2005; Giordano, 2003). How physical attractiveness is directly related to such informal activities is not well-established, but the indirect links (physical attractiveness to popularity, popularity to party behavior) are. One exception is the link between physical attractiveness with dating/sexual preferences and opportunities, which is well-established for adolescents just as it is for adults (Eyre & Millstein, 1999; Jones, 2001; Li & Kenrick, 2006; Lundy, Tan, & Cunningham, 1998; Regan & Joshi, 2003; Rhodes, Simmons & Peters, 2005).

Third, self-perceptions of appearance have been consistently associated with greater self-esteem and lower rates of depression in adolescence, especially among youth who think that

appearance is important (Harter, 2000). Again, evidence is far more mixed when *others'* ratings of attractiveness have been used. These studies of others' ratings, however, have relied on relatively small, localized samples (Jovanovic, Lerner, & Lerner, 1989; Kenealy, Gleeson, Frude, & Shaw, 1991; Lerner et al., 1991) or have been conducted outside the U.S. (Mares, de Leeuw, Scholte, & Engels, 2010; Oldehinkel, Rosmalen, Veenstra, Dijkstra, & Ormel, 2007). A more thorough vetting with others' ratings of looks is needed.

We motivate Hypothesis A based on this past research on attractiveness and on related topics. Yet, if the hypothesized link between physical attractiveness and social achievement in high school receives support in Add Health, more fine grained mechanisms underlying this link will still be unknown. These unidentified mechanisms lead to the following exploratory question:

Exploratory Question A: What are the social psychological sub-mechanisms by which physically attractive youth accrue more social achievement?

Grounded theory approaches allow for generating new insights from qualitative data, but such approaches can build from starting points provided by theory. Following such an approach, we explore the qualitative data freely but do so after using a priori expectations as guides of the *initial* exploration as a means of organizing the task.

The theoretical approaches summarized earlier—status characteristics theory and the social stigma perspective—provide the organizing frame for this exploration (Berger & Fişek, 2006; Link & Phelan, 2001). These approaches share three features that are particularly relevant to physical attractiveness in high school. The first is that visible markers of status and value (or lack thereof) have an outsized influence on social interactions, especially initially, and these influences can be hard to undo once they have taken effect. The second is that such markers can have diffuse effects that trump other relevant pieces of information and that get linked to a wide variety of social judgments about a person. In this way, something seemingly unrelated to factors

like competence, likeability, and character can influence others' assessments of these traits. The third feature is that the active and passive social responses that such markers can elicit are often internalized into the self; this internalization then further enhances or further discourages the kinds of behaviors that allow individuals to realize social opportunities. Status characteristics theory and the stigma perspective are applicable across the life course. They appear to be especially relevant to adolescence, however, given it is a critical period in identity development—a time when developing cognitive capacities and body concerns increase awareness of the self as a social object and a stage in which social networks and opportunities for social interaction expand and diversify (Eccles et al., 1993; Giordano, 2003; Rankin, Lane, Gibbons, & Gerrard, 2004; Steinberg & Morris, 2000).

We use these theoretical approaches to narrow down our exploration of sub-mechanisms in our qualitative data from Lamar high school to the following: physical attractiveness may a) be used as a sorting device among high school youth to determine who is worthy of continued or sustained investments of time, attention, and attachment; b) lead to others' assumptions that good looking youth have a wide variety of characteristics that evoke liking; and c) influence whether young people put themselves into social situations and competitions. This narrowing down, however, does not eliminate further exploration. These a priori themes serve as starting points for organizing the voluminous qualitative data, but they are not end points—we allowed other themes to emerge more organically from the data too.

How Social Achievement Reinforces and Offsets Academic Achievement in High School

Path B in the conceptual model captures the potential for the social achievement related to physical attractiveness to factor into academic achievement. Note that this path is designated as having both a positive and a negative direction. This consideration of how social achievement can both help and hinder academic achievement is a key innovation of this study. Essentially, we

posit offsetting paths between social and academic achievement that dilute, but do not completely wash out the academic disparities related to physical attractiveness. The explicit hypotheses related to this piece of the conceptual model are:

Hypothesis B1: Some aspects of social achievement related to physical attractiveness will support academic pursuits in high school (social assets), but others will disrupt them (social distractions).

Hypothesis B2: Social assets will outweigh social distractions, so that attractiveness is positively associated with academic achievement overall.

The social and academic hierarchies of high school are highly intertwined but not always mutually beneficial. Importantly, social opportunities matter to academic outcomes but can be either academically productive or counter-productive depending on the specific opportunity (Coleman, 1961; Eckert, 1989; Eder & Kinney, 1995; Kinney, 1999). Of the forms of social achievement discussed in the prior section, some have well-established associations with better grades (e.g., warm relationships with teachers and fellows students, sports participation, and positive psychosocial functioning), and some have well-established associations with poorer grades (e.g., party behavior; Catalano, Haggerty, Osterle, Fleming, & Hawkins, 2004; Crosnoe, 2002; Fredericks & Eccles, 2006; McLeod & Fettes, 2007; Needham, Crosnoe, & Muller, 2004). Consequently, we label these factors in relation to their association with grades as social assets and social distractions. In our initial models, we verify that we observe these directions of associations in the Add Health data and also explore the role of other activities. For example, there is some evidence that cheerleading is an exception to a general pattern of positive associations between extracurricular activities and academic achievement, for example, and dating has been linked to lower teacher academic ratings, especially for girls (Merten, 1996a; Zimmer-Gembeck, Siebenbruner, & Collins, 2001).

This past research motivates Hypotheses B1 and B2. Some social outcomes of physical attractiveness will be academically supportive, others academically problematic. We tentatively posit that the total effect of attractiveness on grades will be positive. This expectation is tentative given conflicting evidence in the small number of empirical studies reviewed above associating looks with grades in adolescence (Felson, 1980; Lerner et al., 1990; Sparacino & Hansell, 1979; Zebrowitz et al., 1998, 2002), although there is more consistent evidence of a positive attribution bias by elementary school teachers in the social psychological literature (Ritts et al., 1992; Wang et al., 2008) and of the better looking earning more in the economics and organizational psychology literatures (Hamermesh & Biddle, 1994; Hamermesh et al., 2002; Harper, 2000; Hosoda et al., 2003). Again, evidence for these hypotheses in Add Health will generate new questions, such as the more nuanced daily interactions that produce these offsetting paths. The following exploratory question, therefore, will be addressed with the Lamar data:

Exploratory Question B: What are the psychological and behavioral sub-mechanisms by which social achievements are positively and negatively related to academic achievement?

Again, a grounded theory approach allows for a priori expectations to guide initial exploration while also enabling other themes to emerge. Following this mixture of a priori and emergent themes, we put forward three possible starting points for exploring the sub-mechanisms underlying Path B. First, the sub-mechanisms linking social assets, such as interpersonal ties and psychosocial resources, to higher academic achievement may be socioemotional in nature. According to the arenas of comfort paradigm (Call & Mortimer, 2001), adolescents are better able to succeed in some domain of challenge when they are embedded in arenas of comfort, or contexts of interpersonal relations that allow young people to feel good about themselves and know they have a source of help if needed. In many ways, this adolescent-

focused conceptual framework echoes some of the sentiments of attachment theory. Relationships with adults and other youth serve as the secure foundation for navigation of the external world. With such support, young people have more confidence to meet challenges in other domains—such as school—and to successfully complete the academic tasks before them (Dornbusch, 1989). Without this secure socioemotional base, however, adolescents are less able to cope with the pressures that the increasingly stratified, cumulative, and competitive structures of high schools present in their lives (Csikszentmihalyi & Schneider, 2000; Frank et al., 2008; Simmons & Blythe, 1987). A strong belief in oneself can serve similar purposes independent of interpersonal relationships. It can enable young people to persist in the face of difficult but important tasks, such as the tasks found in contemporary American high schools (Crosnoe, Riegle-Crumb, & Muller, 2007). Thus, youth who have more social ties or who, regardless of their social ties, are confident and secure in themselves will be better equipped socioemotionally to succeed in school. The flipside is that youth without such ties or resources are likely to be highly alienated, and alienation has long been considered a major risk factor in a variety of domains of adjustment and functioning. These domains include academic achievement, as alienation leads youth to give up on conventional tasks or, in some cases, actively reject them (Kreager, 2004; Merton, 1957).

Second, the sub-mechanisms linking social distractions, such as certain formal and informal activities, to lower academic achievement may be practical in nature. For example, such activities may consume time and emotional energy and shift motivations away from academics, as revealed by evidence from college samples that romantic popularity is inversely associated with grades among sorority members, who have been found to spend great amounts of time on non-academic activities such as grooming and shopping (Crocker & Wolfe, 2001; Davis, Claridge, & Fox, 2000; Speed & Gangestad, 1997). These college patterns may echo high school

patterns where some students invest time in social achievement to the detriment of academic achievement. For example, ethnographic studies have documented the time and effort it takes to seek and occupy cheerleading roles. Merten (1996a, 1996b) found that girls spent considerable time and energy practicing before and after making the cheerleading team and struggled to figure out how much time to give to friends and romantic partners. A student in a high school ethnography by Crosnoe (2011) echoed these findings, describing how managing social pressures and opportunities in high school takes time that distracts from school work. Importantly, this sub-mechanism has also been suggested by past experimental research on physical attractiveness in the status characteristics tradition. As a participant in Webster and Driskell's experiment explained, "Person B [attractive] probably has a lot of things to do, so I guess Person A [unattractive] gets better grades" (1983, p. 157).

Third, identity development could play a role in the link between social and academic achievement in both its positive and negative dimensions. According to identity theory (Stryker, 1987), identities represent the product of our interpretations of the social expectations that go along with our social positions. Scholars interested in development have argued that many of the informal and formal activities of adolescence have their effects on youth by shaping identity development, either by providing a group-based identity that crystallizes position in some social structure or by evoking self- and other-expectations for behavior associated with that position. These identities then generate behavioral responses that are meant to confirm or disconfirm them (Barber et al., 2001; Ryan, 2001). Having extensive social ties and access to many social opportunities could then generalize into a basic positive identity that extends across multiple domains, including academics, and engender behavioral efforts to maintain it (Crosnoe, 2011). At the same time, specific social activities might be viewed as compatible or incompatible with academic achievement. Being a partyer or a cheerleader, for example, may not link to images of

academic success and, therefore, fail to encourage academically supportive behaviors or even generate academically counterproductive behaviors.

Of note are two apparent contradictions in the general logic of social assets and distractions as defined here. Sports and most extracurricular activities are viewed as potential assets, but one particular extracurricular activity, cheerleading, is a potential distraction. Similarly, having friends is viewed as an asset, dating may be a distraction. All of these factors are likely to be similar in terms of time allocation, taking away time from school work. Where they likely differ is on socioemotional and identity dimensions. Evidence suggests that dating introduces great emotional demands that young people, male and female, often have difficulty managing (Giordano, Longmore, & Manning, 2006). Sports and extracurricular participation is far less likely to be defined and evaluated through purely superficial standards, such as attractiveness, and provides a set of organized activities around some common goal. In these ways, such participation likely differs from cheerleading (Adler et al., 1992; Bettis & Adams, 2003; Eder, 1985; Eder & Parker, 1987; Kinney, 1993; Merten, 1996a). These differences suggest potential ways in which these activities vary in their consequences for academic achievement. We take this possibility as an empirical question, with quantitative data pointing to what is as an asset or distraction and qualitative data suggesting the possible reasons why.

Potential foci for the qualitative exploration of why social achievement is linked to academic achievement in positive and negative ways, therefore, are: (1) socioemotional help and support, (2) time allocation, and (3) identity issues. These foci will serve as a starting point for the qualitative analyses in Lamar, which will also allow for other emergent themes. To illustrate this approach in more methodological terms, these three themes were the initial codes for reducing the qualitative data, but the qualitative data also revealed other themes that could be used as sorting codes to reduce the data even further. Moreover, in some cases, an a priori theme

proved to be ineffective as a tool for organizing and reducing the data and was, consequently, eliminated from the qualitative coding scheme.

School Culture as a Modifier of the General Youth Culture

Path C in the conceptual model recognizes that individual schools serve as the contexts in which physical attractiveness leads to different kinds of achievement. Possibly, physical attractiveness may lead to greater social opportunities in one school but not in another, and social opportunities may be academically promotive in one school and academically risky in another. This potential variation is explicitly articulated in the next hypothesis:

Hypothesis C: The links among physical attractiveness, social achievement, and academic achievement in adolescence will vary in degree and direction across high schools.

This hypothesis arises directly from the two main theories that we use to organize our conceptual model of the stratifying role of physical attractiveness: status characteristics theory and the stigma perspective. According to both, the status and value attached to personal characteristics, including those related to appearance can be context-specific. For example, Goffman (1963) pointed out that some social stigma can be considered global, in the sense that they are widely shared among diverse groups, but also that even the most seemingly global stigma will vary in intensity across local contexts. In other words, just because something is devalued in the U.S. in general does not mean that it is devalued in every community in the U.S.

This notion of local variation applies to the study of physical attractiveness during adolescence in several ways. First, as discussed above, standards of physical attractiveness are believed to vary across local contexts. Although empirical findings regarding beauty generally do not align with these expectations (Cunningham et al., 1995; Langlois et al., 2000; Rhodes, 2006), the evidence of variation in effects of other physical features supports the continued

pursuit of this potential. For example, college educated Americans tend to react much more harshly to obesity than other Americans, not so much for aesthetic reasons but more because they view it has a sign of personal failure (Ge, Elder, Regnerus, & Cox, 2001; Grogan, 2008; Ross, 1994). Second, high schools in the U.S. differ widely in their normative structures and value systems, with some emphasizing social achievements or academic achievements more than others. This school-to-school variation in norms and values has been a major theme in work on adolescent culture from Coleman (1961) onward. Thus, in addition to the possibility that different standards of physical attractiveness could be at work across schools, the degree to which physical attractiveness is socially rewarded and the academic implications of those social rewards are likely to differ depending on the school context. Indeed, Coleman (1961) showed that physical attractiveness was only strongly linked to cheerleading in certain schools, and Crosnoe (2011) showed that obesity was only related to academic outcomes in schools in which it was heavily stigmatized.

We test this hypothesis in Add Health with hierarchical linear modeling. This modeling approach explicitly decomposes the variance in the outcome into between- and within-school components through the estimation of a random intercept (i.e., capturing the possibility that two youth from the same school may have more similar achievement than two youth from different schools). It also allows for the testing of a random slope, in which the coefficient for some predictor (e.g., attractiveness) is allowed to be school-specific; if the random slope is not significant, then there is evidence for a single slope that generalizes across schools. By testing the significance of a random slope for attractiveness, we take an initial but important step towards answering the question of whether attractiveness matters more or less in some schools than others. To go a step further, we also use the Lamar data to explore specific features of schools that might moderate the effect of looks, based on the following exploratory question:

Exploratory Question C: Is observed school-level variation in the implications of physical attractiveness related to school factors that reflect fluctuations in academic and social competition?

This exploration is guided by the argument put forward by Crosnoe (Crosnoe, 2011; Crosnoe et al., 2007; Crosnoe & Muller, 2004) in his work on the stigmatization of certain students in high school, such as those who are gay/lesbian or obese, and how such stigmatization is an academic risk factor. One theme from this research is that schools with greater levels of competition for social and academic recognition will increase the risks associated with having a devalued or stigmatized characteristic. In such schools, those characteristics will be used by others as a means of putting someone at a competitive disadvantage. Thus, an adolescent's unattractiveness will take on added meaning when the chances are greater that it can be effectively used against him or her by others or when others avoid that adolescent for fear that the association will be used against them.

In exploring this possible mechanism of school variability, we follow the basic categories of student characteristics put forward by Crosnoe and his colleagues that are similar to Coleman's (1961) much earlier discussions of high school cultures: a) patterns of social behaviors (e.g., dating, partying, activity involvement) that denote a high premium on social engagement in a school and, therefore, a competitive market for social achievement, and b) evidence of academic intensity (e.g., high rates of achievement and eventual college enrollment) among students that raises the likelihood that even non-academic factors can be used to stratify students academically.

The qualitative exploration will not be limited to these categories of school characteristics but will start from them. Worth noting is that the qualitative data come from a single school, so that exploration of school variation is impossible. These data are useful for this purpose,

however, in the sense that adolescents can talk about what they think matters in their school and, by proxy, what differentiates their school from others. In the nonlinear fashion common to mixed methods studies (Lichtman, 2009), we then use their insights to circle back to our quantitative analyses, helping us define which specific school characteristics to test for moderation in our hierarchical linear models based on the multi-school sample of Add Health.

The Hidden Influences of Selection

Path D in the conceptual model touches on an important issue for developmental research, one that is often viewed as a statistical problem but can be thought of more conceptually. In short, selection effects—the potential for the forces that select a person into a status to also account for the apparent effects of that status on some outcome—can lead to misattributions of causality in developmental studies, as detailed in a recent *Monograph of the Society for Research in Child Development* (McCartney, Burchinal, & Bub, 2006). For example, Duncan, Magnuson, and Ludwig (2004) demonstrated how observed child care effects on child outcomes are overestimated when models fail to account for the parental factors (e.g., socioeconomic, personality, community) that both affect child care need and child development. Other recent work has revealed that genetic traits account for a large share of the effects of pubertal timing on adolescent behavior so frequently studied with a developmental approach (Mendle, Harden, Brooks-Gunn, & Graber, 2010). These authors call for such selection forces to be more explicitly accounted for when studying how developmental processes unfold.

For this study, what matters are spurious factors that could affect ratings of physical attractiveness and also social and academic opportunities. Some possible factors are easily observable with quantitative or qualitative data and have widely shared measurement procedures. Race-ethnicity, age, and socioeconomic status are examples. Other factors are much more difficult to observe. One example is genetic heritability. After all, many of the physical features

that constitute appearance (e.g., hair and eye color, nose structure) are partially or completely driven by genetics. Although these genetic influences may not be directly related to social and academic behaviors in adolescence, they could be clustered with other genetic factors that are. It is also possible that additional aspects of grooming, body size, and other factors related to appearance could be driven by aspects of personality or socioemotional adjustment that share similar genetic influences as social and academic behaviors. Assessing such genetic confounds, therefore, is important for establishing the potential causal nature of the basic links in our conceptual model. We tentatively expect to find positive associations, given the strong evidence for attributional bias found in social psychological experiments. To this end, we pose the following hypothesis for testing in Add Health.

Hypothesis D: *The implications of physical attractiveness for adolescent and young adult outcomes will be robust in the face of both observable and unobservable confounds, including those shared by siblings and twins.*

In examining the various parts of the conceptual model with Add Health, we will test for these confound effects explicitly by controlling for important factors (e.g., socioeconomic status) and more implicitly through the use of fixed effects (which adjusts for average levels of attractiveness and achievement within families, thereby washing away any family-specific biasing factors) and genetic sensitivity tests (which point to the presence and magnitude of latent genetic effects in parameters of interest). The Lamar data do not provide information relevant to this hypothesis, and so we do not have an exploratory question for this aspect of our model.

Physical Attractiveness and the Transition to Adulthood

Path E in the conceptual model captures the potential for the interplay of physical attractiveness, social achievement, and academic achievement to carry over into young

adulthood. Prior studies of physical beauty and adult earnings suggest that more attractive youth will have higher earnings when they enter the labor market. We will replicate these analyses with the Add Health data but also extend prior studies by examining the extent to which the earnings advantage of more attractive young adults is explained by their social assets, social distractions, and grades in high school. Such a path represents one way that wage disparities related to physical attractiveness in adulthood are rooted in high school experiences. We also expect that high school grades and social achievement shape the future accumulation of human capital indirectly through the attainment of more social capital in young adulthood (Coleman, 1988). In addition, good looks may directly smooth the transition to adulthood, both through the diffuse status mechanism (the better looking will find it easier to make new friends and to find a life partner, to be successful in college, and to adjust to the workplace) and the stigma mechanism (the unattractive will experience social isolation and depression). The hypotheses related to this piece of the conceptual model are:

Hypothesis E1: Attractive youth will have greater human capital outcomes in young adulthood, including more college degrees and higher wages, and higher social capital in young adulthood, including more interpersonal ties and psychosocial resources.

Hypothesis E2: Greater social assets and social distractions during high school will carry forward into adulthood, explaining some of the human and social capital advantage of attractive young adults.

Hypothesis E3: Young adult human capital outcomes will also be partly explained by contemporaneous social capital, including the benefits to attractive young adults of better self-perceptions and higher chances of marrying or

cohabiting but also the offsetting costs of having more sexual partners and more children.

This piece of our model—the potential for stratification by looks to affect human and social capital accumulation in young adulthood—is important given the increasing diversity in the sequence and timing of school, family, and work transitions (Shanahan, 2000). Recent shifts in the U.S. economy, particularly the move away from heavy manufacturing toward service and information technology, also mean that higher education has become an essential dividing line (Fischer & Hout, 2006). Whereas in the past a young adult could obtain a good-paying manufacturing job with a high school diploma in hand, today post-secondary degrees are required to access the better-paying jobs in the information/technology and service sectors (Diprete & Buchmann, 2006; Heckman, Lochner, & Todd, 2007; Katz & Autor, 1999). We also examine several aspects of family formation, including cohabitation as well as marriage and parenthood, since cohabitation has increased sharply in recent decades but also appears to be associated with negative selection factors, including lower SES (Smock, 2000).

More specifically, our analyses in young adulthood parallel our analyses in adolescence, in that we examine whether better-looking young adults find it easier to accumulate social capital in young adulthood and the extent to which some aspects of these social opportunities will support human capital attainment and others may work against it. We consider a number of social outcomes with well-established associations with college attainment, employment, and earnings. Social attributes that we anticipate will largely associate with higher human capital include: number of close friends, due to the known advantage of social networks for employment (Jackson, 2009; Lin, 1999); marriage, due to the established association of marriage with employment and earnings, especially for men (Ahituv & Lerman, 2007; Bardasi & Taylor, 2008; Waite & Lehrer, 2003); and, personality and mental health, because they have been shown

to associate with success at work and school (Fletcher, 2010; Hough & Oswald, 2000; Lagerveld et al., 2010; Lerner & Henke, 2008; Luo, Cowell, Musuda, Novak & Johnsons, 2010; Spenner, 1988). Social attributes that we anticipate to associate with lower human capital include: cohabitation, due to some evidence of its correlation with lower attainment in school and at work (Cohen, 2002; Smock, 2000); and, sexual behavior and fertility, due to their correlations with less educational attainment and employment, especially among women (Braithwaite, Delevi & Fincham, 2010; Budig & Hodges, 2010; Grogger & Bronars, 1993; Sibulkin & Butler, 2005). We add to prior studies by examining how these young adult social outcomes are associated with physical attractiveness and then build on prior studies by testing whether these social attributes mediate the association of looks with college attainment, earnings, and socioeconomic status.

Prior attempts to explain the association between physical attractiveness and earnings in adulthood are rare, with most studies focusing on mechanisms in the workplace (e.g., discrimination by employers and preferences of customers). Studies of adult earnings have adjusted for other demographic characteristics, like education and marital status, but few have examined these as central outcomes of looks in adulthood. Even fewer studies have examined them as mechanisms through which the association between looks and earnings might be explained. One exception is a study by Judge, Hurst and Simon (2009) that examined how the association between physical attractiveness and earnings was mediated by educational attainment and self-perceptions, such as feelings of helplessness and disappointments about achievements. Their study, however, was limited to several hundred adult residents of Boston surveyed in the mid-1990s. Umberson and Hughes (1987) also found that attractiveness ratings correlated not only with earnings and income but also with educational attainment and measures of positive and negative affect. Their data came from the nationally representative Quality of American Life study, but these data were cross-sectional and gathered in the late 1970s. Zebrowitz, Collins, and

Dutta (1998) additionally showed that attractiveness correlated with a more sociable and dependable personality using several longitudinal studies of White middle class individuals begun in the 1920s and 1930s. Finally, Mocan and Tekin (2010) used the Add Health data and showed that more attractive youth were less likely to engage in crime during their twenties. Although they showed that this association persisted with controls for high school grades, problems with teachers and students, and having been suspended or expelled in high school, they framed their study with economic rather than developmental perspectives. Our goal in connecting adolescence and young adulthood is to provide insight into the life course structure of physical attractiveness as a stratifier, highlighting critical mechanisms in the process.

Consistent with our broader conceptual model and recent research that places the transition to adulthood in developmental context (Shanahan, 2000), therefore, we argue that earlier high school experiences help to explain the association of attractiveness with traditional markers of adulthood. We also anticipate that the key mechanisms we examine in adolescence—diffuse status and stigma—will continue to operate in young adulthood, leading to better looking youth attaining more socially; and, that some of these social achievements will support human capital attainment and others will work against it. Recent research in Add Health has uncovered a link between attractiveness and earnings in the early 20s (Fletcher, 2009; Mocan & Tekin, 2010). Extending this pattern later on into the life course (late 20s and early 30s) and linking it to social and educational experiences in adolescence and during the transition to adulthood is a key contribution of this study. Doing so will suggest ways that the stratifying role of physical attractiveness is cumulative, contemporaneous, or both.

Unfortunately, the qualitative study did not follow the adolescents through their transitions into adulthood. Thus, no exploratory questions are possible for this piece of the conceptual model.

Summary

The basic idea of the conceptual model, therefore, is that physical attractiveness will lead more attractive youth to greater social achievement within and across diverse segments of the population (e.g, defined by gender and race-ethnicity). Sometimes these social achievements will support academic achievement (be social assets) and sometimes they will work against academic achievement (be social distractions). We expect social assets to outweigh social distractions such that the overall association between better looks and grades is positive. These associations should be stronger in certain contexts, especially large and diverse public schools, and the associations may be attenuated but will not disappear when we adjust for selection factors (shared correlates of attractiveness and achievement). We further expect that the more positive social and academic trajectories of more attractive youth will lead them to accumulate more social and human capital during the transition into adulthood; and, that there will be contemporaneous effects of better looks in young adulthood, again with likely offsetting mechanisms through social assets and social distractions. The advantages of occupying the high end of the attractiveness continuum (being very attractive versus attractive, being attractive versus average) may differ from the disadvantages of occupying the low end of the attractiveness continuum (being unattractive versus average, being very unattractive versus unattractive). We evaluate, deconstruct, and built upon this model through mixed methods analyses that bridge hypothesis testing and grounded theory exploration.

The conceptual model of this study, and the plan for analyzing it, builds on prior theory and research in a number of ways. The model captures both the positive and negative implications of physical attractiveness for youth's academic achievement. It connects adolescence to young adulthood as sequential links in the socioeconomic attainment process. It views the implications of physical attractiveness as context-specific, potentially varying across

schools with different structures and cultures. Physical attractiveness is viewed as more complex than a simple dichotomy of beautiful versus ugly and is measured by others' ratings. The quantitative data uses multiple sources, including official school grades, and allows for the application of multiple methods for addressing the selection influences in the conceptual model. The qualitative data provide insights into the kinds of subtle and nuanced sub-mechanisms that are difficult to measure with surveys.

Through these contributions, this study will provide a developmental perspective on the ways in which adolescent development within the high school context plays a role in socioeconomic stratification by physical attractiveness in the U.S. The human capital advantage of better looking adults and positive attributions made of better looking children and adults have been well-documented outside of developmental fields. Relatively little developmental research, however, has been conducted in naturalistic contexts to consider how beautiful, plain, or ugly looks place youth on different trajectories through adolescence and young adulthood. Doing so is the contribution of the current study.

Chapter III: Data and Methods

Quantitative Sample

For quantitative analyses, we drew on the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative survey of adolescents in grades 7 through 12 that began in the mid-1990s (Harris et al., 2009). The school-based, multistage sampling design started with a sample of 80 high schools, selected from a list of American high schools. To ensure diversity, sampling was stratified by region, urbanicity, school sector, racial composition, and school size. Eligible schools included the 11th grade and enrolled more than 30 students. Sixty-five percent of the selected schools agreed to participate, with refusals replaced by schools in the same stratum (Tourangeau & Shin, 1999). A companion middle school that included the grade 7 and sent at least five graduates to the high school was selected. Twenty of the 80 high schools had included grade 7, and thus no companion school was needed. An additional four schools drew their entering classes from a very large number of schools. Each of the remaining 56 high schools was matched to one of its feeder schools, with the probability of the feeder being selected proportional to its contribution to the high school. Four feeders refused to participate, leaving a sample of 52 feeder schools.

During the 1994-1995 school year, all students in each of the sample's 132 schools were invited to complete a brief In-School Survey from which a subgroup of students was selected for in-depth Wave I In-Home interviews. Parents of the In-Home study participants were also interviewed at Wave I. The In-Home interviews were repeated with youth in 1996 (Wave II) for most students. A third wave was conducted in 2001-2002 when participants were ages 18 to 26. At this point, the Adolescent Health and Academic Achievement (AHAA) study gathered official high school transcripts for most Wave III participants which we used to measure official grade point averages during high school (Riegle-Crumb, Muller, Frank, & Schiller, 2005). In

Wave IV, conducted during 2007 and 2008 when respondents were ages 24 to 32 years old, the investigators conducted follow-up in-home interviews with 15,701 (80.3% of eligibles) of the original Wave I respondents (Carolina Population Center, 2009).

The analytical sample for this study was restricted to Add Health youth who were in grades 9 through 12 in the 1994-1995 and/or 1995-1996 school years, participated in at least one of the In-Home surveys (Wave I or Wave II), and participated in the young adult follow-up (Wave IV). These filters left a sample of 8,918 youth.[1] We imputed item-level and instrument-level missingness in *ice* in Stata (Royston, 2005).[2] The *ice* routine implements multivariate imputation with chained equations. We used the Stata *mim* command and the Mplus TYPE=IMPUTATION commands to combine estimates from the multiple imputations using Rubin's standard rules. We used all variables shown in Table 1 in the imputation, in addition to numerous auxiliary variables (e.g., self-reported grades in math, science, English, and the humanities). Inclusive use of auxiliary variables has been shown to benefit, not degrade, results of multiple imputation and to increase the chances that the "missing at random" assumption holds (Collins, Schafer, & Kam, 2001).

The final analytic sample was large and diverse. The 8,918 youth were evenly split on gender (46% male), and just over half (53%) were non-Latino/a White, with an additional one-fifth non-Latino/a African American (20%), and over one-sixth Latino/a of any race (16%; see Table 1). Since others have found that observers have difficulty identifying the backgrounds of multiracial youth and that multiracial youths' academic achievement varies from monoracial youth (Herman, 2009; 2010), we included a separate multiracial category.[3] Five percent of youth in our analytic sample selected multiple racial categories, a percentage similar to other Add Health studies (Campbell & Eggerling-Boeck, 2006; Harris & Sim, 2002; Quillian & Redd, 2009). On average, youths' families had income levels three times the poverty threshold for a

family of their size, although nearly one-quarter (22%) had incomes below the poverty threshold. During adolescence, the high schoolers ages spanned from 12 to 21, and they averaged 16 years of age. Most (the middle 90%) were between ages 15 and 18. During young adulthood, the youth ranged in age between 24 and 34, averaging 29 years. By that age, about one-third had obtained a college degree; and, about half of the young adults had "achieved" various markers of adulthood, including ever marrying, ever parenting, and ever cohabiting. Of the employed youth, earnings averaged about $32,000 per year. Importantly, the sample provided ample numbers of youth rated by interviewers as very attractive (about 1,350), attractive (about 3,100), average (about 3,900) and unattractive (about 550) in looks.

Qualitative Sample

The qualitative data collection was designed to delve into the link between social and academic achievement in high school. It complements quantitative data in Add Health by allowing for "follow up why and how" discussions and observations with local youth that may reflect some of the sub-mechanisms that underlie statistical associations in the national data. As part of a National Institutes of Health project approved by anonymous NIH reviewers and a university institutional review board, one of the co-authors of this monograph studied Lamar High School (a pseudonym) in Texas specifically for use in conjunction with Add Health (although Lamar was not one of the high schools included in the Add Health study). As a large diverse high school, Lamar maximized our ability to observe and hear from girls and boys from multiple race-ethnicities and social classes. Of course, we recognize that the results may or may not generalize to students in schools that are smaller or vary from Lamar on other characteristics, although our analyses of school-level variation in Add Health, presented in Chapter VI, suggested that attractiveness was associated with outcomes in similar ways across schools of varying types.

Data collection occurred during 2006. Lamar was chosen by the investigator and assigned by the larger school district based on its demographic composition and size. According to official statistics from the Texas Education Agency, Lamar had nearly 2,220 students at the time. Of these, 57% were non-Latino/a White, 6% were non-Latino/a African American, and 36% were Latino/a (almost exclusively White). One-fourth were identified by the district as economically disadvantaged (i.e., eligible for free or reduced lunch), and 6% had been labeled Limited English Proficiency (LEP) students. The school received an accountability rating from the state of "academically acceptable." Data collection at Lamar occurred in six parts, conducted by a team of researchers consisting of the study principal investigator as well as five graduate students. As discussed shortly, all team members worked from the same centralized data collection and coding system based on a priori themes derived from theory and past research that was enhanced, developed, and refined through ongoing data collection efforts and consensus agreement. Review and discussion of experiences occurred regularly to increase standardization over time once team members were actually collecting data on site.

First, 25 hours of observational ethnography were conducted in the halls, lunch rooms, and public areas during and after school. Special attention was paid to how groups formed and interacted at school at different times of the day and across different school locations.

Second, a subset of 32 students (n = 17 boys, 15 girls) were selected for more intensive one-on-one data collection. To best capture a cross-section of the student body, the classrooms for the only two untracked, required courses in the curriculum were selected. The classrooms were then visited by project staff to invite participation. Almost all students present agreed to be contacted for participation, and project staff randomly contacted youth from the signup list to enroll a targeted sample of 30. Two extra students were included as a means of increasing the representation of race-ethnic minorities. The data collection with this subsample began with a

"Who I Am" project, a photo elicitation activity in which adolescents were given a camera, poster board, and art supplies and instructed to spend a week making a collage that captured who they were for study personnel. At the same time, adolescents granted access to their personal web pages so that they could be examined by study personnel in tandem with the "Who I Am" projects. They were also asked to write an essay summarizing their projects. Of note is that due to the linked structure of social networking sites (e.g., friending), public parts of some web pages of other school students were accessible for review.

Third, participants filled out short surveys. These surveys were intended to provide background for interviews and observations and to establish links to the Add Health data. They included sections on the youths' families, general background, mental health, school activities, and academic performance.

Fourth, participants sat for two interviews with study personnel, using a standardized semi-structured interview guide. These interviews began with discussions of the "Who I Am" projects and personal web pages and then moved through three sets of interview/discussion areas with standardized prompts and follow-ups, including ways that students adapted to high school peer culture, how high school experiences factored into identity development, and how the social psychological dimensions of schooling contributed to or disrupted academic progress.

Fifth, student interview data were supplemented with teacher interviews. Course catalogs, graduation requirements, and state benchmark data were also collected and analyzed, although these teacher and school data were not used for this particular investigation on attractiveness.

Sixth, high school yearbooks for the current and past year as well as high school newspapers were reviewed and content coded in tandem with the review and coding of the "Who I Am" projects and student webpages. For each set of print or electronic materials, the semi-structured interview guide described above served as the basis for this stage of data collection,

with the themes highlighted on the interview guide providing the initial pass of coding themes and then new themes emerging from the assessment. The yearbook offers one example. Each page of the yearbook was reviewed for evidence of the social structure of the school and its connection to academic activities. This inquiry included objective collections of information (e.g., identification of who engaged in certain activities and held certain honors) as well as more subjective assessments (popularity of students according to visibility, activities, and honors). Notes were organized into a file around multiple headers, with the data then entered into the overall coding and organization of the interview data. The coded high school yearbook data (and other materials, like web pages and "Who I Am" projects) were also used to prompt discussion during interviews; for example, discussions of who had high or low social status in school or of interviewees' positions in the larger social hierarchy at school.

Although the observations, teacher data, and print and electronic materials did prove valuable, much of the most compelling evidence for this study of attractiveness was drawn from the face to face student interviews, including the portions of these interviews in which the discussions were prompted by the other sources of data. Of the 32 adolescents who participated in the interview subset of the larger ethnography, the sample composition was 44% non-Latino/a White, 15% non-Latino/a African American, 7% Asian-American, and 33% Latino/a (because all Latino/as were Mexican-origin, all would have been categorized as White according to Census definitions, but none of the youth viewed their race as anything other than Latino/a or Mexican, refusing to recognize the separability of race and ethnicity). This composition differed from the student body as a whole as well as from most schools in Add Health. Yet, oversampling of race-ethnic minorities was necessary given the small size of the qualitative sample overall. A representative sample (of Lamar, Add Health, or the nation) would have led to undesirably small

or empty cell sizes. The average level of parent education (maximum of all parents in the house) was some college.

All adolescents were given complete anonymity, covered by a certificate of confidentiality from the National Institute of Child Health and Human Development. Their parents signed consent forms for their participation. In addition, the students themselves signed assent forms at the close of the study granting permission for the use of their interviews, projects, and web pages.

Add Health Measures

Figure 2 illustrates how we operationalized Paths A, B, and E of our conceptual model in Add Health. We discuss these measures below, as well as the school measures we used to explore Path C from Figure 1. We discuss Path D from Figure 1 in our analytic approach below. Table 1 provides descriptive statistics for the variables used in the structural equation models based on Figure 2 and reported in Chapter IV. Descriptive statistics for the school variables are presented in Chapter VI.

Attractiveness.

Physical attractiveness. At the end of the In-Home interviews, interviewers answered the question *How physically attractive is the respondent?* with one of five ratings: *1 = very unattractive*, *2 = unattractive*, *3 = about average*, *4 = attractive*, and 5 = *very attractive*.[4] As is common in studies of attractiveness (Langlois et al., 2000), interviewers received no specific training regarding how to make these ratings. Although the Add Health data would have benefitted from more raters, inter-rater reliability on such ratings has been found to be high. In their meta-analysis, Langlois and colleagues (2000, p. 398) found that inter-rater reliability was at .90 for adults rating other adults' attractiveness and .85 for adults rating children. Reliability was high even when raters and targets came from different racial-ethnic groups, at .88. Because

the Add Health interviewers were not blind to youths' other characteristics, it is also reassuring that Langlois and colleagues (2000, p. 403) found that familiarity between the rater and target did not moderate the association between attractiveness and how the rater judged or treated the target. We also conducted supplementary analyses using Add Health Wave IV data when interviewer characteristics were gathered (results available in Appendix S1, available online at XX_WILEY_URL_XX). Although we found some evidence that physical attractiveness ratings associated with interviewer gender, race-ethnicity, age, and education, the differences were small in substantive magnitude, and the pattern of associations with outcomes were the same before and after adjusting for interviewer characteristics. Still, as we note in the discussion, the Add Health data could be improved upon by having more than one rater per subject, all blind to other characteristics of the youth.

Ratings were dummy-coded to correspond to the theoretical perspectives outlined in Chapter II.[5] To examine the diffuse status perspective, we contrasted the *very attractive* to the *attractive*, expecting those rated as very attractive to benefit from the general positive expectations associated with their looks. We use the shorthand phrase *fairest of them all* to refer to this contrast. To further examine the diffuse status perspective, we examined whether being *attractive* versus *about average* in looks helped youth stand out from the crowd, referring to this as the *standing out* contrast. Finally, to examine the stigma perspective, we contrasted those rated as *about average* in looks to those rated as *unattractive*, expecting those rated as unattractive suffered from social isolation and psychosocial distress. We refer to this final contrast as the *stigma* contrast. Because just 1% of the sample was rated *very unattractive*, we collapsed this category with *unattractive* when examining the stigma hypothesis.

Grooming, personality, and weight. Immediately following the question about physical attractiveness, the In-Home interviewers answered similar questions about the youths' grooming

and personality, *How attractive is the respondent's personality? How well groomed is the respondent?*, with similar response categories (with the word "groomed" substituted for "attractive" for the question about grooming). We collapsed together the two lowest categories (very unattractive and unattractive personality; very poorly groomed and poorly groomed). Youth self-reported height and weight at both waves. We computed a body mass index (BMI) by dividing weight in kilograms by the square of height in meters and then compared it to CDC Growth Charts appropriate for the youth's age to estimate *healthy weight* (less than the 85th percentile), *at risk of overweight* (85th to less than the 95th percentile), and *overweight* (equal to or greater than the 95th percentile; Kuczmarski et al., 2002). We used grooming, personality and body size in the latent class analyses presented in Chapter VI.

Young adult human capital. We measured whether young adults had attained a college degree (Crosnoe & Reigle-Crumb, 2007). Respondents also reported their personal pre-tax earnings in the prior year. The survey instructed them to include wages or salary, including tips, bonuses, overtime pay, and income from self-employment. Respondents who said they *did not know* were asked to choose from categories of income, and we recoded their earnings as the mid-point of the selected category. We then logged earnings. Respondents who were not employed, were enrolled in school, or reported no earnings were re-coded to zero on log-earnings. Respondents were also asked to place themselves on a ladder representing where people stand in the United States (Adler, Epel, Castellazzo, & Ickovics, 2000; Goodman et al., 2001; Goodman, Huang, Schafer-Kalkhoff, & Adler, 2007). The instructions read:

> "At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where

would you place yourself on this ladder? Pick the number for the step that shows where you think you stand at this time in your life, relative to other people in the United States."

Young adult social capital

Interpersonal ties. Young adult respondents reported their number of close friends (defined in the survey question as "people whom you feel at ease with, can talk to about private matters, and can call on for help") in the following categories: 1 = *none*, 2 = *1 or 2 friends*, 3 = *3 to 5 friends*, 4 = *6 to 9 friends*, and 5 = *10 or more friends*. We used a linearized version of this variable as an outcome (recoding the response categories to 0, 1.5, 4, 7.5, and 10, respectively). We also dummy coded the young adults' reports of whether they had (1) ever been married, (2) ever cohabited, and (3) ever had children (Crosnoe & Reigle-Crumb, 2007). Finally, the young adults reported the number of sexual partners they had ever had, which we logged due to skewness (after adding one to account for zeros).

Psychosocial resources. Wave IV included 10 items from the Center for Epidemiologic Studies-Depression Scale (CES-D; Radloff, 1977, 1991), for example, *you felt sad* and *you felt that people disliked you*. Young adults rated the items on a scale of *0 = never or rarely*, *1 = sometimes*, *2 = a lot of the time*, and *3 = most of the time,* and the sum could range from 0 to 30. Questions about extraversion and optimism were scored *1 = strongly agree*, 2 = *agree*, 3 = *neither agree nor disagree*, 4 = *disagree*, and 5 = *strongly disagree*. We used reversals, noted below, so that higher scores indicated more of the construct (note that we reversed positively rather than negatively oriented items, since the response structure was negatively oriented). Extraversion was the sum of four items: *I am the life of the party* (reversed), *I don't talk a lot*, *I talk to a lot of different people at parties* (reversed), and *I keep in the background*. Optimism was the sum of four items: *I'm always optimistic about my future* (reversed), *I hardly ever expect*

things to go my way, o*verall, I expect more good things to happen to me than bad (*reversed), and *I rarely count on good things happening to me*. Both sums ranged from 4 to 20.

High school academic achievement

Grade point average (GPA). We calculated overall GPAs from official transcripts for the 1994-1995 and 1995-1996 school years. Add Health investigators coded letter grades as: *F = 0*, *D = 1*, *C = 2*, *B = 3*, and *A = 4* (Riegle-Crumb et al., 2005). Based on our qualitative results, we also examined subject-specific grades, grouping classes that are often perceived to have more (English, social science, and humanities) and less (science and math) discretion in grading.

High school social achievement

Interpersonal ties. The peer network data in the In-School Survey at Wave I provided the number of friendship nominations received by youth (Cavanagh, 2004; Staff & Kreager, 2008). Students also responded to the question *How much do you feel that your teachers care about you?* on a scale of 1 (*not at all*) to 5 (*very much*). In addition, they reported how often they had trouble getting along with teachers and with other students on a scale of 0 (*never*) to 4 (*everyday*); We reverse coded and summed these two items (Crosnoe, Johnson, & Elder, 2004). We also measured peer relationships with two dummy variables that indicated whether youth reported opposite sexual partners, with and without sexual intercourse, in audio-CASI interviews (Turner et al., 1998).

Formal and informal activities. We dummy coded students' reports of participation in clubs, organizations, and teams from the In-School Survey at Wave I into two types of activities: (1) cheerleading or dance team and (2) sports.[6] Youth were asked nine items regarding how many times their drinking caused problems in the past 12 months, such as *you got into trouble with your parents because you had been drinking* and *you've had problems at school or with school work because you had been drinking*. The answers were approximate frequencies (0 =

never, 1= *once*, 2 = *twice*, 3 = *3-4 times*, and 4 = *5 or more times*). We recoded the frequencies that were reported in ranges (representing 3-4 times with a 4 and represented 5 or more times with a 5) before summing the nine items.

Psychosocial resources. Self-esteem was the sum of six items that addressed feelings of self-worth and acceptance (e.g., *you have a lot of good qualities*, *you have a lot to be proud of*, *you like yourself just the way you are*, *you feel like you are doing everything just about right*, *you feel socially accepted*, and *you feel loved and wanted)*. To measure depression in adolescence, the Add Health investigators used a fuller version of the CES-D at Waves I and II than at Wave IV, including 18 of the CES-D items and an item added by the investigators. The sum of these 19 items could range from 0 to 57.[7]

School characteristics

We present descriptive statistics for all school-level variables in Chapter VI.[8] Add Health investigators obtained the full roster of students in the school, which provided a measure of school size. We indicated "Big Schools" with more than 2000 students. During the In-School interview, students rated the chances that they would graduate from college from 0 to 8 (anchors were provided for even numbers, 0= *no chance*, 2= *some chance*, 4= *about 50-50*, 6 = *pretty likely*, and 8 = *it will happen*). We indicated a "college-bound climate" as schools in which the average report was 6.5 or higher. We also calculated the school-level averages of four individual-level variables: the percentage of students who were rated as average in looks, the percentage of students with a romantic partner, the average number of friendship nominations, and the average depression level. Based on school averages, we dummy indicated the school climate as follows: (1) "Average-looks climate" if more than 50 percent of students were rated as average in looks, (2) "Dating intensive climate" if more than 50 percent of students reported a romantic partner,

(3) "Friendship-intensive climate" if the average number of friendship nominations was greater than 4, and (4) "Poor mental health climate" if the average depression level was above 11.

Controls

To adjust for potential common causes of physical attractiveness ratings, social achievement, and academic achievement, we controlled for youth demographics, including gender, race-ethnicity, age, grade, and family structure. We also adjusted for the difficulty of coursework taken by the student (highest course taken in math and science, in English, and in humanities/social science; see Riegle-Crumb et al., 2005), being in the school's lowest grade (typically 9th or 10th), and the Add Health Picture Vocabulary Test standardized score (Neiss & Rowe, 2000). To adjust for potential associations between SES and observer ratings of attractiveness, we included parents' reports of their educational attainment and family income (divided by the appropriate poverty threshold; U.S. Census Bureau, 2007). We also adjusted for the parent respondent's gender and relationship to the youth. Finally, to adjust for the study design with a model-based approach, we indicated whether the youth was in the study's oversampling categories (disabilities, racial and ethnic groups, genetic [twins and other siblings], and saturation school) and the timing (spring, summer, or fall) of each wave's interview (DuMouchel & Duncan, 1983; Little, 2004).

Analytical Plan

Quantitative Analyses. For the test of our general conceptual model, shown in Figure 2, we used structural equation modeling. We estimated all regression models simultaneously in Mplus 6.0 and asked the software to calculate total, indirect, and direct effects and their standard errors (Muthén & Muthén, 2010). For ease of interpretation, we present linear regression results for all models. Alternative specifications (logit, ordered logit, and poisson models) are available from the authors. We present unstandardized coefficients as well as fully or partially

standardized coefficients. We calculated the fully standardized coefficients for continuous predictors and continuous outcomes by multiplying the unstandardized coefficient by the standard deviation of the predictor and dividing by the standard deviation of the outcome. We calculated the partially standardized coefficients for dummy predictors and continuous outcomes by dividing the unstandardized coefficient by the standard deviation of the outcome. For dichotomous outcomes, we used outcome base rates to evaluate the size of effects. Significance tests were based on robust standard errors that adjusted for clustering of youth within schools (using the *cluster* option in Mplus, which calculates robust standard errors via the sandwich estimator and mimics the statistical control for within-school clustering performed by hierarchical linear models when school effects are not the focus; Muthén & Muthén, 2010). We estimated these structural equation models simultaneously, including all equations shown in Figure 2 (plus direct paths from all prior outcomes to later outcomes) and adjusting for all of the controls listed in Table 1 in every equation. The controls included the oversampled groups, which allowed us to adjust for their overrepresentation in the sample in a model based approach (DuMouchel & Duncan, 1983; Little, 2004). We present the results of these models in Chapter IV.

In Chapter IV, we also present two types of analyses that help us go beyond our measured control variables in attempting to get closer to causal estimates of our findings for academic achievement and human capital outcomes: (1) sibling fixed effects and (2) sibling correlations. Whereas we selected one youth per family for other analyses, these analyses used the broader Add Health sample and capitalized on the presence of siblings and genetic oversampling in the study's design. Specifically, the fixed-effects approach relied on the presence of such multiple youths per family, which allowed us to add a dummy variable for each family and, as such, adjust for characteristics that the siblings shared, even when unmeasured.

We estimated these models with Stata's *xtreg* command in order to appropriately calculate standard errors (Allison, 2005; Angrist & Pischke, 2009; Wooldridge, 2009). We also included interviewer fixed effects in these models, to wash away interviewer-specific bias in rating attractiveness, and we adjusted the standard errors for the clustering of youth within schools, since school effects were not the focus of these models (see below for our explicit tests of school effects with hierarchical linear modeling).

Another strategy takes advantage of the siblings in the data (Reiss, Neiderhiser, Hetherington, & Plomin, 2000). Specifically, we looked within sibling pairs at the degree of correlation between attractiveness scores and the degree of correlation between GPA scores. If a genetic component existed, then we expected the correlations to be higher for pairs that were more similar genetically (e.g., monozygotic twins) than those who were less similar (e.g., full and half non-twin siblings). We also calculated differences in attractiveness scores and GPAs within sibling pairs and examined how these differences were correlated in bivariate regression models. This approach was analogous to our sibling fixed-effects approach, although it disaggregated the association across types of siblings who were more and less genetically similar (but did not control for measured attributes that varied between siblings).

We present three additional sets of quantitative analyses in Chapter VI, informed by our qualitative results: (1) an exploration of the co-occurrence of good grooming and an appealing personality with good looks, (2) an examination of school-level characteristics, and (3) analyses of subject-specific grades. To explore the co-occurrence of grooming, personality, and looks, we used latent class analyses estimated in LatentGold and including gender, race-ethnicity, overall GPAs, and weight status as covariates (Vermunt & Magidson, 2005). To examine school-level characteristics, we first described the extent of variation in high school academic and social achievement that was within versus between schools (random intercepts), then described the

extent to which the association of physical attractiveness with achievement varied across schools (random slopes, our initial test of Hypothesis C) , and finally tested whether the association of physical attractiveness with achievement was larger in schools with some characteristics than others (explicit cross-level interactions between specific individual and school characteristics). We used multilevel modeling (the generic term for hierarchical linear modeling) in Mplus for these analyses (Muthén & Muthén, 2010). To examine subject-specific grades, we replicated our path models in Mplus, but using GPAs in English, humanities, and social studies or in math and science in place of overall GPAs. Like we did for the overall models presented in Chapter IV, we estimated all equations simultaneously, adjusting for all of the controls listed in Table 1, and calculated robust standard errors adjusting for the clustering of youth within schools.

Qualitative Analyses. General guidelines from Miles and Huberman (1984) organized the qualitative analyses of the Lamar data. All interviews were professionally transcribed, and the "Who I Am" collages, web sites, field notes, and other documents were content coded with standardized methods described earlier. All sources of data were organized into hierarchical (i.e., general to specific) tree codes for analyses.

Data reduction with nVivo began with the largest source of data, the student surveys and interviews. It was first done according to a priori themes based on our literature and theory review, as explained in Chapter II. For example, the themes included social sorting, varied dimensions of attractiveness, and outgoingness as sub-mechanisms of the link between attractiveness and social achievement; socioemotional resources, time allocation, and identity issues as sub-mechanisms for the link between social and academic achievement; and school social and academic norms as sub-mechanisms for the moderating role of school context. Iteratively, the codes for these a priori themes were broken down into subthemes. For example, the category of socioemotional resources was further deconstructed into emotional support,

social assistance, and group identity. Next, organization of codes was expanded according to emerging themes that went beyond those a priori codes. As will be described in Chapter V, such emerging themes included halo effects for the link between attractiveness and social achievement, the poles of social belongingness and status for the link between social and academic achievement, and school structure and composition for the moderating role of school context. In total, about a dozen guiding themes, with various subthemes, were eventually used to organize the interview data. Comparisons of coding for sample materials were highly reliable (nearly 90% agreement), and discrepancies were resolved through discussion to consensus.

A similar protocol was used to the code the note files generated by the print and electronic resources (e.g., "Who I Am" projects, web pages, school publications) and observations. The trees generated from the a priori and emergent theme interview coding served as the starting point for this organization, although the tree codes (especially subthemes) were expanded in several instances. For example, the "Who I Am" projects and web pages yielded extensive information relevant to the identity tree, allowing finer-grained consideration of identity "work", identity discrepancies, and role conflicts, and the school publications yielded extensive information within the social achievement tree about popularity, activity participation, and social status.

Once all materials had been coded into the tree theme structure, a matrix was then generated, with each cell containing a general summary description of all information relevant to some theme or subtheme and multiple illustrative examples. The matrix was expanded so that the themes were cross-classified by gender and race (to match the quantitative analyses) as well as by interviewer-rated attractiveness. Doing so allowed us to use the interviews, observations, or material coding to identify possible sub-mechanisms by which physical attractiveness related to social and academic achievement differently for different groups. This matrix organization

greatly facilitated data analyses according to specific exploratory questions. For example, when answering Exploratory Question A, the cells for each theme relevant to this question (e.g., outgoingness) were identified, and then the summary and illustrative examples were reviewed.

Chapter IV: Physical Attractiveness, Social Achievement, and Human Capital: Testing the Basic Model with Quantitative Data

We now turn to our test of our basic model in the National Longitudinal Study of Adolescent Health (Add Health), reflecting the operationalization of our basic conceptual model shown in Figure 2. In short, we expected that a good portion of the implications of physical attractiveness for young adults' lives was rooted in their social and academic achievement during adolescence, although we also expected some contemporaneous effects. Additionally, in both life stages, we anticipated that social achievement (social capital) would have offsetting positive and negative implications for academic achievement (human capital). As explained in the previous chapter, we examined Hypotheses A, B, and E with a structural equation model that simultaneously estimated the pathways from physical attractiveness through social and academic achievement in high school and through social achievement in young adulthood to human capital attainment in young adulthood, controlling for numerous youth and family background characteristics (listed in Table 1). Recall that Hypothesis A posited that attractive youth would have higher social achievement during high school; Hypothesis B predicted that some aspects of social achievement would support and others would disrupt academic achievement, with the supports outweighing the disruptions; and, Hypothesis E forecast that attractive youth would have greater social and human capital attainment in young adulthood, some a continuation of earlier trajectories and some contemporaneous and that, as in adolescence, social achievements would have offsetting (some positive and some negative) implications for human capital accumulation. We then tested Hypothesis D – that associations between physical attractiveness and achievement would be robust to adjustments for confounds – capitalizing on the siblings in the dataset to adjust for additional characteristics and, thus, strengthening the possibility that

associations reflect real causal effects. We consider Hypothesis C – potential cross-school variation in the effects of good looks – in Chapter VI.

Physical Attractiveness and Social Achievement in High School

Beginning with the portion of the structural equation model that tested Hypothesis A, we expected that more attractive youth would have higher social achievement at school, including through their interpersonal ties, their formal and informal activities, and their psychosocial resources.[9] To begin, looking back at Table 1, nearly half of the Add Health youth (44%) were rated as having average looks. When interviewers deviated from this average, over one-third of youth were rated as *attractive*, about one-sixth as *very attractive*, and just 6% as *unattractive* or *very unattractive*. An advantage of Add Health was that, although being rated as very attractive and as unattractive were relatively rare, the large sample size meant even small percentages represented sufficient cell sizes. For example, about 1,350 very attractive youth and about 550 unattractive youth were in the analytic sample of 8,918.

Table 2 presents the results from our structural equation model for the contrasts among adjacent categories of attractiveness as predictors of each measure of social achievement. As noted in Chapter III and indicated in the column labels of Table 2, three contrasts tested the theoretical perspectives outlined in Chapter II, which we called *fairest of them all*, *standing out*, and *stigma* for shorthand (corresponding to the contrasts of *very attractive* to *attractive*, *attractive* to *average*, and *average* to *unattractive* respectively). The first two contrasts examined the "diffuse status perspective" about the value attached to certain positive attributes. We expected that those rated as *very attractive* benefited relative to the *attractive* in looks from the general positive expectations associated with their "fairest of them all" looks. To further examine whether attractiveness helped adolescents "stand out" from the high school crowd, we contrasted youth who were rated *attractive* versus *about average* in looks. Finally, to examine the "stigma"

perspective, we contrasted those rated as *about average* in looks to those rated as *unattractive*, expecting those rated as unattractive suffered from social isolation and psychosocial distress.

Scanning Table 2, the pattern of significance indicated no evidence for the most extreme "fairest of them" all aspect of diffuse status (first columns), some evidence for stigma (final columns), and the most consistent evidence for the "standing out" aspect of diffuse status (middle columns). Attractive youth were more likely than average-looking youth to socially achieve on seven of the ten outcomes we examined, including having more friendship nominations, perceiving more teacher caring, having more successful relationships at school, being more likely to have any romantic partners and to participate in sports, having higher self-esteem, and being less depressed. The standardized coefficients for continuous predictors indicated that the effect sizes were small in size (ranging from .06 to .18 in magnitude for significant coefficients), although they were larger than several other demographic measures (e.g., family income-to-needs and parent's education had standardized coefficients of 0.04 or less for these same outcomes; results not shown in tables). The coefficients for romantic partners and sports participation were also modest relative to the base rates for these outcomes. Controlling for youth and family demographics and study design features, attractive youth were five percentage points more likely to date than youth of average looks, relative to a base rate of 49% of youth having romantic partners (base rate taken from Table 1). Moreover, attractive youth were eight percentage points more likely to engage in sports than youth of average looks, relative to a base rate of 53% of youth participating in sports.

Turning to the final column of Table 2, we found that youth who were rated about average in looks achieved more than those who were rated as unattractive on five of the ten social outcomes examined, including friendship nominations, sexual partners, partying (drinking problems), self-esteem, and (lack of) depression. The effects were again modest in size (with

standardized coefficients between .11 and .17 in magnitude for significant coefficients). After adjusting for controls, youth with average looks were seven percentage points more likely to have sexual partners than unattractive youth, relative to a base rate of 41% having sexual partners; base rate taken from Table 1.

None of the coefficients in the first column for the "fairest of them all" contrast were statistically significant. When interpreting this result, remember that the extreme categories of being very attractive and being unattractive had smaller sample size than the middle categories of being attractive and average in looks. Moreover, the standard errors were smaller for the middle columns than the first and final columns. In some cases, the coefficients in the first column were larger than twice the standard error found in the middle columns (friendship nominations, sexual partners, drinking problems, self-esteem and depression). The standardized coefficients, however, were also consistently smaller in the first column than the second and third, suggesting that the "fairest of them all" effect was weaker than the "standing out" and "stigma" effects.

These results from Add Health contribute to the literature linking attractiveness to social achievement in adolescence, which has generally had unknown generalizability due to small, localized designs, unclear interpretations due to use of self-ratings of physical attractiveness, and lack of testing of the direction of effect ("beauty is good" versus "ugly is bad"). In our nationally representative sample with interviewer ratings of attractiveness, we found consistent evidence that better looking teenagers had an advantage across domains of social achievement, consistent with Hypothesis A. In most cases, the key distinction was between youth rated *attractive* versus *about average*, suggesting the importance of good looks in helping youth "stand out" in the high school crowd. We also found, however, that unattractive youth had fewer friends, less self-esteem, and more depression (but also were less likely to have sexual partners and drinking problems) than youth with average looks.

Physical Attractiveness and Academic Achievement in High School

A major theme of this monograph and the research traditions it builds on is that schools house multiple forms of achievement, and so we turn to the "official" form of school achievement sanctioned by adults: academic progress. In doing so, we tie this form of achievement back to the social achievement patterns described earlier in this chapter. As shown in Figure 2 and laid out in Hypotheses B1 and B2, we expected that some aspects of social achievement would align with academic achievement while others would work against it. Although we expected physical attractiveness would correlate with both types of social achievement, we expected that the social assets for grades would outweigh the social distractions and thus expected to find an overall positive correlation between interviewer-rated attractiveness and grade point averages.

Table 3 shows the results from Path B in the structural equation model—the associations of each measure of high school social achievement with overall transcript GPA. The results show that eight of the ten measures of social achievement significantly predicted grades, the exceptions being cheerleading/dance and self-esteem. The direction of the associations were consistent with our expectations, in terms of social assets (positive coefficients for friendship nominations, teacher caring, success getting along, and sports; negative coefficient for depression) and social distractions (negative coefficients for sexual and romantic partners and for drinking problems). As seen for the associations of physical attractiveness with grades, the effect sizes were small (from .05 to .16 in magnitude for significant coefficients) but comparable to demographic controls (e.g., a standard deviation increase in the Add Health Picture Vocabulary scale was associated with a .18 standard deviation increase in GPA; youth living with two biological parents had grades one-tenth of a standard deviation higher than youth living with one biological parent, adjusting for the other controls in Table 1; results not shown in tables).

Putting together the results from Tables 2 and 3, Table 4 presents the indirect effects of physical attractiveness on grades through social assets and social distractions as well as the total and direct effects. Reflecting the patterns in Table 2, the greatest number of significant associations was evident in the middle column of Table 4. Specifically, there was a significant total effect of being "attractive versus average" on overall transcript GPAs, reflecting significant direct and indirect associations. Only the indirect effect of social assets, and not the indirect effect of social distractions, was significant in the middle column (although one social distraction, any romantic partners, was individually significant). This finding was consistent with the more numerous associations of the standing out advantage of the attractive over the average in looks seen in Table 2 for social achievement and the five social assets significantly associated with grades in Table 3. Turning to the third column of Table 4 (the stigma effect), both the indirect effects through social assets and social distractions were significant. In fact, the indirect effects for the "stigma" contrast nearly canceled each other out, leading to a non-significant overall indirect effect (0.035-0.029 = 0.006). This result was consistent with the findings in Table 2 and 3: Although unattractive youth were at a disadvantage relative to youth with average looks in terms of friendship ties and depression (social assets in Table 3), they were less likely to have sexual partners and to have drinking problems (social disadvantages in Table 3).

In sum, our results were partially consistent with Hypotheses B1 and B2. As expected, the overall association between attractiveness and grades was positive—at least for the standing out advantage of being attractive versus average in looks—but we also found evidence of offsetting underlying social mechanisms, especially for the stigma consequences of being unattractive versus average in looks. That is, some social achievements were positively correlated with both attractiveness and grades, and others were positively correlated with looks but negatively associated with grades. We also found greater evidence that the higher pole (being

attractive versus average in looks) but not the lower pole (being unattractive versus average in looks) mattered for the total effect on grades, which was more consistent with a standing out aspect of diffuse status rather than a stigma social process underlying the overall associations with grades. We found no evidence, however, for the highest pole of attractiveness—the fairest of them all aspect of diffuse status in high school.

These findings clarify the inconsistent literature on the association between attractiveness and GPA. With nationally representative data, we found that teenagers rated as attractive received higher grades than those rated as average looking, although there was no additional benefit of being very attractive versus attractive in looks and no total effect of being unattractive versus average in looks. This variation in results across the beauty continuum suggested that the inconsistent results in prior studies with adolescents may, in part, reflect their treatment of likert scales of attractiveness as continuous. Our results also suggested that the inconsistencies in prior studies may be partly due to the non-control for youths' participation in activities associated with lower grades, which could suppress the association of unattractiveness with grades. Especially among high school students, considering the dual role of looks in achieving social status (with short term payoffs) and academic standing (with longer term payoffs) appears to be important.

Physical Attractiveness and Social Capital in Young Adulthood

Turning to young adulthood, Hypothesis E2 (path E2 in Figure 2) assessed whether the offsetting pathways from physical attractiveness to grades through social assets and social distractions extended years after high school. Whereas we expected to see some continuity, we also anticipated a residual effect of attractiveness in young adulthood such that, even controlling for high school experiences, better looking young adults should have higher social capital, greater educational attainment, more earnings, and higher self-perceived status (Hypothesis E1, and path E1 in Figure 2). As in high school, we further expected that some of the young adult

human capital outcomes would be explained by the social aspects of the transition to adulthood (Hypothesis E3, and path E3 in Figure 2).

Beginning with the total, direct, and indirect effects of physical attractiveness on young adult social achievement, Tables 5, 6, and 7 present the results across the eight social outcomes. To simplify the presentation of results and highlight patterns related back to the conceptual model, each table shows one of the contrasts between pairs of adjacent attractiveness categories. To begin, Table 5 shows the results for the first diffuse status contrast, between the very attractive and attractive in looks.

Diffuse status "fairest of them all" patterns: The very attractive versus the attractive in looks. Compared to adolescence, the young adulthood analyses revealed more support for attractiveness as a diffuse status characteristic at the highest extreme—the comparison of the very attractive and attractive.

Specifically, Table 5 shows that, although there were no indirect effects from adolescence for any outcomes and there were no significant total and direct effects for five outcomes, the remaining three outcomes had significant total and direct effects, consistent with a diffuse status perspective. In particular, young adults who had been rated as very attractive rather than attractive in high school reported greater extraversion, less depression, and more close friends in young adulthood. The associations were small in size. The direct effects were less than a tenth of the respective outcome standard deviations which are shown in the first row of the table (i.e., .253/3.07=.08 for extraversion; -.426/4.63= -.09 for depression; .192/2.82=.07 for number of close friends). Still, these associations were comparable to other predictors of these outcomes (for example, the standardized coefficient relating self-esteem from adolescence to extraversion in young adulthood was .10; the standardized coefficient relating depression in adolescence to depression in young adulthood was .25; the standardized coefficient relating number of

friendship nominations in high school with number of close friends in young adulthood was .04; results not shown in tables).

These results were evident at the high end of the attractiveness continuum for the types of outcomes that the diffuse status framework would predict. That is, the very attractive may have experienced reactions from others that enhanced their social skills and enjoyment of social contexts (thus promoting extraversion), viewed themselves as successful in social situations (thus promoting good mental health), and made them more sought out as friends.

Diffuse status "standing out" patterns: The attractive versus the average in looks. The second contrast related to the diffuse status concept—whether youth rated as attractive "stand out" in social contexts whereas those rated average in looks may be less visible socially. Table 6 presents these total, direct, and indirect effects of the contrast of *attractive* to *average* in looks for the young adult social outcomes.

In adolescence, teenagers with average looks were disadvantaged relative to those rated as attractive along numerous social and academic dimensions. In young adulthood, five of the eight outcomes in Table 6 had significant indirect paths, including the three measures of young adult psychosocial resources and two young adult interpersonal ties (number of close friends and whether the respondent had ever been married). Most of these associations reflected indirect pathways through both high school social assets and social distractions as well as through high school grades. In particular, there was continuity in psychosocial resources, such that the mental health advantage in high school of youth rated as attractive rather than average in looks predicted better mental health in young adulthood. The similar advantage of the attractive over average in looks in high school in terms of friendship nominations also carried forward into more extraversion and more close friends in young adulthood. In addition, greater social achievement in terms of having romantic partners in high school carried forward into more psychosocial

resources, having more close friends, and being more likely to be married in young adulthood. The higher average grades in high school for the attractive than average in looks also led to some greater psychosocial resources and more interpersonal ties in young adulthood. Yet, there was also an indirect pathway to less extraversion, fewer sexual partners, and fewer chances of cohabiting or having children that led from the higher grades of the more attractive than the average in looks in high school. Although consistently significant, these indirect effects were small in size. Relative to the outcome standard deviations, the indirect effects shown in Table 6 were .03 to .05 in size and, thus, about half the size of the direct effects of being very attractive versus attractive in young adulthood previously discussed.

In contrast to the numerous indirect pathways for standing out, there were just two direct effects of standing out in Table 6. Specifically, the more attractive were six percentage points more likely to be married and three percentage points more likely to have children than the average in looks. Since about half of the young adults in the study were married and had children, these associations were about one-tenth and one-fifteenth of the base rate, respectively. The size of these associations compared favorably to demographic variables, however. For instance, young adults who lived with both biological parents rather than one biological parent in high school were nearly five percentage points more likely to be married and one percentage point more likely to have a child by young adulthood (results not shown in table).

Taken together, these results were consistent with diffuse status theory, with attractive youth having greater psychosocial resources and more interpersonal ties in young adulthood than youth with average looks. Many of the advantages of being attractive versus average in looks reflected mechanisms that operated during high school, when standing out from the crowd may have been especially important, although there were also direct effects of "standing out" for marital status and parenthood in young adulthood.

Social stigma patterns: The average versus the unattractive in looks. The analyses also produced evidence in support of stigma at the opposite end of the attractiveness continuum. Table 7 shows the total, direct, and indirect effects of being average versus unattractive in looks on young adult social outcomes.

As was the case for standing out, most of these stigma associations were indirect, reflecting a continuation of differentials seen in high school. In fact, in Table 7, there were indirect effects for every young adult social outcome. Yet, unlike what we saw in Table 6, there were no indirect pathways in Table 7 through high school grades. All of the indirect effects of the stigma associations operated through high school social outcomes. As we saw for standing out, we again saw continuity in psychosocial resources and friendship nominations from high school into young adulthood; thus, the poorer mental health and greater isolation of the unattractive versus average in looks extended from high school into young adulthood. Unlike the standing out results in Table 6, however, continuity of the stigma effect from high school social distractions operated through sexual partners and drinking problems rather than through romantic partners. Those who had sexual partners in high school later reported having more sexual partners in young adulthood, as well as more extraversion and higher chances of being married, cohabiting, and having children but also fewer close friends. Those with drinking problems in high school were more extraverted, had more sexual partners, and were more likely to cohabit, but they were less likely to be married in young adulthood.

Altogether, the indirect stigma effects of physical attractiveness through high school social achievement on young adult social outcomes were again small in size, being about .02 to .06 of a standard deviation for continuous outcomes and about .02 of the base rates for dichotomous outcomes. The only direct effect for stigma was that youth who had been rated as unattractive rather than average looking were less likely to have sexual partners as young adults.

This effect was somewhat bigger (b = .117, or .11 of the outcome standard deviation of 1.06), and the total effect of the stigma association to sexual partners in adulthood was .181, a size of .17 relative to the outcome standard deviation. This total effect was similar in size to the direct effect of having a romantic partner in high school on having more young adult sexual partners (.18 of the outcome standard deviation) and about one-third of the direct effect of having a sexual partner in high school on having more young adult sexual partners (.56 of the outcome standard deviation; results not shown in table).

In short, although small in absolute size, these results compared favorably to the size of other covariates and were consistent with the stigma concept. At the lower end of the attractiveness continuum, young adults reported worse mental health and less social acceptance. The consequences of such stigmatization of "ugliness" in young adulthood appeared to largely be a continuation of a process begun earlier, as most associations were indirect. Most of the consequences of being unattractive for young adult social outcomes operated through high school social achievement; none operated through high school grades and there was only one direct stigma effect during young adulthood.

Taken together, the results across Tables 5 to 7 were broadly consistent with our hypotheses. As expected by Hypothesis E2, pathways from looks carried forward from high school to young adulthood, particularly for the standing out and stigma contrasts. As expected by Hypotheses E1 and E3, looks also had some contemporaneous effects on young adult social outcomes, for the fairest of them all contrasts as well as standing out and stigma.

Physical Attractiveness and Human Capital Attainment in Young Adulthood

We now turn to examining the final paths in our conceptual model and the remaining aspects of Hypotheses E1, E2, and E3. Specifically, we looked to see whether physical

attractiveness related to more human capital attainment in young adulthood, both directly and through contemporaneous and earlier social and academic achievement.

Relating social capital to human capital in young adulthood. To begin, Table 8 shows how the measures of young adult social capital related to human capital attainment in the structural equation models, similar to the results shown for high school social achievement and grades in Table 3. For the most part, the direction of these associations was consistent with expectations in Hypothesis E3. Five social outcomes in young adulthood operated as assets for young adult human capital attainment. That is, having more close friends and having less depression were consistently associated with higher human capital attainment across all three outcomes. Being married and having a college degree were also positively associated with SES ladder placement and log earnings. Furthermore, extraversion was positively associated with SES ladder placement. Two social outcomes in young adulthood operated as social distractions, or what we might call in young adulthood "social constraints," on human capital attainment. Having children was associated with a lower likelihood of having a college degree, with lower ladder placement and with lower earnings. More sexual partners were also associated with fewer chances of graduating from college and placing oneself lower on the SES ladder. The final young adult social outcomes—cohabitation and optimism—operated in different ways for different outcomes. Cohabitation was negatively associated with graduating from college but positively associated with earnings. Optimism was positively associated with college attainment and SES ladder placement but negatively associated with earnings.

With these associations of young adult social to human capital in hand, we now present the total, direct, and indirect effects of physical attractiveness on human capital attainment, including indirect pathways from high school social and academic achievement (to test Hypothesis E2) and through young adult social capital attainment (to test Hypothesis E3).

Evidence of total and direct effects of physical attractiveness on human capital attainment provided evidence for Hypothesis E1. Table 9 presents the results from the structural equation models. In this table, the three human capital outcomes (educational attainment, earnings, and ladder placement) are grouped within the three beauty contrasts (diffuse status – fairest of them all; diffuse status – standing out; and stigma).

Educational attainment. Results for educational attainment are presented in columns 1, 4 and 7 of Table 9. Similar to high school grades, the most important aspect of physical attractiveness is the standing out aspect of being attractive versus average in looks (column 4 of Table 9). Specifically, standing out had significantly positive total and indirect effects on college attainment, which largely reflected higher grades and more friends, romantic partners, and sports participation in high school. Of note, the direction of the indirect effects for having romantic partners during high school were reversed for GPAs and college attainment: Whereas having romantic partners in high school was an indirect distraction from grades (see again Table 4), young adults whose better looks had led to romantic partnerships in high school were more likely to attend college (Table 9). These assets were partially offset by attractive youth being more likely than average looking youth to have children by young adulthood, which had a negative indirect effect on college completion, although their greater optimism during young adulthood also had a positive contemporaneous effect; column 4 of second page of Table 9. All together, attractive youth were nearly three percentage points more likely to graduate from college than were youth average in looks, an association that was nearly a tenth of the outcome base rate (about one-third of young adults had a college degree). The size of this association was similar to the difference between youth who had lived with both biological parents rather than one biological parent in high school, which had a direct effect on college attainment of three percentage points (results not shown in table).

In contrast, the higher end of the diffuse status continuum revealed no significant effects of being "fairest of them all" on obtaining a college degree (column 1 of Table 9). Some significant indirect pathways for the stigma effect (column 7 of Table 9) were found, although they offset one another, similar to the stigma effect on high school grades. That is, the average in looks had an advantage over the unattractive in terms of college attainment that operated through more friendship nominations in high school. The average in looks, however, also had a disadvantage relative to the unattractive in terms of college attainment due to having more sexual partners and a greater chance of having a child in young adulthood (column 7, second page, Table 9). Because the positive and negative indirect pathways offset each other, the overall indirect effect was nonsignificant for the stigma contrast on college attainment, as were the total and direct effects.

In sum, the analyses revealed some evidence for Hypotheses E1, E2, and E3. As expected in Hypothesis E1, more attractive youth had higher educational attainment in young adulthood, operating primarily through the standing out mechanism. This standing out advantage was primarily indirect, operating through high school grades and through social achievement both in high school and young adulthood (as predicted by Hypotheses E2 and E3). There was no support of the "fairest of them all" aspect of our diffuse status hypothesis in terms of young adult educational attainment. Although there were some indirect effects through the stigma mechanism for this outcome, the social advantages of being average versus unattractive in looks (in terms of friends in high school) were offset by the social constraints of this same comparison (in terms of more sexual partners and childbearing in young adulthood). Thus, there was evidence for Hypothesis E2 and E3, but not hypothesis E1, for the stigma mechanism.

Earnings. Turning to young adult earnings, columns 2, 5, and 8 of Table 9 show indirect effects for each contrast, including both of the diffuse status mechanisms and the stigma

mechanism. Because the outcome was the log of earnings, the coefficients could be interpreted approximately as percent change. Thus, the better looking had a 7 to 10 percent indirect advantage in their earnings, a small effect relative to the outcome standard deviation (*SD* = 4.89), but about one-third the size of the direct effect of being African-American relative to White (B = -.351) and similar in size to prior studies of adults reviewed above (e.g., Hamermesh & Biddle 1994). The indirect effects reflected social advantages in high school, in young adulthood, or both. Specifically, the earnings advantage of the very attractive over the attractive reflected their better mental health in young adulthood (column 2, second page of Table 9). For attractive over the average in looks, high school social assets were collectively significant, although none were individually significant (having more friends was largest in magnitude and approaching significance). In young adulthood, the assets were collectively significant as were the individual indirect effects of being married and having completed college by young adulthood, although these were offset by the attractive in looks being more likely to have children. The indirect earnings advantage of the average over the unattractive in young adulthood reflected the accumulation of numerous small indirect effects, none of which were individually significant (although some were approaching significance, including friends in high school).

Surprisingly, we did not find evidence for a positive total or direct effect of attractiveness on young adult earnings, although the coefficients were consistently positive in sign (and marginally significant at $p < .08$ two-sided for the stigma total effect of B = .399). The exception was the nonsignificant negative direct association for the standing out effect of being attractive versus average in looks on earnings, which might reflect unmeasured social opportunities that distracted the attractive over the average in looks from work in young adulthood.[10]

For earnings, therefore, there was evidence of indirect effects reflecting social achievement in high school and young adulthood (consistent with Hypothesis E2 and E3), but there were no direct and no total effects (so no evidence for Hypothesis E1).

Self-perceived status. In contrast to the findings for earnings, which were entirely indirect, the results for where youth placed themselves relative to others in the U.S. on a ladder of "the most money and education and the most respected jobs" were direct as well as indirect. Moreover, the total and direct effects occurred only for the fairest of them all and standing out contrasts (columns 3, 6, and 9 of Table 9). The total effects (.168 and .170) were about one-tenth of the outcome standard deviation (1.70), and the direct effects (.100 and .095) were about .06 of the outcome standard deviation, respectively. These effects were larger than the standardized direct effect of parental educational attainment, which was .03.

Indirect pathways to self-placement on the ladder were evident for all three beauty contrasts, although they were more often social assets for diffuse status and social distractions for stigma. These indirect pathways again reflected both high school and young adult advantages of the better looking. For the fairest of them all, the higher ladder placement of the very attractive versus attractive in looks reflected their greater self-reported extraversion, more close friends, and less depression in young adulthood. For stigma, the indirect path from higher high school self-esteem reported by the average versus the unattractive in looks was offset by the greater number of sexual partners that the average in looks reported. For standing out, there were several indirect pathways at both life stages, including through teacher caring, self-esteem, and grades in high school as well as optimism, marital status, and college attainment in young adulthood.

In summary, being better looking was associated with feeling socioeconomically advantaged relative to others, a perception that appeared to start in adolescence but widen in

young adulthood. This higher perceived status was consistent across all levels of the beauty continuum. These results are consistent with Hypotheses E1, E2, and E3.

Summary of Structural Equation Models

The conceptual model pointed to some benefits of above-average beauty and some detriments of below-average beauty. It also suggested that, among those with above-average looks, being the "fairest of them all" (very attractive) might have a further boost to social and academic achievement over being "just" attractive in looks. These expectations were based on diffuse status theory and the stigma perspective, and evidence at each end of the beauty spectrum offered support for each theoretical perspective. A unique strength of the Add Health data was the sizable samples at each of these beauty extremes, allowing a better opportunity to test such directional aspects of beauty effects than prior research. We also extended prior studies of beauty by postulating that the general social advantages gained by better looks might have offsetting implications for academic and human capital attainment. The Add Health data provided a number of social, academic, and human capital outcomes to examine this expectation. We used prior studies to anticipate which social processes might reveal these offsetting pathways, but a contribution of our study is showing which indeed are empirically evident.

In order to emphasize which contrasts (fairest of them all, standing out, and stigma) were significant for which social, academic and human capital outcomes, Figures 3 through 7 summarize the findings, placing the significant pathways from the tables into figures. Because of the numerous potential pathways, especially in young adulthood, we show different pieces of our larger conceptual model in separate charts. Each figure shows the fairest of them all diffuse status contrast in the top panel, the standing out diffuse status contrast in the middle panel, and the stigma contrast in the bottom panel. Figure 3 shows the results during high school. Figure 4 shows the pathways to social outcomes during young adulthood. Figures 5, 6, and 7 show the

pathways to each human capital outcome during young adulthood (college degree, earnings, and SES ladder respectively). To make the patterns more visually apparent, the figures only present statistically significant direct and indirect pathways. We used plus and minus signs to denote the direction of associations, except in Figure 4, where we used solid and dashed lines due to the number of pathways shown in that figure.

The figures make it easy to step back from the specific results discussed with each table and to draw conclusions about which results hold across the beauty continuum and for different outcomes. The first major conclusion we drew from across these figures was that the greatest number of pathways was evident in the middle panel, for the standing out diffuse status contrast. The stigma process followed, with the next greatest number of significant pathways evident in the bottom panels of the figures. The fewest pathways were significant in the top panels, for the fairest of them all diffuse status mechanism (and those that were evident occurred exclusively in young adulthood). On the whole, these results suggested to us that each pole of the beauty continuum mattered, but that standing out from the crowd—being attractive rather than average in looks—was particularly important during the developmental periods studied here, adolescence and young adulthood.

The second major finding was that different particular types of social achievement were elevated by specific levels of looks and were intermediaries between those specific levels of looks and academic or human capital outcomes. For example, Figure 3 showed that, in high school, having romantic partners was the mediating distraction between standing out and grades (Figure 3b); sexual partners and drinking were the intermediary distractions between being non-stigmatized (being average rather than unattractive in looks) and grades (Figure 3c). A pair of assets – friendships and mental health—was an intermediary for both of these poles of beauty, but teacher caring, getting along, and sports also formed a positive pathway linking being

attractive versus average in looks with GPA. Both contrasts also revealed elevated self-esteem for better looking youth, although this social advantage was not linked to better high school grades.

Particular types of social achievement were also elevated for specific contrasts along the beauty continuum in young adulthood. The middle and bottom panels of Figure 4 show that standing out and lack of stigma were linked to every social outcome that we measured in young adulthood, either directly or indirectly through high school social and academic achievements. In contrast, in the top panel of Figure 4, being very attractive versus attractive in looks was linked to just three young adult social advantages: greater extraversion, more close friends and less depression. The intermediary links from high school to young adult social achievements were more numerous in the middle than the bottom panel of Figure 4, and some high school outcomes operated for only one contrast (teacher caring, getting along, sports, GPA, and having romantic partners for standing out; sex partners and drinking for stigma).

In Figures 5 to 7, only subsets of these young adult social achievements, and earlier high school achievements, carried forward to advantage or constrain youth in their human capital attainment. In both the middle and bottom panels of Figure 5, only one social mediator was evident for more than one contrast—a greater chance of having a child constrained youth from attaining a college degree in both the standing out and stigma contrasts. The other mechanisms linked to college attainment differed—more close friends in young adulthood benefitted the very attractive versus the average in looks; more optimism in young adulthood and more sports participation, friends, romantic partners, and higher grades in high school benefitted the attractive versus the average in looks; more high school friends benefitted the average versus unattractive in looks. A second constraint, however, was also evident for the average versus unattractive—more sexual partners lowered their chances of graduating from college.

Figure 6 likewise shows a different set of intermediary social mechanisms linking looks to earnings across the beauty continuum. For the fairest of them all in the top panel, the lower depression of the very attractive than attractive in looks led to higher earnings. For the non-stigmatized in the bottom panel—the average versus unattractive in looks—higher earnings reflected the accumulation of numerous smaller advantages across variables, none of which was individually significant. More pathways were evident for those whose looks stood out from the crowd in high school. Their earnings benefitted from an accumulation of various assets in high school as well as their higher chances of being married and having a college degree in young adulthood, but their earnings were also constrained by their higher likelihood of having children.

Finally, Figure 7 shows that for SES ladder placement only one social intermediary operated at two different levels of the beauty continuum—greater high school self-esteem was linked to higher self-perceived ladder placement for both the attractive versus average (Figure 7b) and for the average versus unattractive in looks (Figure 7c). The former group whose looks stood out from the crowd in high school also benefitted from higher GPAs and perceptions of teacher caring in adolescence and greater optimism and chances of being married in young adulthood. In contrast, the latter group with non-stigmatized looks demonstrated an offsetting pathway in which their greater numbers of sexual partners in young adulthood linked to a lower perception of ladder placement. For the fairest of them all (top panel of Figure 7) a different set of social outcomes in young adulthood—their extraversion, close friends and lower depression—connected their looks and ladder perceptions.

The figures also revealed a few other important points. Stepping back again to look across Figures 4 through 7, a striking pattern was that not all of the numerous social outcomes that were elevated for the better looking in young adulthood played a role in human capital attainment. Thus, at least at this stage of life, some benefits of better looks were purely social

(although it may be that later in life they translate into additional economic benefits). Comparing Figures 3 with Figures 5, 6, and 7, a notable difference was that having romantic partners, which was a distraction from grades in high school, became an asset for college attainment in young adulthood. This difference demonstrates how meaning can change across the life course—what may have produced time and psychic costs for academic pursuits in high school may have led to social skills and relationship maturity in young adulthood. Another noteworthy difference across developmental stages revealed in Figures 3 versus 7 is that self-esteem did not link looks to grades in high school but did connect to greater ladder placement in young adulthood.

Efforts to Improve Causal Inference

We end this chapter by examining the possibility that the factors that led some adolescents to have better looks also led them to achieve more socially and academically. By looking for the robustness of our results across alternative specifications, we respond to recent calls for scholars who use a developmental approach to more explicitly account for such selection effects, especially when these selective forces may be difficult to measure (Duncan, Magnuson, & Ludwig, 2004; McCartney, Burchinal, & Bub, 2006; Mendle, Harden, Brooks-Gunn, & Graber, 2010). To do this, we capitalize on the siblings and twins in the Add Health data. To reduce the volume of results, we focused these analyses on grades, earnings, and self-perceived SES. We did so because grades and earnings have received particular attention in the quantitative literature on attractiveness and by policymakers, the public, and the media, and because we found that self-perceived status had consistent associations across hypotheses and levels of beauty.

As noted in Chapter III, these analyses capitalized on within-sibling variation in both physical attractiveness and grades in two ways: 1) drawing on techniques from the field of behavioral genetics and 2) drawing on econometric fixed-effects models. Each approach used

differences to wash out common correlates of attractiveness and academic/human capital that were shared by siblings within families, even when these characteristics were themselves unmeasured. Each approach was limited, however, to the extent that there was little independent variation across siblings. Consequently, we began each analysis by examining such variation.

Sibling correlations by type of sibling pair. The first sibling analysis borrowed from behavioral genetics (Reiss et al., 2000). Specifically, we looked at the degree of correlation between attractiveness scores and between GPA scores, earnings, and self-perceived ladder status within sibling pairs.[11] If a genetic component existed, the correlations should have been higher for pairs that were more similar genetically (e.g., monozygotic twins) than those who were less similar (e.g., full and half non-twin siblings). We also calculated differences in attractiveness scores and GPAs, earnings, and ladder placement within pairs and examined how these differences were correlated. This approach was analogous to our sibling fixed-effects results (shown next), although it disaggregated the association across types of siblings who were more and less genetically similar.

To begin, Table 10 presents the number of siblings of each type.[12] Looking at the first column, for attractiveness ratings, the greatest number of sibling pairs were full siblings but not twins (n = 1,143), including male-male (n = 345), female-female (n = 325), and male-female (n = 473) configurations. The sample also included a sizable number of twins, both monozygotic (n = 383) and dizygotic (n = 548) pairs. It also contained half siblings (n = 218) and unrelated siblings (n = 562). The sample sizes were smaller for earnings and SES ladder placement because of attrition through Wave IV of the study and because of cases in which both siblings were not employed at Wave IV (because we required both siblings to have earnings for these analyses). We also presented the descriptive differences between siblings on their attractiveness ratings and on their GPAs, earnings, and ladder placement in Table 10. The differences averaged about zero,

with standard deviations of around one on each difference on most variables (standard deviations were higher, at about two, for SES ladder placement).

Turning to the substantive results in Table 11, the within-pair correlations were, as expected, generally highest for monozygotic twins and lowest for half-siblings or unrelated siblings, reflecting a genetic component to physical attractiveness as well as GPA, earnings, and ladder placement. For example, the correlations between attractiveness scores were .72 for monozygotic twins versus .22 for half-siblings and .31 for unrelated siblings. Likewise, the correlations were .65 and .23 to .25, respectively, for GPAs; .55 and .00 to .02 for earnings; and, .31 and .03 to .07 for SES ladder placement. Still, our regressions of the difference in achievement on the difference in attractiveness ratings demonstrated a lingering association between looks and human capital even within sibling pairs, consistent with the sibling fixed-effects results described below. Specifically, in full-sibling (non-twin) pairs, the sibling who was rated as more attractive had a higher GPA (B = 0.17) and higher SES ladder placement (B = .23). These results indicated that something beyond shared environment and partially shared genetics produced the attractiveness results in the structural equation models. In contrast, among monozygotic twins, the twin rated as more attractive had the same average GPA as the twin rated higher (B = 0.00) and a non-significantly higher SES ladder placement (B = 0.07). The regression results for earnings, in contrast, were not significant (and negative in sign), which may reflect less of a causal effect of attractiveness on earnings in young adulthood than on grades or self-perceived SES (although the sample sizes were smallest for earnings, due to the attrition through Wave IV and the fact that both siblings were not employed in some pairs).

Sibling fixed effects. The second approach involved within-sibling fixed-effects models, beginning with our examination of the extent of within-sibling variation in the sample. If there was no variation within siblings (e.g., all siblings were rated the same on attractiveness; all

siblings had the same GPAs), then fixed effects models could not be estimated. If variation was evident, but minimal, we could estimate the models, but the standard errors would be large. We found moderate to substantial variation for the key variables. Specifically, the intra-class correlation (ICC) for attractiveness was .21, indicating that 21% of variation on attractiveness was between siblings and 79% of variation was within siblings. For the achievement measures, the ICC was highest for GPA at .38, indicating 62% of variation within siblings. For earnings, the ICC was .16, indicating 84% of variation within siblings. For the SES ladder measure, the ICC was the lowest, at .10, indicating 90% of variation within siblings.

Table 12 summarizes the results of regressing each measure of achievement on the attractiveness dummies, with and without sibling fixed effects. All models included all of the control variables listed in Table 1 (but not high school or young adult social achievement). These models included all sibling pairs available at each time point and thus were based on a larger sample size than the structural equation models. With this greater power, both diffuse status contrasts differed significantly from zero for all outcomes before adding sibling fixed effects. With sibling fixed effects, the coefficients for the standing out effect on GPAs remained significant. Although the coefficients for earnings and ladder placement were no longer significant with sibling fixed effects, the standard errors increased substantially for these outcomes (four to seven times larger), and the coefficients remained positive. Three of the four coefficients that were significant for earnings and the SES ladder without sibling fixed effects would be significant with sibling fixed effects if the standard error was at the same size as in the models without sibling fixed effects. This pattern was generally consistent with the results presented above for full siblings, where the sibling with the higher attractiveness score had higher GPAs and SES ladder self-ratings. Together, these results provided some evidence that there was an association between physical attractiveness and grades beyond partially shared

environment and genetics. There was also some evidence for a potential causal association with self-perceived SES, and the least evidence for this possible causal association for earnings (although the sibling-based earnings analyses had the least power).

Summary

The analyses in this chapter tested the basic conceptual model. We found evidence in favor of the hypotheses that physical attractiveness was positively associated with many types of social achievement in high school, that some of these social achievements worked toward and some worked against grades, and that these patterns continued into young adulthood, where the physically attractive had higher social and human capital (in part due to their social and academic achievements in high school). Our results were consistent with both diffuse status and stigma perspectives. The "standing out" aspect of diffuse status (being attractive rather than average in looks) and stigma (being unattractive rather than average in looks) operated in both developmental periods of adolescence and young adulthood. The "fairest of them all" aspect of diffuse status (being very attractive rather than attractive in looks) operated only in young adulthood. Additional analyses tried to adjust for confounds, beyond those that we were able to measure and control in the structural equation models. Although we still could not be certain whether the associations of attractiveness with the academic and human capital outcomes were causal, the additional results supported the possibility that the associations reflected some real effects of attractiveness.

Chapter V:

Examining and Elaborating the Conceptual Model with Qualitative Data

The National Longitudinal Study of Adolescent Health (Add Health) was an excellent resource for establishing population patterns among physical attractiveness, social achievement, and academic achievement in high school, checking the robustness of these patterns to many threats to causal inferences, and extending these adolescent patterns into young adulthood. Still, like most large-scale (and especially national level) data, Add Health is less useful for identifying the more nuanced processes underlying these patterns. For example, Add Health allowed the testing of specific mediators of the attractiveness association with academic outcomes but provided little data to identify and examine the sub-mechanisms through which these mediational pathways operated (e.g., why do more friendship nominations link looks to grades?). To dig further than Add Health allowed, we turned to the qualitative data from Lamar.

Chapter II put forward exploratory questions—all dealing with sub-mechanisms of effects—for each piece of the conceptual model that focused on adolescence. Chapter II also summarized the conceptual guidelines for looking for the answers to these questions in the qualitative data, based on past research and theory. As we explained, these conceptual guidelines organized the initial analyses of the qualitative data, but, in the spirit of grounded theory, we allowed other themes to emerge more freely from the data. As discussed below, some pre-selected conceptual guidelines revealed new insights, but others did not. Some new insights also emerged that were not entirely expected. In some cases, we were able to further examine these new insights with the Add Health data in Chapter VI. In other cases, we could not test them empirically in the current project, but incorporated them into an expanded conceptual model that we present in Chapter VII.

The findings in this chapter primarily came from planned face to face interviews with the 32 selected youth from Lamar high school as well as, more generally, from conversations with these and other youth that emerged more organically in observational settings in Lamar and from print and electronic materials collected as part of the study. Of note is that the interviews or other data collections did not specifically center on appearance, but they yielded relevant information nevertheless. For example, most of the interviewed youth brought up attractiveness through the course of conversation. Girls were more likely than boys to raise the importance of appearance in high school. In fact, almost all girls did, with the exceptions being race-ethnic minorities. The boys who discussed appearance issues were all White.

Physical Attractiveness, Social Achievement, and School Context

Discussions about the link between physical attractiveness and social achievement in Lamar tended to be closely connected to discussions of the particular environment in Lamar. The latter often arose from the former. As a result, data related to the exploratory questions for the social implications of physical attractiveness (Path A in Figure 1) and the moderating role of school context (Path C) will be described together. As a reminder, those exploratory questions were as follows:

Exploratory Question A: *What are the social psychological sub-mechanisms by which physically attractive youth accrue more social achievement?*

Exploratory Question C: *Is observed school-level variation in the implications of physical attractiveness related to school factors that reflect fluctuations in academic and social competition?*

Recall that the conceptual guidelines put forward for Exploratory Question A concerned social sorting, the multi-dimensional nature of attractiveness, and sociability (i.e., the tendency for attractive youth to be more outgoing). Evidence was found relevant to all three, although

these themes often were "mixed up together" in student comments, meaning they were frequently raised but more often together with one or two of the other themes than on their own. The data also pointed to an emerging theme that might be best thought of as "halo effects" as well as one concerning a person x media interaction. The conceptual guidelines for Exploratory Question C concerned the social and academic competitiveness of the school. Such school issues were discussed by Lamar students (although not always explicitly about social and academic competition), and were also observed more generally. They appeared to be tightly coupled with the larger issue of social sorting.

Theme #1: Sorting. Not surprisingly, adolescents never actually used the term sorting, but they touched on the basic idea. They viewed physical attractiveness as a factor in initial meetings that would affect the likelihood of first impressions turning into more sustained social interaction. In their view, this role of physical attractiveness as a sorting device for first impressions was a product of the size and heterogeneity of the school, especially given the large, diverse composition of Lamar relative to their middle schools.

Collectively, discussions indicated that youth with ordinary looks got lost in the crowd. As adolescents moved from smaller, more intimate middle schools into a high school that they uniformly found more impersonal and intimidating, they realized that their visible features signaled whether others should get to know them better or move on. Explained a White ninth grader named Christian (note: all names have been changed):

> "I'd say a lot of kids will look at someone and make an idea of them just like that…I think physical appearance, like, what people wear and stuff like that, is more in the short-term, like, people decide if they're going to talk to them or not."

One of Christian's classmates, a White girl, was far more specific and echoed the quantitative finding of the importance of standing out from the crowd: "It's being beautiful or

handsome, you can't just be average, you have to be above average." Other White classmates echoed this sentiment and, emphasized that first impressions were significant. According to Ava, "A lot of people now will go on looks first hand, before getting to know a person." Ava further described "now"as not being in reference to the present moment but rather as signifying going to high school in general. According to Cooper:

> "It's probably within the first 30 minutes or so that they've met. It's like the first things that you say to people that you don't know are going to completely affect what they think about you and who you are, how you act, what you do all the time, and all that sort of stuff."

In other words, as young people traversed the halls of school and came into contact with many different people, good looks could bring people in for more interaction or average/bad looks could foreclose social experiences. This view appeared to reflect something broader than first impressions, as the yearbook and newspapers revealed ample evidence that youth who inhabited the most visible positions in school (e.g., class officers) and were voted into high-profile activities and honors (e.g., cheerleading, homecoming court) tended to be conventionally attractive. The youth interviewed in the study—whose activities and honors in the school publications also followed an attractiveness gradient as rated by study personnel—echoed these findings from school publications review that social visibility in the school was a function, in part, of attractiveness. They drew on such information about broad school patterns to think about more micro-level patterns that they encountered, such as social interactions and first impressions.

Lamar students frequently discussed physical attractiveness as a powerful factor in determining (opening up or foreclosing) social options against this backdrop. It gave entrée to social experiences, and it helped young people make the most of these opportunities. For example, attractiveness could get someone invited to a party, and it could also help that person

navigate the party. As White working class Cathy explained, "You have to be able to open up and talk to people. And people who are attractive, you know, are usually pretty popular. Like, you can be more popular according to, like, your appearance." Although focusing on the disadvantages of unattractiveness rather than advantages of attractiveness, her Latina classmate, Sylvia, felt much the same way. Sylvia also drew a much stronger connection between the social and psychological in this process, explaining:

> "A lot of it is looks. And how you look physically and I guess that society has always taught us that if you don't look good physically then you are not accepted by everybody…they have a harder time being with others not accepting them, because they are not the way…or they are not beautiful, I guess you could say. And emotionally, if you are not…if you don't keep telling yourself, reminding yourself that you should just embrace who you are, then you are going to start to believe that. So, your self esteem starts to go down and you start feeling bad about yourself and you start getting depressed."

In the eyes of Lamar students, physical attractiveness was a powerful asset for young people trying to make their way in the diverse array of social experiences and activities at Lamar, and the apparent link between attractiveness and formal school honors and activities seemed to back up this assessment. The most commonly cited factors that helped to explain this role of physical attractiveness were the characteristics of Lamar that made it daunting to navigate (e.g., size, diversity) but also the clique/crowd structure that arose in Lamar. In other words, the larger school peer culture was broken down into smaller units with often clear boundaries. Something like physical attractiveness could give someone more freedom to cross those boundaries. In a particularly striking (and literal) example, a teacher drew a map of where different crowds sat in the school before first period and during lunch, noting the segregation by race and class. This

map proved to be highly accurate during ethnographic components of the study, but observers also noted that this segregation also had an attractiveness component, in that the youth who crossed boundaries also tended to be viewed as more attractive. Of course, these youth also tended to be visible, popular, and active (all of which appeared to cluster together in our review of school publications), and so isolating any independent attractiveness effect is difficult.

The structural and social characteristics of Lamar are relevant to thinking about competitiveness. Larger schools entail more competition for limited activities and opportunities. Moreover, schools that are highly structured in terms of race-ethnicity and class (as might be expected in a diverse school) or in terms of peer networks can place artificial constraints on social interactions and on the movement of youth into valued positions and activities. Competition tends to increase the effects of competitive factors, and interviews, observations, and other data in Lamar suggested that attractiveness was one such factor.

Theme #2. Halo effects. Halo effects are implied in diffuse status characteristics theory; the reverse is implied in the notion of spoiled identities in the stigma perspective. The Lamar youth talked about halo effects in linking physical attractiveness to social achievement, connected to and separated from their thoughts on sorting. Basically, some youth claimed that attractiveness could smooth out other potentially unappealing characteristics (e.g., boring or mean personality, lower class position), thereby blunting what could otherwise be disadvantages in the social market—allowing entrée into and maintaining social activities and positions. This halo effect for the attractive was something that the average-looking did not have and, therefore, could not use to counteract negatives about themselves.

Madeline, a White 10th grader, described one of her friends, illustrating this process: “Yeah. It sounds really, really shallow, but it’s actually true... she’s like the prettiest person

ever….She's gorgeous! So she can get away with anything." Despite her many gaffes, this pretty girl had no reason to think of herself as anything other than likable.

Theme #3. The media. Although not a preset theme organizing the qualitative data collection, the significance of the media was also apparent in observations and interviews at Lamar. In particular, Lamar students viewed the media as a venue for the larger youth culture to pollinate into the school culture. Most of the girls at Lamar who talked about looks brought up the media. All of the boys who discussed looks also made connections to the media. For the most part, they focused on the "old" media (e.g., television and magazines) rather than the "new" media (e.g., social networking sites and the web). Madeline summed up the gist of these conversations by saying:

> "Yeah, definitely… like with the media and how girls should look and stuff. We were reading—you know, you just flip through a magazine that's saying, "Get a better body," and this and this. It's like all this almost puts pressure on people if you [do not look] like that. It's saying pretty much that you *should* be and that you should do this and this and this."

Most of the Lamar students were critical of the media and seemed savvy about the overt and covert messages of what they consumed, but they still recognized that it was a powerful source of the basic conceptual guidelines of the sorting process in high school. Our review of their use of electronic media through social networking sites also reflected such views, as no matter what youth had to say negatively or dismissively about attractiveness in interviews, the girls who had personal web pages uniformly presented themselves on these web pages in ways that appeared to enhance their attractiveness to others. Even casual shots they posted were flattering, sometimes bearing little resemblance to the everyday presentation of the youth, and the comments for posted pictures were typically focused on issues of attractiveness, pointing to a possible

motivation for doing so. The "Who I Am" pages followed a similar pattern for girls and boys—no "bad" pictures were used, even among those who decried the shallowness of judging others by physical features. Although the youth did appear to take the assignment seriously and spoke about their collages in deeply personal terms, a review of the projects suggest that the actual materials included in the projects—if not the discussion—were motivated in part by a desire to put the "best me" forward.

Theme # 4. Attractiveness as multidimensional. Another theme emerging from the qualitative data will also be examined quantitatively in the next chapter. Basically, this theme concerned the highly variable nature of what physical attractiveness constituted for young people—not variability across groups but instead variability from youth to youth in what factors were most prominent in perceptions of attractiveness.

The data from Lamar clearly indicated that youth did not perceive attractiveness strictly through the prism of facial features. Instead, discussions of attractiveness often veered into talk about body size, various issues of grooming (e.g., style of dress, general upkeep), and personality. Indeed, knowing exactly what youth meant when talking about attractiveness could be difficult at times. The interviews, observations, reviews of school publications, and web page comment sections clearly indicated that weight was a huge component for girls and that grooming mattered for both girls and boys, although their assessments of good or bad grooming did not always align with the adults collecting the data. Perhaps, then, the results from Add Health that have been presented so far could reflect a general package of presentation rather than beauty or handsomeness per se. As will be presented in Chapter VI, this possibility led us to use statistical analyses designed to capture such packages of traits (latent class analyses).

Summary. In terms of sub-mechanisms for the link between physical attractiveness and social achievement, the Lamar data indicated that physical attractiveness could be used as a first-

step measure of investing in or avoiding social interactions, either because of attractiveness itself or because of its potential to mask potentially problematic characteristics. The average got lost in the crowd of a large, diverse, and highly structured school. This power of attractiveness could be overcome, but it was strong. Although initial entrée into groups and the ways in which perceptions of looks bleed into other perceptions are difficult to study directly in Add Health, we further examine the potential for school composition as a moderator and the co-existence of grooming and personality with looks in the next chapter.

Social Assets and Distractions

As hypothesized, the statistical analyses of Add Health revealed that some social achievements were positively associated with academic achievement while some were negatively associated with academic achievement. In other words, in the highly social world of high school, youth and their peers valued many types of social ties and activities, but not all were assets for academic pursuits—some were distractions. The exploratory question for this part of the conceptual model (Path B) was about figuring out why something social could matter, in good or bad ways, to something academic:

Exploratory Question B: What are the psychological and behavioral sub-mechanisms by which social achievements are positively and negatively related to academic achievement?

Recall that the conceptual guidelines put forward for Exploratory Question B concerned socioemotional support, time allocation, and identity development issues. In our grounded theory approach, two themes emerged: social belongingness and social status/power. Still, aspects of the three a priori guidelines can be inferred from the discussions of these two poles.

On one hand, Lamar students valued the sense of belonging that resulted from being part of a circle of significant others. As White 9th grader Cathy explained, "[My friends], like, help

me, like, shape, shape who I am…like, they make me who I am." Indeed, the single most consistent message of the "Who I Am" projects was that being a part of a tight knit group of friends was what adolescents viewed as the most important and defining resource of their lives. In the words of Ali, a 10th grader of Middle Eastern origins, this belongingness dimension transcends physical attractiveness:

> "Well they know who I am, so I don't have to worry about what they think of me. They know who I am. I don't have to worry, oh they think this of you because of how I look. No, they know who I am. So I don't have to try to like show anything or prove anything."

Ava agreed, saying "…friends aren't willing to judge me on just how I look. They go by my personality instead, because they are stronger friends."

Acceptance among close friends was the dominant theme in both the "Who I am" projects as well as in student web pages (those interviewed as well as their friends and others linked to them online). These presentations were centered on friendship cliques that were highly romanticized for the support that they gave young people, support that they found necessary in order to get along in the sometimes stressful world of the high school.

In this way, belongingness could reinforce academic achievement by providing socioemotional resources (e.g., security, connectedness) to young people that allowed them to meet the challenges in their lives and in their schooling. Such patterns tie into the evidence from Add Health that some indicators of social connectedness seemed to enhance academic achievement. It is also closely related to the socioemotional support theme that we laid out in relation to the conceptual model in Chapter II, in which young people are better able to meet the challenges of school when they know that others "have their back."

The qualitative data also suggested that, to some extent, measures of social ties in Add Health could have also tapped into purely positional aspects of popularity—power and visibility—rather than connections and bonds. Lamar students usually discussed this aspect of social ties in more negative terms and generally in reference to what happened outside protective circles of close friends. Cathy noted the difference between being liked and being known: "You can have tons of people hate you and still be popular, it's just like, you know, having people know you." According to Sylvia, what concerned most students was position, not so much connectedness.

> "But I guess other teenagers have a hard time doing that because they want to be cool. And if you are not cool, then you don't fit in and if you don't fit in, then you are a nobody. And a lot of high school and other schools is like a lot of what matters is what level you are on the social status."

Importantly, athletes and cheerleaders were particularly likely to be brought into this kind of discussion, with students noting that they were popular but not always well liked. A similar theme applied to those who appeared to be popular and high-profile in school publications, many of whom were athletes and cheerleaders and many of whom also came from the wealthier neighborhoods feeding into the school. Many of these students were specifically mentioned by the Lamar students we interviewed or were discussed online. They were looked down on in some ways but looked up to in others. Thus, the status/power theme may connect social ties and social activities within the school.

This positional dimension of status also appeared to factor into Add Health findings that some social ties and activities appeared to be academic distractions. Good-looking students come to highly value the attention and regard that they received from others (recall that being known is often more important than being liked) and as a result, did not want to lose it. The problem was

that many venues for gaining and maintaining the attention of others were directly opposed to academics. Indeed, student after student described doing too well in school as "a weakness," as something for "losers and nerds and stuff", and as a detriment to a "being cool." Indeed, of the many online personas that young people at Lamar presented to the world, not one centered on academic excellence. The same was true for the "Who I Am" projects. Many teenagers felt these competing demands. One White high-achieving 10th grader, Lizzie, bragged that most of the people at school thought that she blew off school to party, not realizing that her grades were actually high: "It's also kind of cool, because then I've got this cool reputation, but I also get good grades, you know."

Parties and dates gained adolescents social achievements but did nothing for their academic achievements. As Cathy lamented, students had to learn to accept "not always being there [at a party]…if you have a night to study. Because that used to bother me. I always wanted to be there." An online message from an overweight girl likewise stated that she believed that she had an academic advantage over more conventionally attractive peers who had to deal with "guys, drinking, parties, and most of all freedom." In these ways, the qualitative data suggested that the time allocation theme discussed in Chapter II—in which the social "work" of high school takes away from the academic "work" of high school—has some merit and needs to be examined more closely.

The Lamar students did not discuss identity development explicitly, even when prompted to discuss identity discrepancies and conflicts through a more structured psychological protocol (Ewell, Smith, Karmel, & Hart, 1996). Yet, insights into identity development can be inferred from what they did say about the various dimensions of social achievement and how they related to academic progress. Specifically, physical attractiveness seemed to give young people access to a cool reputation as well as the social opportunities necessary to maintain that reputation.

Adolescents were highly motivated to achieve that identity and keep it, as designated by more formal statuses (e.g., school positions and honors easily recognizable in school publications) or in more informal statuses observed among students (e.g., web page friends, being the center of attention in hallway or lunchtime groups). The physically unattractive were, to some extent, frozen out of that potential identity. They could try to claim it for themselves, but the social world of the school made it difficult to hold onto it. For these youth, the silver lining was that being frozen out of the cool identity meant that they had to deal with fewer tensions from also trying to maintain an identity as an academic achiever.

Thus, the qualitative data suggested that physical attractiveness could help youth do better in school by providing secure interpersonal and psychological bases for meeting challenges. It could also interfere with academic progress, however, by granting them status and power that they then needed to maintain at the expense of their studies. Another theme emerged from the qualitative data relevant to the link between social and academic achievement that connects the halo effect and social status/power. Some youth spoke about how teachers might show favoritism to students because of their social status, such as being an athlete, or because of how they looked, implying an undue academic advantage accrued through social achievements. Interestingly, Lamar students noted that such an advantage would be more likely in classes in which grading was perceived to be more subjective. As a Latina named Romina explained:

> "If you are still in a sport at this point, you will be making good grades. And I can understand that. There is a very big favoritism going on in this school for those people. English is the big one, because there is no right or wrong in English, I guess. It is a very biased subject in the first place and the teachers are easily able to pick favorites."

This theme suggests the need to breakdown the GPA outcome in Add Health into subject-specific grades. The results of these new analyses will be presented in the next chapter.

Chapter VI: Physical Attractiveness, Social Achievement, and Human Capital: Testing the Elaborated Model with Quantitative Data

The qualitative results suggested several possible refinements of the conceptual model. They identified sources of and influences on assessments of attractiveness among adolescents (e.g., the media, aspects of grooming and appearance), possible sub-mechanisms underlying the path from attractiveness to social achievements in the model (sorting, halo effects), possible sub-mechanisms of offsetting paths from social to academic achievement (support, time allocation, academic disincentives), and moderators of the various pieces of the model (school characteristics related to competitiveness, academic subjects in which grading occurred). Some of these potential refinements could not be explored quantitatively, at least not with the relatively blunt data available in the National Longitudinal Study of Adolescent Health (Add Health), but some could—allowing for the circle between quantitative and qualitative analyses to close.

Of the refinements that did lead to new hypothesis-testing in Add Health, the first is an evaluation of the importance of other aspects of attractiveness beyond facial beauty, including grooming, personality, and weight. The second is an examination of variation in the importance of physical attractiveness for achievement across different types of schools, moderation that we had also anticipated much more generally in Path C of the original conceptual model shown in Figure 1. The third is examination of differences in the importance of beauty for grades in different subjects, particularly those perceived to have more and less subjective grading.

Beauty, Grooming and Personality

The students in Lamar alluded to the fact that physical beauty often goes hand-in-hand with other visible attributes, like a charming personality and fashionable grooming. From a research perspective, we would like to isolate the effects of each attribute. We expect, however,

that these attributes likely co-occur in reality, perhaps to such an extent that it is difficult to use standard regression techniques to identify the unique effects of each variable. As a result, we employed latent class analysis to determine whether we could identify subgroups of students with various configurations of attributes, including students who were rated as physically attractive but with an unpleasant personality and poor grooming.

As noted in the Method section, we used LatentGold to identify the best-fitting model, using student gender and race-ethnicity, overall GPA, and weight status as covariates. LatentGold was the ideal software for such an exploratory latent class model because its routines are optimized to identify global maxima (Vermunt & Magidson, 2005). We selected the 6-cluster solution because it had the lowest BIC value and because the cluster structure was most interpretable (The 7-cluster model distinguished two clusters that were not highly separable in terms of indicator probabilities: these two clusters generally captured students with average scores for beauty, grooming, and personality, although one of the clusters had slightly more students rated attractive on personality).

Figure 8 shows the indicator response probabilities for the 6-cluster solution. The labels for the six clusters are on the horizontal axis, along with the percentage of students falling in each cluster. In the legend, we defined the shadings used to show each category of the indicators, which are displayed with vertical bars for the three types of attractiveness within each of the six clusters. The first four clusters were occupied by students who interviewers rated similarly across the three types of attractiveness. Specifically, the second and third clusters, which we labeled "Average" and "Attractive", were occupied by nearly eight-of-ten students (39% each). These students had similar indicator probabilities of being rated average (dark gray shading) and attractive (light gray shading), respectively, on grooming, personality, and looks. We labeled the fourth cluster "Very Attractive." This cluster contained just over a tenth (11%) of students who

were primarily rated very attractive (white shading) across all three types of attractiveness. The first cluster, labeled "Unattractive" contains youth who were rated unattractive (black shading) or average (dark gray shading) on grooming, personality, and looks. Unlike the second, third, and fourth clusters, the bars were a bit different across the three aspects of attractiveness in this first cluster, with youth being particularly likely to be rated unattractive on looks (80% response probability) in contrast to grooming and personality (about one-third rated unattractive). This "Unattractive" cluster contained 5%, of the youth, or about 400. Together, fully 94% of youth fell into these first four clusters and were rated similarly by interviewers across their grooming, personality, and looks. This result highlights the difficulty of empirically identifying unique effects of each type of attractiveness.

The final two clusters showed the greatest differences between grooming, personality, and looks, but they were occupied by just 5% (about 375) and 1% (about 50) of youth. We labeled the fifth cluster "Average Looks & Grooming/Attractive Personality" because 100% of youth in this cluster were rated average in looks (dark gray shading); about half were rated average and about half attractive in grooming (dark gray and light gray shading), and over 90% were rated attractive or very attractive in personality (light gray and white shading). We labeled the final cluster "Average Looks & Personality/Attractive Grooming" because 100% of youth in this cluster were rated average on personality and looks (dark gray shading) whereas nearly all were rated attractive or very attractive on grooming (light gray and white shading).

The LatentGold results also indicated that the covariates differed significantly across clusters, and so we turn to examining the covariate probabilities and means across the six clusters. To begin, Figure 9 shows the distribution of latent class categories for youth of various gender and racial-ethnic backgrounds. In this figure, we used shading to depict the six clusters in vertical bars for each gender and racial-ethnic combination. Girls are on the left, boys on the

right. The first finding that stood out is that the "Average" and "Very Attractive" shaded areas were generally larger for girls than boys (2nd and 4th shaded areas from bottom within each vertical bar), but the "Attractive" shaded areas were generally larger for boys than girls (3rd shaded area from bottom). There were no striking differences—and no group clearly rated as most attractive—by race-ethnicity within gender.

This visual pattern was confirmed by statistical significant tests. Thirteen of 15 contrasts between the five racial-ethnic categories of boys and the five racial-ethnic categories of girls were statistically significant. In contrast, within boys, just 3 of 15 contrasts among the five racial-ethnic categories were significant. Likewise, within girls, 3 of 15 contrasts were significant. For boys, all significant contrasts were versus the multiracial boys (who differed significantly from boys who were of non-Latino/a White, non-Latino/a African American, and non-Latino/a other race-ethnicities). For girls, the significant contrasts were between the non-Latino/a African American and the non-Latino/a White and the Latino/a race-ethnicities as well as between the non-Latino/a White and non-Latino/a girls of "other" race-ethnicities.

Figure 10 displays the average overall transcript GPA for youth within each cluster, with the six clusters labeled along the horizontal axis. Worth noting is that we did not adjust for the many control variables shown in Table 1 and used in the structural equation models, nor did we adjust for the social assets and social distractions mechanisms, in these latent class analyses. These patterns, therefore, are total effects. They revealed that those youth rated unattractive across grooming, personality, and looks had the lowest GPAs (leftmost bar), fully three-quarters of a point lower than youth rated very attractive across these three aspects of attractiveness (4th bar from left), who had the highest average GPAs. The second highest GPAs were for youth rated average on looks and personality, but attractive on grooming (rightmost bar; recall that fully half of these youth were rated very attractive on grooming, the white shading in Figure 8).

Those rated average or attractive across categories, or average in looks and grooming but attractive in personality, fell in between in terms of GPAs (2nd, 3rd and 5th bars from left in Figure 10). The fact that these results show that youth who were rated attractive across categories had average GPAs about a quarter point below those rated average across categories likely reflects the fact that, again, these are total effects, not accounting for offsetting social assets and social distractions associated with looks and not adjusting for other covariates.

Finally, Figure 11 shows how the six clusters were distributed by student body size. We laid out this figure similarly to Figure 9, with the three weight categories labeled along the horizontal axis and shading in the vertical bars representing each of the six latent classes. The chart strikingly revealed the increasing proportion of youth who were overweight or at risk of overweight falling into the "Average" cluster (dark gray shaded area, 2nd from bottom) and "Unattractive" cluster (bottom-most shaded area, in solid black). These youth were also less likely to fall in the "Attractive" cluster (3rd shaded area from bottom) and the "Very Attractive" cluster (4th shaded area from bottom). In additional analyses (not shown) the structural equation model results held when we controlled for body size, suggesting that there is an effect of being rated physically attractive that remains after adjusting for body size. These results also showed that overweight youth were experiencing both the negative and positive consequences of attractiveness for grades. They were more isolated and in poorer mental health than their thinner peers but received higher grades, consistent with Lamar students' quotes revealed.

The results of the latent class analyses raise the question of whether disentangling beauty from personality and grooming is possible in observational studies, or whether instead researchers should be thinking of these attributes as a package, both conceptually and empirically. Given the extent to which grooming, personality, and looks tend to co-occur, researchers also need to consider conceptually and empirically the extent to which something

self-selective is going on when a youth is, for example, pretty but not well groomed and unpleasant in personality, as we discuss in Chapter VII. Importantly, youth appeared to be able to compensate for average looks (and personality) with grooming, leading them to have statistically equivalent GPAs with those rated as very attractive across all three domains. Researchers conducting observational studies may also need to consider creative new methodological approaches, such as those we suggest in the next chapter.

School-Level Characteristics

Table 13 describes the 132 Add Health schools on the characteristics defined in Chapter III.[13] The schools averaged 865 students, although the standard deviation was 710 students and just 9% had more than 2000 students. Within the average school, mean student expectations were that it was "pretty likely" (average score just above 6) that they would attend college; and, in nearly two-fifths of schools, the average was more than "pretty likely." In the typical school, 46% of students were rated as average in looks; and, in just one quarter of schools more than half of the students were rated average looking. Nearly half of the students in the typical school had a romantic partner, and the mean number of friendship nominations was just over four. The average depression level also exceeded 11 in just over half the schools. Finally, over nine-in-ten Add Health schools were public schools.

We next examined the degree to which variation in the measures of attractiveness and high school social and academic achievement occurred within versus between schools and the extent to which the association between physical attractiveness and these outcomes differed between schools. To the extent that most of the variation in these outcomes was within versus between schools and to the extent that most of the association of physical attractiveness with achievement was similar across schools, there would be less variation to explain with school characteristics. This was indeed the case. Intraclass correlations for attractiveness, GPA, and

students' interpersonal ties, activities, and psychosocial resources were all below .10. In fact, for eight of the twelve measures, the ICC was between .01 and .03. This result indicated that there was very little between-school variation in these variables. In other words, students from different schools were about as likely to have similar scores as were students within the same school. We also used multilevel modeling (the generic term for hierarchical linear modeling) to test whether the slope associating the attractiveness dummy variables with GPAs and with the social achievement measures randomly varied across schools. In all cases, the random component for these slopes was not significant (results available from the authors).

Given the little evidence found for between-school variation in attractiveness, academic achievement, and social achievement and no evidence that the association between attractiveness and achievement varied randomly across schools, the lack of moderation by the selected school characteristics was not surprising. The exception was that the associations of attractiveness with friendship nominations, romantic partners, and depression were significantly stronger when the average level of the outcome was higher in the school. Still, the moderation was generally in degree and not in the presence of the association. That is, in nearly all cases, more attractive youth scored higher on the outcomes in all types of schools, but the association was significantly ($p < .05$) stronger in contexts in which the outcome mean was higher.

We found, more specifically, that both the standing out and stigma effects were moderated for friendship nominations. In schools in which the average number of nominations was four or less, attractive youth had 0.48 more friendship nominations than youth rated average in looks. Likewise, youth of average looks had 0.51 more friendship nominations than youth rated unattractive. These associations were nearly double in schools in which the average number of friendship nominations was greater than four, with the increment to friendship nominations being 0.85 for both the contrast of attractive to average and the contrast of average to

unattractive. For romantic partnerships and depression, only the stigma effect was moderated. That is, in schools in which more than half the students were had romantic partners, average-looking youth were nine percentages points more likely to have a romantic partner than were youth rated unattractive ($p < .10$), whereas the average and unattractive in looks did not differ significantly in the chances of romantic partnerships in schools in which fewer than half the students had romantic partners. Similarly, only in schools with high levels of average depression were youth rated average in looks significantly less depressed than those rated unattractive in looks ($B = -1.36$, $p < .05$ in schools with high levels of depression; $B = -0.19$, $p > .05$ in schools with low levels of depression among students).[14] For both romantic partnerships and depression, however, there were standing out effects regardless of the school-wide characteristics (attractive youth were five percentage points more likely than youth rated average in looks to date, both in schools with and without high levels of romantic partnerships; youth who were attractive in looks were less likely to be depressed than youth average in looks both in schools with low and high levels of depression, $B = -0.81$, $p < .05$ and $B = -0.50$, $p < .05$ in the two contexts respectively).

In sum, although we conceptually expected that school characteristics might moderate the association of attractiveness with grades and social achievement, an expectation heightened by the comments of students in Lamar, we found little evidence of such variation in Add Health. These results suggest that the importance of attractiveness for academic and social achievement is pervasive during high school and is evident across all types of schools. Add Health is the first dataset allowing a comprehensive test for such variation, given its large, nationally-representative frame. This finding is an important contribution of this study.

Subject-Specific GPAs

Students at Lamar also alluded to the potential halo effect of attractiveness, suggesting

that students with good looks might get better grades due to preferential treatment by teachers. They also speculated that that such preferential treatment might be more evident in subjects in which grading was typically viewed as being more subjective (e.g., English, humanities and social studies) than subjects in which grading was viewed as less subjective (e.g., mathematics and science). Consequently, Paths A and B of the structural model were re-estimated separately for these subject-specific grades.

Compared to the results for overall GPAs in Table 4, the pattern of significance was identical for each subject-specific GPA as for overall GPA, with two exceptions. For the stigma effect, drinking problems had a significantly negative indirect effect on overall grades and lower math and science grades, but not lower grades in English, humanities, and social studies. Also for the stigma effect, greater mental health had a significant positive association only with overall grades; although the coefficients were similar in size for subject-specific grades, the standard errors were slightly larger and the associations were only marginally significant ($p <$ .09). Between the two types of subjects, the associations were generally slightly larger in size for the possibly more subjective subjects (English, humanities, and social studies) than the potentially less subjective subjects (mathematics and science), as expected, although differences were small. For example, whereas the total effect of being attractive versus average in looks was 0.083 for English, humanities and social sciences classes, it was 0.070 for math and science classes. Likewise, the direct effects were 0.049 and 0.033, respectively, and the indirect effects were 0.044 and 0.026, respectively, for the two types of classes.

Overall, these results suggest that the halo effect of grades was not restricted to particular subjects. Although the associations were somewhat stronger in English, humanities, and social sciences classes, they were also evident in math and science classes.

Chapter VII: Discussion and Conclusions

To discuss the results of this mixed methods study, we look back to Figure 1, which displayed the working conceptual model that organized the empirical analyses. In doing so, we comment upon the extent to which the results in Chapter IV are consistent with the original hypotheses, what we learned through the exploratory analyses of the qualitative data in Chapter V and the quantitative data in Chapter VI, and suggestions to the field for next steps based on the results. This discussion provides a roadmap for future research by scholars interested in how beauty affects development.

Discussion of Results Based on Conceptual Model

To begin, most of our original hypotheses were supported, with some nuances related to the different mechanisms proposed, including the three types of attractiveness effects (fairest of them all, standing out, and stigma) as well as the offsetting pathways through social assets and social distractions. Specifically, we found evidence for Path A in Figure 1 (and related Hypothesis A) that more attractive youth would have higher social achievement, but this effect was evident mostly for the standing out contrast (of being attractive versus average in looks) and the stigma contrast (of being unattractive versus average in looks). We did not find evidence that very attractive high schoolers achieved more socially than attractive youth (again we emphasize, though, the smaller sample sizes of the extreme categories). These findings are important additions to the literature, since there have been relatively few studies of physical attractiveness effects in adolescence, especially with others' ratings, and none have been framed in terms of the diffuse status and stigma mechanisms. We were able to test these hypotheses due to the large sample size in the National Longitudinal Study of Adolescent Health (Add Health) and because

of our strategy of contrasting youth rated in different categories of attractiveness (rather than testing only for a simple linear effect).

Regarding Exploratory Question A, examined with the qualitative data from Lamar, youth reported that visible characteristics like attractiveness, as opposed to averageness, gave students greater entrée and assuredness in initial interactions and greater forgiveness for foibles and missteps in later interactions, something particularly valuable in the large impersonal world of high school. In this context, average-looking youth had relatively few chances for standing out or opportunities to gain status in a competitive playing field.

The second set of findings involved Path B in Figure 1 (and the related Hypotheses B1 and B2). Largely replicating prior studies, we found evidence in support of the hypothesis that some aspects of social achievement would relate positively to grades (friendship nominations, teacher caring, success getting along, sports participation, and lack of depression) and that others would relate negatively to grades (sexual and romantic partners, drinking problems). Adding to the prior literature, much of it qualitative, we found that participation in cheerleading and dance teams were not associated with GPA. Although the association was not significantly negative, the lack of benefit for grades based on participation in cheerleading and dance distinguished these activities from other extracurricular activities (like sports), which have been consistently positively associated with GPA (e.g., Barber et al., 2001).

Putting together the findings related to Hypotheses A and B1, we indeed found new evidence of offsetting indirect pathways from attractiveness to grades through social achievement, especially for the stigma effect. That is, youth who were rated average rather than unattractive in looks benefited in terms of grades from social assets (especially more friendships and better mental health) but also suffered in terms of grades from social distractions (especially sexual partners and drinking problems). These two indirect pathways fully offset one another

such that there was no significant overall stigma effect on grades. In contrast, the indirect standing out effect from being attractive (versus average) in looks to grades through social achievement was primarily positive, reflecting numerous social assets (friends, teacher caring, success getting along, sports participation, and mental health). There was also a significant direct effect of standing out on grades of nearly equivalent size as the indirect effect; this result suggests that there are additional positive pathways from being attractive versus average in looks to grades that we were unable to measure in Add Health.

Together these findings indicate that Hypothesis B2—social assets would outweigh social distractions—held only for the standing out effect and not the stigma effect. We should emphasize, however, that even though grades are the ultimate high school outcome in our models, the intermediary position of the social outcomes should not diminish their importance. The particularly high depression levels of unattractive youth are cause for concern, in line with recent reviews of in-depth but smaller-scale studies of peer victimization (Hawker & Boulton, 2000; Gini & Pozzoli, 2009). Interviewers rarely rated youth unattractive or very unattractive, and they were the smallest group in Add Health. Future in-depth study of this group is warranted.

Students at Lamar high school were actively involved in these processes and articulated the offsetting mechanisms, at least at some level. In particular, the Lamar students spoke especially about the negative aspects of popularity that often go along with physical attractiveness. They noted that investing in activities that maintain this kind of popularity, like parties and dating, often conflicted with investing in activities that raise grades. Some students also perceived high academic investment as inconsistent with high positional popularity. The end result of investing in positional popularity was a chipping away at the aforementioned academic advantages of the good looking.

The conceptualization and testing of these offsetting pathways is a major contribution of this study, one that has not been examined by prior research. The evidence suggests that the mixed findings in prior studies of beauty and grades in adolescence may be due, in part, to their failure to separate these two broad mechanisms. We discuss below how future research might build on this study to elaborate these mechanisms, beyond the data we had available in Add Health and Lamar.

In contrast to the findings for Paths A and B, we found little evidence for Path C in Figure 1 and related Hypothesis C. That is, most of the variation in attractiveness, social achievement, and grades was within rather than between schools, and little evidence suggested that the association between attractiveness and social or academic outcomes varied across schools. Indeed, models estimated within schools of different types confirmed that the role of attractiveness was similar across the many different types of schools present in the representative Add Health study. Although unexpected, this finding is important and, in hindsight, this result is consistent with the pervasive beauty bias that has been widely documented in the social psychological literature. As discussed below, further study of this robust association is an important direction for future research.

Path D, and related Hypothesis D, anticipated that there would be numerous shared predictors of attractiveness and achievement, some of which may be difficult to measure. To go beyond the measured controls included in the structural equation models, we took advantage of the siblings in the Add Health data. Techniques from behavioral genetics and non-experimental econometric evaluations revealed support for the possibility that looks produced greater academic achievement in high school and more human capital accumulation in young adulthood, even beyond the genes and environments that siblings share. That is, attractiveness and achievement were most highly correlated for monozygotic twins, as expected. Yet, for (non-

twin) full siblings, where these correlations were smaller, the more attractive sibling had higher achievement than the less attractive sibling, especially for grades and self-perceptions of social standing. These results strengthen our conclusion that the associations in the structural equation models are not simply spurious effects and raise the importance of the directions for future study that we discuss below. In other words, given this evidence that some advantages of physical attractiveness may reflect real effects, scholars who take a developmental approach need to renew their focus on this topic so that their results can inform programs and policies to mitigate them.

Finally, regarding Path E (and Hypotheses E1, E2, and E3), we generally found evidence for both indirect and direct effects of attractiveness in young adulthood, although these results were again nuanced across the fairest of them all, standing out, and stigma mechanisms and reflected both the advantages and constraints for human capital attainment that go along with the social opportunities available to the better looking. Specifically, the standing out advantages seen in adolescence carried into young adult social capital accumulation. Young adults who were attractive rather than average in looks were more extraverted and optimistic, less depressed, had more friends, and were more likely to be married, primarily due to continued effects of similar advantages in terms of interpersonal ties, social activities, psychosocial resources, and grades in high school. Stigma effects also continued into young adulthood across social outcomes, which largely reflected the social isolation (fewer friends, less sports participation, less partying) and poorer mental health of youth who had been rated unattractive rather than average in looks. Unlike in adolescence, we also saw a significant fairest of them all effect at the highest end of the attractiveness continuum in young adulthood. That is, the very attractive were more extraverted, less depressed, and had more friends in young adulthood than the attractive in looks, and all were direct effects in young adulthood, rather than carryovers from high school. These

outcomes are the kinds of advantages predicted by diffuse status theory and suggest that very good looks may help youth socially as they move out into the world during the transition to adulthood. How attractiveness relates to social outcomes in young adulthood is especially understudied and ripe for future studies by developmental scientists.

Regarding young adult human capital accumulation, some of the social advantages of the better looking supported human capital attainment (close friends, marital status, better mental health, college attainment), and others worked against it (having more sexual partners and bearing children), consistent with Hypothesis E3 and the high school results. Some pathways from high school also continued into young adulthood, leading to greater human capital attainment for the better looking in a pattern consistent with Hypothesis E2. This indirect pathway was especially strong for the standing out advantage associated with a higher likelihood of a college degree, earnings, and self-perceived SES. Thus, the advantage of the attractive over the average in looks in terms of high school social connections and activities and higher GPA carries forward into their being more likely to attain the important bachelor's degree and gain entrée into advantaged positions in the world of work. We had expected that the total effect, and any direct effects, would be positive, given prior research on the earnings advantage of the better looking and the widespread beauty bias (Hypothesis E1). We found evidence for this hypothesis mostly for the fairest of them all and standing out effects on self-perceived SES, as well as the standing out effect on college attainment; there was less consistent evidence for direct effects of beauty on earnings at this life stage (late 20s and early 30s).

The qualitative data were not only used to unpack the quantitative results. These data also pointed, in some cases, to new ways to analyze the quantitative data. These emergent ideas included factors that influenced perceptions of attractiveness among adolescents (e.g., the media, aspects of grooming and appearance), possible more nuanced processes underlying the path from

attractiveness to social achievements in the model (sorting, halo effects), possible ways through which the offsetting paths from social to academic achievement operated (support, time allocation, academic disincentives), additional moderators of the various pieces of the model (school characteristics related to competitiveness, academic subjects in which grading occurred). Although not all of these emergent ideas could be tested in Add Health, some could. Specifically, we found that good looks typically came packaged together with good grooming and an outgoing personality, consistent with the comments of students at Lamar. Indeed, 94% of Add Health students were rated similarly across looks, grooming, and personality by interviewers; just 6% were rated differently on one or two aspects of attractiveness. Also consistent with the comments of students at Lamar, body size was tied to attractiveness, with overweight youth less likely to be rated as attractive or very attractive in looks, grooming, and personality and more likely to be rated as average or unattractive across these dimensions. As discussed below, future researchers should design and analyze studies with the co-occurrence of these attributes of attractiveness in mind. Based on the comments of students at Lamar, we also tested whether the associations between attractiveness and grades might be stronger for courses viewed as having more subjective grading. We found little evidence for this possibility. Instead, the advantage of better looks for better grades was evident in math and science as well as English, humanities, and social studies. Additionally, as discussed above, beauty effects did not appear to vary across schools.

We also reiterate that we focused the monograph on full sample models, rather than moderation by gender and/or race-ethnicity, because of the lack of interactions found in preliminary models. As we discussed in the introduction, although we began this project anticipating that beauty effects might operate differently for boys and for girls and for youth of various race-ethnicities, the finding of lack of moderation is consistent with prior social psychological experiments and economic studies of beauty bias (Langlois et al., 2000;

Hamermesh, 2011). In our roadmap for future research, presented next, we do recommend that future studies continue to test for such variation. For example, the beauty literature suggests that the greatest cross-gender and cross-cultural consistency in beauty effects are for facial attractiveness. Add Health did not ask interviewers to focus on facial or full-body attractiveness, and future studies that better separate these aspects of looks may find greater evidence for moderation (especially for full-body attractiveness). Such future studies might also delve deeper into the ways in which youth compensate for less-than-attractive physical features, for example with grooming and personality. Indeed the popularity of make-over shows and the messages they send to teenage girls would be a fertile avenue for future study (Deery, 2004; Moseley, 2000).

A Roadmap for Future Research

We now turn to a roadmap for future research, highlighting directions for new developmental studies based on the findings from this mixed methods project. To start, we encourage researchers to go beyond our examination of one moderating context (school) to consider how other broader contextual factors (including state and local laws, state and local court cases, and local and national media messages) may interact with attractiveness in its associations with social and academic achievement in high school and with social and human capital accumulation in young adulthood. Indeed, the importance of the media was raised by Lamar students, but we could not examine this moderator in Add Health. Of particular interest would be studies that ask students, parents, and teachers about how they filter media messages: To what extent are they aware of them, and do they actively feed into them or steer away from them? Future school-level analyses might be more revealing if they examine similar questions for students' networks of friends; studying coursemates (in shared classes), and teammates (on extracurricular activities) might be particularly informative.

Another fertile area for future research would be studies of children, families, teachers, schools, and workplaces that are located in settings in which high-profile court cases or changing local laws highlight the importance of lookism. Studies of these areas would be particularly informative when including matched comparison settings that are similar but do not have such local cases and laws. Additionally, although we generally did not find that the associations of looks with grades and social achievement varied across schools, interventions to reduce the pervasive influence of attractiveness might reveal the potential for school-level variation. If successful, such interventions would be especially informative for future programs and policies to break the connection between attractiveness and high school outcomes and thereby thwart the indirect pathway from looks to human capital accumulation in the transition to adulthood.

We also encourage researchers to design their studies to measure and analyze multiple aspects of attractiveness together. As noted above, scholars who take a developmental approach in observational studies may need to consider creative new methodological approaches, building on prior experimental studies and more systematic ratings of multiple features, in order to attempt to empirically separate these different aspects of attractiveness. Doing so might include using modern computing technology to manipulate photographs of students' appearance to make them appear of heavier or lighter weight and of better or poorer grooming, regardless of their overall facial attractiveness. Following the lead of some earlier studies, having multiple observers rate all photos (blind to other student characteristics) would improve on the strategy used in Add Health of having interviewers rate looks of study participants. Personality might likewise be manipulated either by priming viewers with a vignette description of a person's personality paired with a photo and/or by asking study participants to act out different scenes depicting various personalities in videos that are then rated by viewers. Again, multiple ratings of all photos/videos by the same set of raters would strengthen the psychometric properties of these

measures. Doing so is important, potentially demonstrating for example the ways in which behavioral changes may not only have health benefits (weight loss, better hygiene) but social benefits as well.

We also encourage future research to expand upon our attempts to test for selection factors, thinking about how students may select into categories of configurations of attractiveness across multiple domains (face, physique, grooming and personality) based on characteristics that also predict their academic and social achievement. Indeed, as we noted above, the extent to which grooming, personality, and looks co-occur that we documented suggests that researchers need to consider conceptually and empirically the extent to which something self-selective is going on when they do not go together. For example, why might a youth who has attractive facial features or an appealing physique be poorly groomed and unpleasant in personality? We speculate, for example, that lack of grooming, especially in the presence of good looks, might reflect (potentially unmeasured) aspects of SES or self-esteem. Or, an unpleasant personality might reflect vanity, a mental health issue, or lack of social capital, especially in the presence of good looks. Future studies might examine whether such associations hold, although oversampling of groups in which these aspects of attractiveness do not co-occur would be needed in order to achieve sufficient sample sizes in the various categories.

Also noteworthy is that this study documented for the first time evidence of the broad mechanisms we outline (fairest of them all, standing out and stigma) as well as the offsetting pathways we predicted through social assets and distractions. We were limited, however, by secondary data sources in our ability to pursue more specific ways in which these mechanisms and pathways unfold. Pursuing such mechanisms is an especially important avenue for future research. Here we offer six specific suggestions for future research based on our reading of the literature and our experience with the Add Health and Lamar data.

One approach future research might take would be to use qualitative data to explore what good looks mean to adolescents and the extent to which adolescents actively use grooming and personality to offset average or unattractive looks. These qualitative studies might also examine whether some parents are more strategic than others in helping youth do this, perhaps when they themselves have used grooming and personality to offset unattractive or "plain" looks. The results of these qualitative studies might then be used to define new concepts and measures for quantitative studies. A second, related strand of future research might build on Harter's (2000) work to better understand how physical attractiveness is wrapped up with identity development in adolescence across multiples aspects of attractiveness (face, physique, grooming, and personality). A third approach, also getting at dimensionality of looks, would be to extend sociometric studies to capture how students view others/friends on multiple aspects of attractiveness, including grooming, personality, and looks. A fourth component of such future studies might be extending social psychological experiments, which have generally focused on elementary school, to study how teachers grade in high school when primed that a student has a particular level of attractiveness. A fifth important direction for future qualitative and quantitative research would be to focus on the transition to high school, a period of numerous "first impressions" which Lamar students described as crucial events in which attractiveness has its effects. By following students at frequent intervals over this transition period, such studies could evaluate the extent to which initial impressions persist or are overcome as well as how various aspects of attractiveness feature into new friendship formations.

Finally, future studies of young adulthood might also move beyond studies of how looks associate with earnings and opposite-sex relationships to design surveys that can examine the many varied ways that looks affect social interactions, especially during the transition to

adulthood. Again, intensive study of first impressions (e.g., freshmen in college; new hires in workplaces) would be particularly informative.

Developmental and Life Course Considerations

As discussed in the opening chapter, much of the research on the stratifying role of attractiveness focuses on childhood or adulthood. We have argued that adolescence (and particularly high school) is a critical period in this process, and we have called for more attention to longitudinal work linking multiple periods. Here, we have presented the first ever national study of attractiveness across adolescence and into adulthood. In looking at adolescence, therefore, we focused on future trajectories based on what happens during the high school years. Yet, an important part of the developmental approach should be to link these periods back to childhood. Doing so would yield insights into the cumulative nature of the stratifying role of attractiveness and what experiences provide turning points that counter this accumulation.

Our project team plans to continue building the developmental literature on beauty, and encourages other researchers to do so as well. Scholars interested in development have less often tackled questions about physical attractiveness than have social psychologists and economists, leaving the beauty literature largely void of empirical results and theoretical models of the ways in which looks affect outcomes across the life span. This monograph begins to fill this gap by homing in on adolescence and young adulthood and positing ways in which better looking teenagers' social advantages may sometimes support and sometimes detract from the building blocks of socioeconomic attainment. Much more developmental work is needed, however. For example, we recently proposed a project to attach codes for beauty to the Study of Early Child Care and Youth Development (SECCYD). The SECCYD followed a birth cohort of children into their early 20s, and it includes videotapes of children taken annually or biennially from infancy to adolescence. This project would create the largest ever public repository of physical

attractiveness ratings for a birth cohort over time. When merged with the already rich multi-method developmental, biological, and ecological data in the SECCYD, we will be able to unpack the origins of the effects seen here in adolescence and young adulthood, describing how physical attractiveness evolves over time (e.g., ugly ducklings turning into beautiful swans and vice versa), tracking beauty's potentially cumulative or counterbalancing effects on youth as they move through the pre-school, elementary, and secondary school systems, and examining how these trajectories serve as the foundation for long-term status attainment as study participants enter young adulthood.

Strengths, Limitations, and Theoretical Implications

Overall, the empirical findings of this study suggest that scholars who take a developmental approach should pay more attention to how physical attractiveness stratifies high schools and determines trajectories into adulthood. The results clarify the prior scientific literature on adolescents, which has been inconsistent or difficult to interpret due to issues of measurement (self versus other reports of attractiveness; focus on linear associations), sampling (small and/or non-representative samples), and modeling (failure to consider together social and academic achievement). Pairing a large nationally-representative study that uses others' reports of attractiveness with a small in-depth study that elicited youths' self-reflections increased generalizability without losing the rich insights of a qualitative approach.

Still, as a preliminary examination of attractiveness and high school achievement on the national level, this study can be built on in the future. Analyses of Add Health have substantial power to identify even small effects, and, indeed, the sizes of the associations of social and academic achievement with attractiveness were small to moderate. Yet, the sizes of effects were comparable to demographic variables like income and family structure. For example, attractive youths' GPAs averaged about .08 standard deviations higher than youth with average looks; in

comparison, youth who lived with two biological parents had GPAs one-tenth of a standard deviation higher than youth living with one biological parent. Moreover, even small differences, such as in GPA, can affect honors, distinctions, and college entry and, given the cumulative nature of education, can widen from year to year (Crosnoe, Frank, & Muller, 2006; Miller, 1998). Like other areas of development, the study of beauty lends itself to conceptualizing cascading effects, that will snowball and widen over time within and across domains (Masten & Cicchetti, 2010). In our case, we found indirect effects from high school social achievement through high school grades into young adult social capital and human capital.

Another limitation of this study is that we cannot infer causality, even with the sibling analyses we conducted. Particular challenges to causal inference are the relatively small variation in attractiveness and grades within families and the fact that the raters of physical attractiveness were interviewers who had heard the youth report about their activities and behaviors. In addition, although adolescence is an important life stage at which physical attractiveness may be especially salient, the process by which beauty affects academic performance likely begins in the earliest interactions with teachers. Longitudinal studies that follow youth from school entry into adolescence and beyond, and that have ratings by observers who are blind to other characteristics of the youth and are trained for rating specific aspects attractiveness, would strengthen the evidence for the possible causality of these processes. This is the type of study we proposed above based on the SECCYD, and scholars who take a developmental approach are particularly well positioned to conduct similar longitudinal studies.

Our study is also limited given that Add Health sampled adolescents in the mid-1990s, nearly twenty years ago. Although this timing is advantageous, in that we were able to follow the youth into adulthood, we cannot say for sure whether the results would apply to today's adolescents. In general, the mechanisms that we outline are based on established constructs --

status characteristics theory, stigma perspectives, and the social structure of high schools -- which we would expect to continue to hold today. It is also reassuring that the students at Lamar echoed in 2006 the themes that we identified in Add Health's sample of high schoolers in the mid-1990s. Our planned study of the SECCYD would also allow important quantitative replication of our findings in a more recent cohort, so that we can verify that they in fact do hold in a recent multi-site sample. We also hope this monograph will encourage new studies on this topic by other developmental scholars.

With these limitations in mind, we argue that this study makes several significant contributions to social theory and research. First, in relation to status characteristics theory and its offshoots, this study confirms the value of viewing physical attractiveness as a diffuse status characteristic and, more generally, demonstrates how even highly valued status characteristics like physical attractiveness can bring about both positive and negative consequences depending on the domain of effects being considered. Our mixed-methods approach consistently identifies both social and academic advantages for good-looking adolescents in high school. Although each avenue of achievement may be valued by teenagers during high school, some types of social attainment may interfere with grades and therefore be consequential for later decision points along the long-term socioeconomic attainment process. Furthermore, whereas some may only invest so heavily in their social identities during this life stage of intense social consciousness, others may establish a pattern of doing so, consistent with the broader sociological and psychological literatures reviewed above (e.g., attractive adults are perceived to be vain; attractive undergraduates are more engaged in the social scene). At the same time, an attractive appearance is a clear and visible marker of halo effects during high school, and positive stereotypes about attractive people's skills may continue to compensate for time spent socializing into adulthood.

Second, in relation to the opposite pole of the physical attractiveness continuum, this study demonstrates how the high school—a formal organization dedicated to instruction and skill development—can be a site of social stigmatization. Unattractive teenagers suffer from social isolation, low self-esteem, and depression. Even if they benefit academically from avoiding social distractions, the potentially long-lasting implications of their loneliness and reduced social experiences deserve attention. Viewing high schools as sites of stigmatization can reveal how the impact of schools on the life course extends far beyond their official missions. Moreover, we argue that linking status characteristics theory and concepts of social stigma demonstrates how status and stigma are not simply two sides of the same coin (e.g., status as the absence of stigma or vice versa) but instead two qualitatively different processes. In the case of physical attractiveness and grades in high school, the data suggest that status is more important. Yet, both status and stigma operate for high school social achievement.

Third, in line with recent arguments by Crosnoe (2011) that educational interventions should expand past demographic risk factors to include social status risk factors (e.g., obesity), the findings of this study suggest that documentation of educational disparities in public schools could conceivably expand to include markers of physical appearance. Moreover, as we note above, school interventions designed to promote acceptance, tolerance, and inclusion could also be similarly expanded, and could be informative in understanding school effects and causality. Crosnoe's (2011) argument that educational stratification occurs along many dimensions beyond race, class, and gender aligns well with our findings.

Fourth, in relation to the conventional status attainment model, this study suggests the importance of incorporating physical attractiveness into the set of important non-cognitive traits that guide attainment and identifies an early life course corollary to the well-documented pattern of lookism effects in the labor market. Prior research on attractiveness and adult earnings has

been dominated by economists and organizational psychologists and focused on contemporaneous associations. We extend our analyses from high school into young adulthood and find some similar processes operating in both time periods (the unattractive report fewer sexual partners in both developmental periods) and some evidence of mechanisms begun in high school carrying forward into young adulthood (the indirect pathway from the advantages of standing out through looks in high school to college completion). Going back to the legal arguments of Rhode (2010) that employment protections and discrimination laws should incorporate lookism, our findings suggest that such laws would not alleviate labor market disparities by physical attractiveness; that is, because looks is a key mechanism in human capital attainment—including through educational achievement in childhood, adolescence, and young adulthood—appearance would continue to fuel such disparities even if no such discrimination in the labor market existed.

Overall, our results have important policy relevance by suggesting that the labor market advantages of physical attractiveness have their roots in adolescence. Importantly, we also find that at the earlier (high school) life stage, this GPA advantage is whittled away by the social distractions of attractive youth, including dating, sex, and drinking. These offsetting pathways operate in high school and extend into young adulthood. In short, physical attractiveness is an important stratifying factor in social life, and the literature would benefit from more attention devoted to it by developmental scientists.

References

Adamitis, E. M. (2000). Appearance matters: A proposal to prohibit appearance discrimination in employment. *Washington Law Review,75*, 195-223.

Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy White women. *Health Psychology, 19,* 586-592.

Adler, P. A., Kless, S. J., & Adler, P. (1992). Socialization to gender roles: Popularity among elementary school boys and girls. *Sociology of Education, 65*, 169-187.

Ahituv, A. & Lerman, R.I. (2007). How do marital status, work effort, and wage rates interact? *Demography, 44(3),* 623-647.

Allen, J. P., Porter, M. R., McFarland, C. F., Marsh, P., & McElhaney, K. B. (2005). The two faces of adolescents' success with peers: Adolescent popularity, social adaptation, and deviant behavior. *Child Development,76*, 747-760.

Allison, P.D. (2005). *Fixed effects regression methods for longitudinal data using SAS.* Cary, NC: SAS Institute.

Angrist, J. D. & Pischke, J. (2009). *Mostly harmless econometrics.* Princeton, NJ: Princeton University Press.

Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16*, 429-455.

Bardasi, E. & Taylor, M. (2008). Marriage and wages: A test of the specialization hypothesis. *Economics, 75,* 569-591.

Becker, B. E., & Luthar, S. S. (2007). Peer-perceived admiration and social preference: Contextual correlates of positive peer regard among suburban and urban adolescents. *Journal of Research on Adolescence,17*, 117-144.

Berger, J., & Fişek, M. H. (2006). Diffuse status characteristics and the spread of status value: A formal theory. *American Journal of Sociology, 111*, 1038-1079.

Bettis, P. J., & Adams, N. G. (2003).The power of the preps and a cheerleading equity policy. *Sociology of Education, 76*, 128-142.

Biddle, J. E., & Hamermesh, D. S. (1998). Beauty, productivity, and discrimination: Lawyer's looks and lucre. *Journal of Labor Economics, 16*, 172-201.

Bogin, B. & Varela-Silva, M. I. (2010). Leg length, body proportion, and health: A review with a note on beauty. *International Journal of Environmental Research and Public Health, 7*, 1047-1075.

Braithwaite, S. R., Delevi, R., & Fincham, F. D. (2010). Romantic relationships and the physical and mental health of college students. *Personal Relationships, 17*, 1-12.

Budig, M.J. & Hodges, M.J. (2010). Differences in disadvantage: Variation in the motherhood penalty across White women's earnings distribution. *American Sociological Review, 75*, 705-728.

Call, K. T. & Mortimer, J. T. (2001). *Arenas of comfort in adolescence: A study of adjustment in context*. Mahwah, NJ: Erlbaum.

Campbell, M. E. & Eggerling-Boeck, J. (2006). "What about the children?" The psychological and social well-being of multiracial adolescents. *Sociological Quarterly, 47*, 147-173.

Carolina Population Center. (2009). *Design Slide Show.* Retrieved from http://www.cpc.unc.edu/projects/addhealth/design/slideshow.

Catalano, R. F., Haggerty, K. P., Osterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health,74*, 252-261.

Cavanagh, S. E. (2004). The sexual debut of girls in early adolescence: The intersection of race, pubertal timing, and friendship group characteristics. *Journal of Research on Adolescence, 14*, 285-312.

Cohen, P. N. (2002). Cohabitation and the declining marriage premium for men. *Work and Occupations, 29*, 346-363.

Closson, L. M. (2009). Status and gender differences in early adolescents' descriptions of popularity. *Social Development, 18*, 412-426.

Coleman, J. (1988). Social capital and the creation of human capital. *American Journal of Sociology*, *94*, 95-120.

Coleman, J. S. (1961). *The adolescent society*. New York, NY: Free Press of Glencoe.

Collins, L. M., Schafer, J. L., & Kam, C. (2001). A comparison of inclusive and restrictive strategies in modern missing data procedures. *Psychological Methods, 6*, 330-351.

Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review, 108*, 593-623.

Crosnoe, R. (2002). Academic and health-related trajectories in adolescence: The intersection of gender and athletics. *Journal of Health and Social Behavior,43*, 317-335.

Crosnoe, R. (2011). *Fitting in, standing out: Navigating the social challenges of high school to get an education*. New York, NY: Cambridge University Press.

Crosnoe, R. & Johnson, M. K. (2011).Research on adolescence in the 21st century. *Annual Review of Sociology.*

Crosnoe, R. & Muller, C. (2004). Body mass index, academic achievement, and school context: examining the educational experiences of adolescents at risk of obesity. *Journal of Health and Social Behavior,45*, 393-407.

Crosnoe, R., & Riegle-Crumb, C. (2007). A life course model of education and alcohol use. *Journal of Health and Social Behavior, 48*, 267-282.

Crosnoe, R., Frank, K., & Muller, C. (2006). Peer context and the consequences of adolescent drinking. *Social Problems, 51*, 288-304.

Crosnoe, R., Johnson, M. K. & Elder, G. H., Jr., (2004). Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships. *Sociology of Education,77*, 60-81.

Crosnoe, R., Riegle-Crumb, C., & Muller, C. (2007).Gender, self-perception, and the experience of learning disability and failure. *Social Problems,54*, 113-133.

Csikszentmihalyi, M. & Schneider, B. (2000).*Becoming adult: How teenagers prepare for the world of work*. New York: Basic Books.

Cunningham, M.R., Roberts, A.R., Barbee, A.P. Druen, P.B., & Cheng-Huan, W. (1995). "Their ideals of beauty are, on the whole, the same as ours": Consistency and variability in the

cross-cultural perception of female physical attractiveness. *Journal of Personality and Social Psychology, 68,* 261-279.

Davies, P. T., & Windle, M. (2000).Middle adolescents' dating pathways and psychosocial adjustment. *Merrill-Palmer Quarterly*, *46*, 90-118.

Davis, C., Claridge, G., & Fox, J. (2000). Not just a pretty face: Physical attractiveness and perfectionism in the risk for eating disorders. *International Journal of Eating Disorders, 27*, 67-73.

Deery, J. (2004). Trading faces: The makeover show as prime-time "infomercial" *Feminist Media Studies, 4(2)*, 211-214.

Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology,24*, 285-290.

Diprete, T. A., & Buchmann, C. (2006).Gender specific trends in the value of education and the emerging gender gap in college completion. *Demography, 43*, 1-24.

Dornbusch, S. M. (1989). The sociology of adolescence. *Annual Review of Sociology, 15*, 233 - 259.

Duncan, G. J., Huston, A. C., & Weisner, T. S. (2007). *Higher ground: New hope for the working poor and their children*. New York, NY: Russell Sage.

Duncan, G. J., Magnuson, K. A., & Ludwig, J. (2004). The endogeneity problem in developmental studies. *Research in Human Development, 1*, 59-80.

DuMouchel, W. H., & Duncan, G. J. (1983). Using sample survey weights in multiple regression analyses of stratified samples. *Journal of the American Statistical Association, 78*, 535-543.

Eagly, A. H., Ashmore, R. D., Makhijani, M. G., & Longo, L. C. (1991). What is beautiful is good, but…: A meta-analytic review of research on the physical attractiveness stereotype. *Psychological Bulletin, 110*, 109-128.

Eccles, J. S., Midgely, C., Wigfield, A., Buchanan, C. M., Reuman,D., & MacIver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, *48*,90-101.

Eckert, P. (1989). *Jocks and burnouts: Social identity in the high school*. New York: Teachers College Press.

Eder, D. (1985). The cycle of popularity: Interpersonal relations among female adolescents. *Sociology of Education,58*, 154-165.

Eder, D., & Kinney, D. A. (1995).The effect of middle school extracurricular activities on adolescents' popularity and peer status. *Youth and Society*, *26*, 298-324.

Eder, D., & Parker, S. (1987). The cultural production and reproduction of gender: The effect of extracurricular activities on peer-group culture. *Sociology of Education,60*, 200-213.

Eichom, D. H., Clausen, J. A., Haan, N., Honzik, M. P., & Mussen, P. H. (Eds.). (1981). *Present and past in middle life.* New York: Academic Press.

Elder, G. H., Jr. (1998). The life course as developmental theory. *Child Development, 69*, 1-12.

Employment Law Alliance. (2005). *National poll shows public opinion sharply divided on regulating appearance—from weight to tattoos – in the workplace*. Employment Law Alliance.Retrieved fromhttp://www.employmentlawalliance.com/node/1321

Entwisle, D. R., Alexander, K. L., & Olson, L. S. (2005). First grade and educational attainment by age 22: A new story. *American Journal of Sociology,110*, 1458-1502.

Erikson, E. (1968). *Identity: Youth and crisis*. New York: Norton.

Evans, C., & Eder, D. (1993). 'No exit': Processes of social isolation in the middle school. *Journal of Contemporary Ethnography, 22*, 139-170.

Ewell, F., Smith, S., Karmel, M. P., & Hart, D. (1996). The sense of self and its development: A framework for understanding eating disorders. In L. Smolak, M.P. Levine, & R. Striegel-Moor (Eds.) *The developmental psychopathology of eating disorders: Implications for research, prevention, and treatment* (pp 107-133). Mahwah, NJ: Erlbaum.

Eyre, S. L., & Millstein, S. G. (1999). What leads to sex? Adolescent preferred partners and reasons for sex. *Journal of Research on Adolescence,9*, 277-307.

Feldman, A. F., & Matjasko, J. L. (2005). The role of school-based extracurricular activities in adolescent development: A comprehensive review and future directions. *Review of Educational Research,75,* 159-210.

Felson, R. B. (1980). Physical attractiveness, grades and teachers' attributions of ability. *Representative Research in Social Psychology,11*, 64-71.

Fischer, C. S., & Hout, M. (2006).*Century of difference: How America changed in the last one hundred years*. New York, NY: Russell Sage.

Fletcher, J. M. (2009). Beauty vs. brains: Early labor market outcomes of high school graduates. *Economics Letters, 105*, 321-325.

Fletcher, J. M. (2010). Adolescent depression and educational attainment: Results from sibling fixed effects. *Health Economics, 19*, 855-871.

Frank, K. A., Muller, C., Schiller, K., Riegle-Crumb, C., Mueller, A. S., Crosnoe, R., & Pearson, J. (2008).The social dynamics of mathematics coursetaking in high school. *American Journal of Sociology, 113*, 1645-1696.

Fredericks, J. A., & Eccles, J. S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology, 42,* 698-713.

García Coll, C., & Marks, A. (2009).*Immigrant stories: Ethnicity and academics in middle childhood.* New York, NY: Oxford University Press.

Ge, X., Elder, G. H. Jr., Regnerus, M., & Cox, C. (2001). Pubertal transitions, perceptions of being overweight, and adolescents' psychological maladjustment: Gender and ethnic differences. *Social Psychology Quarterly, 64*, 363-375.

Gini, G. & Pozzoli, T. (2009). Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics, 123*, 1059-1065.

Giordano, P. C. (2003). Relationships in adolescence. *Annual Review of Sociology, 29*, 257-281.

Giordano, P. C., Longmore, M. A., & Manning, W. D. (2006). Gender and the meanings of adolescent romantic relationships: A focus on boys. *American Sociological Review, 71*, 260-287.

Glueck, S. & Glueck, E. T. (1963). *Crime causation study: Unraveling juvenile delinquency.* Cambridge, MA: Henry A. Murray Research Center, Radcliffe College.

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.

Goldin, C., & Katz, L. F. (2008).*The race between technology and education*. Cambridge, MA: Harvard University Press.

Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B,, & Colditz, G. A. (2001). Adolescents' perceptions of social status: Development and evaluation of a new indicator. *Pediatrics, 108*, e31.

Goodman, E., Huang, B., Schafer-Kalkhoff, T., & Adler, N. E. (2007). Perceived socioeconomic status: A new type of identity that influences adolescents' self-rated health. *Journal of Adolescent Health, 41*, 479-487.

Griffin, A. M. & Langlois, J. H. (2006). Stereotype directionality and attractiveness stereotyping: Is beauty good or is ugly bad? *Social Cognition, 24*, 187-206.

Grogan, S. (2008). *Body image: Understanding body dissatisfaction in men, women, and children*. New York: Routledge.

Grogger, J. & Bronars, S. (1993). The socioeconomic consequences of teenage childbearing: Findings from a natural experiment. *Family Planning Perspectives, 25*, 156-161.

Hamermesh, D. S. (2011). *Beauty pays: Why attractive people are more successful*. Princeton, NJ: Princeton University Press.

Hamermesh, D. S., & Biddle, J.E. (1994). Beauty and the labor market. *American Economic Review, 84,* 1174-1194.

Hamermesh, D. S., & Parker, A. M. (2005). Beauty in the classroom: Instructors' pulchritude and putative pedagogical productivity. *Economics of Education Review,24*, 369-376.

Hamermesh, D. S., Meng, X., & Zhang, J. (2002). Dress for success: Does primping pay? *Labour Economics, 9*, 361-373.

Han, E., Norton, E. C., & Stearns, S. C. (2009). Weight and wages: Fat versus lean paychecks *Health Economics*, *18*, 535-548.

Harris, D.R. & Sim, J.J. (2002). Who is multiracial? Assessing the complexity of lived race. *American Sociological Review, 67*, 614-627.

Harris, K. M., Halpern, C. T., Whitsel, E., Hussey, J., Tabor, J., Entzel, P., & Udry, J. R. (2009). *The National Longitudinal Study of Adolescent Health: Research Design.* University of North Carolina, Carolina Population Center. Retrieved from

Harper, B. (2000). Beauty, stature, and the labour market: A British cohort study. *Oxford Bulletin of Economics and Statistics, 62*, 771-800.

Harter, S. (2000). Is self-esteem only skin-deep? The inextricable link between physical appearance and self-esteem. *Reclaiming Children and Youth, 9*, 133-138.

Harter, S. (1983). *Supplementary description of the Self-Perception Profile for Children: Revision of the Perceived Competence Scale for Children.* Denver, CO: University of Denver.

Hawker, D. S. J. & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*, 441-455.

Heckman, J., Lochner, L., & Todd, P. (2007). Earnings functions, rates of return and treatment effects: The Mincer equation and beyond. In E. Hanushek& F. Welch (Eds.), *Handbook of the economics of education*. Amsterdam, the Netherlands: Elsevier Science, North Holland.

Herman, M. R. (2009). The Black-White-other achievement gap: Testing theories of academic performance among multiracial and monoracial adolescents. *Sociology of Education, 82*, 20-46.

Herman, M. R. (2010). Do you see who I am? How observers' backgrounds affect their perceptions of multiracial faces. *Social Psychology Quarterly*, *73*, 58-78.

Hosoda, M., Stone-Romero, E. F., & Coats, G. (2003). The effects of physical attractiveness on job-related outcomes: A meta-analysis of experimental studies. *Personnel Psychology,1*, 431-462.

Hough, L. M. & Oswald, F. L. (2000). Personnel selection: Looking toward the future-Remembering the past. *Annual Review of Psychology, 51*, 631-664.

Jackson, M. O. (2009). Networks and economic behavior. *Annual Review of Economics, 1*, 489-511.

Jones, D. C. (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles,45*, 645-664.

Jovanovic, J., Lerner, R. M., & Lerner, J. V. (1989).Objective and subjective attractiveness and early adolescent adjustment. *Journal of Adolescence, 12,* 225-229.

Judge, T. A., Hurst, C., & Simon, L.S. (2009). Does it pay to be smart, attractive, or confident (or all three)? Relationships among general mental ability, physical attractiveness, core self-evaluations and income. *Journal of Applied Psychology, 94(3)*, 742-755.

Katz, L., & Autor, D. (1999).Changes in the wage structure and earnings inequality. In O. Ashenfelter & D. Card (Eds.), *The handbook of labor economics, volume 3a* (pp. 1462-1558). Amsterdam, The Netherlands: Elsevier, North-Holland.

Kenealy, P., Gleeson, K., Frude, N., & Shaw, W. (1991).The importance of the individual in the causal relationship between attractiveness and self-esteem. *Journal of Community and Applied Social Psychology, 1,* 45-56.

Kinney, D. (1993). From nerds to normals. The recovery of identity among adolescents from middle school to high school. *Sociology of Education, 66*, 21-40.

Kinney, D. (1999). From 'headbangers' to 'hippies': Delineating adolescents' active attempts to form an alternative peer culture. *New Directions for Child and Adolescent Development,84*, 21-35.

Kreager, D. A. (2004). Strangers in the halls: Isolation and delinquency in school networks. *Social Forces, 83,* 351-390.

Kuczmarski, R. J., Ogden, C. L., Guo, S. S., Grummer-Strawn, L. M., Flegal, K. M., Mei, Z., Wei, R., Curtin, L.R., Roche, A.F., & Johnson, C.L. (2002). CDC Growth Charts for the United States: Methods and development. *Vital Health Statistics, 11*, 1-190.

Lagerveld, S. E., Bultmann, U., Franche, R. L., van Dijk, F. J. H., Vlasveld, M. C., van der Feltz-Cornelis, C. M., Bruinvels, D. J., Huijs, J. J. J. M., Blonk, R. W. B., van der Klink, J. J. L., & Nieuwenhuijsen, K. (2010). Factors associated with work participation and work functioning

in depressed workers: A systematic review. *Journal of Occupational Rehabilitation, 20*, 275-292.

Lammers, C., Ireland, M., Resnick, M., & Blum, R. (2000). Influences on adolescents' decision to postpone onset of sexual intercourse: A survival analysis of virginity among youths aged 13 to 18 years. *Journal of Adolescent Health,26*, 42-48.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin, 126,* 390-423.

Lease, A. M., Musgrove, K. T., & Axelrod, J. L. (2002). Dimensions of social status in preadolescent peer groups: Likability, perceived popularity, and social dominance. *Social Development, 11,* 508-533.

Lerner, D. & Henke, R.M. (2008). What does research tell us about depression, job performance, and work productivity? *Journal of Occupational and Environmental Medicine, 50*, 401-410.

Lerner, R. M., Delaney, M., Hess, L. E., Jovanovic, J., & von Eye, A. (1990).Early adolescent physical attractiveness and academic competence. *Journal of Early Adolescence,10,* 4-20.

Lerner, R. M., Lerner, J. V., Hess, L. E., Schwab, J., Jovanovic, J., Talwar, R., & Kucher, J. S. (1991). Physical attractiveness and psychosocial functioning among early adolescents. *Journal of Early Adolescence, 11,* 300-320.

Li, N. P. & Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term maters: What, whether and why. *Journal of Personality and Social Psychology, 90*, 468-489.

Lichtman, M. (2009). *Qualitative research in education: A user's guide.* Thousand Oaks: Sage.

Lin, N. (1999). Social networks and status attainment. *Annual Review of Sociology, 25*, 467-487.

Link, B. G., & Phelan, J. C. (2001).Conceptualizing stigma. *Annual Review of Sociology,27*, 363-385.

Little, R .J. (2004). To model or not to model? Competing models of inference for finite population sampling. *Journal of the American Statistical Association, 99*, 546-556.

Loh, E. S. (1993). The economic effects of physical appearance. *Social Science Quarterly, 74*, 420-438.

Lundy, D. E., Tan, J., & Cunningham, M. R. (1998). Heterosexual romantic preferences: The importance of humor and physical attractiveness for different types of relationships. *Personal Relationships, 5*, 311-325.

Luo, Z. H., Cowell, A. J., Musuda, Y. J., Novak, S. P. & Johnsons, E. O. (2010). Course of major depressive disorder and labor market outcome disruption. *Journal of Mental Health Policy and Economics, 13*, 135-149.

Magro, A. M. (1997). Why Barbie is Perceived as Beautiful. *Perceptual and Motor Skills, 85*, 363-374.

Major, B., & O'Brien, L. T. (2005).The social psychology of stigma. *Annual Review of Psychology, 56*, 393-421.

Mares, S. H. W., de Leeuw, R. N. H., Scholte, R. H. J., & Engels, R. C. M. E. (2010). Facial attractiveness and self-esteem in adolescence. *Journal of Clinical Child and Adolescent Psychology, 39*, 627-637.

Martin, K. A. (1996). *Puberty, sexuality, and the self: Boys and girls at adolescence.* New York: Routledge.

Masten, A.S. & Cicchetti, D. (2010). Developmental cascades. *Development and Psychopathology, 22*, 491-495.

Mazur, A., Halpern, C., & Udry, J. R. (1994). Dominant looking male teenagers copulate earlier. *Ethology and Sociobiology, 15*, 87-94.

McCartney, K., Burchinal, M., & Bub, K. (Eds.). (2006). *Best practices in quantitative methods for developmentalists*. Monographs of the Society for Research in Child Development, *71*(3).

McLeod, J. D., & Fettes, D. L. (2007). Trajectories of failure: The educational careers of children with mental health problems. *American Journal of Sociology,113*, 653-701.

McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*, 185-204.

Mendle, J. E., Harden, K. P., Brooks-Gunn, J., & Graber, J. A. (2010). Development's tortoise and hare: Differing roles of pubertal timing and pubertal tempo in the emergence of depressive symptoms. *Developmental Psychology* 46, 1341-1353.

Merten, D. E. (1996a). Burnout as cheerleader: The cultural basis for prestige and privilege in junior high school. *Anthropology and Education Quarterly, 27*, 51-70.

Merten, D. E. (1996b). Going-with: The role of a social form in early romance. *Journal of Contemporary Ethnography, 24,* 462-484.

Merton, R. K. (1957). *Social theory and social structure.* New York: Free Press.

Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis*. Newbury Park, CA: Sage Publications.

Miller, S. R. (1998). Shortcut: High school grades as a signal of human capital. *Educational Evaluation and Policy Analysis, 20*, 299-311.

Mocan, N., & Tekin, E. (2010). Ugly criminals. *Review of Economics and Statistics, 92*, 15-30.

Moseley, R. (2000). Makeover takeover on British television. *Screen, 41*, 299-314.

Mueller, U., & Mazur, A. (1996). Facial dominance of West Point cadets as a predictor of later military rank. *Social Forces,74*, 823-850.

Muthén, L.K. & Muthén, B.O. (2010). *Mplus user's guide, sixth edition*. Los Angeles, CA: Muthén & Muthén.

Needham, B. L., Crosnoe, R., & Muller, C. (2004). Academic failure in secondary school: The inter-related role of health problems and educational context. *Social Problems,51*, 569-686.

Neiss, M., & Rowe, D. C. (2000). Parental education and child's verbal IQ in adoptive and biological families in the National Longitudinal Study of Adolescent Health. *Behavior Genetics, 30*, 487-495.

Oldehinkel, A. J., Rosmalen, J. G. M., Veenstra, R., Dijkstra, J. K., & Ormel, J. (2007). Being admired or being liked: Classroom social status and depressive problems in early adolescent girls and boys. *Journal of Abnormal Child Psychology, 35,* 417-427.

Ong, M. (2005). Body projects of young women of color in physics: Intersection of gender, race and science. *Social Problems, 52*, 593-617.

Patzer, G. L. (1985).*The physical attractiveness phenomena.* New York, NY: Plenum Publications.

Perreira, K. M., Deeb-Sossa, N., Harris, K.M., & Bollen, K. (2005).What are we measuring? An evaluation of the CES-D across race-ethnicity and immigrant generation. *Social Forces, 8,* 1567-1601.

Post, R. (2000). Prejudicial appearances: The logic of American antidiscrimination law. *California Law Review*, *88*, 1-40.

Quillian, L. & Redd, R. (2009). The friendship networks of multiracial adolescents. *Social Science Research, 38*, 279-295.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385-401.

Radloff, L. S. (1991). The use of the center for epidemiologic studies depression scale in adolescents and young adults. *Journal of Youth and Adolescence, 20(2)*, 149-166.

Rankin, J. L., Lane, D. J., Gibbons, F. X., & Gerrard, M. (2004). Adolescent self-consciousness: Longitudinal age changes and gender differences in two cohorts. *Journal of Research on Adolescence,14*, 1-21.

Regan, P. C., & Joshi, A. (2003).Ideal partner preferences among adolescents. *Social Behavior and Personality,31*, 13-20.

Reiss, D., Neiderhiser, J. M., Hetherington, E .M., & Plomin, R. (2000). *The relationship code: Deciphering genetic and social influences on adolescent development*. Cambridge, MA: Harvard University Press.

Rhode, D. L. (2010).*The beauty bias: The injustice of appearance in life and law*. New York, NY: Oxford University Press.

Rhodes, G. (2006). The evolutionary psychology of facial beauty. *Annual Review of Psychology, 57,* 199-*226*.

Rhodes, G., Simmons, L. W., & Peters, M. (2005). Attractiveness and sexual behavior: Does attractiveness enhance mating success? *Evolution and Human Behavior, 26*, 186-201.

Riegle-Crumb, C., Muller, C., Frank, K., & Schiller, K. (2005). *National Longitudinal Study of Adolescent Health: Wave III education data codebook*. Carolina Population Center, University of North Carolina at Chapel Hill. Retrieved from www.prc.utexas.edu/ahaa/data/edu1.pdf

Ritts, V., Patterson, M. L., & Tubbs, M. E. (1992). Expectations, impressions, and judgments of physically attractive students: A review. *Review of Educational Research, 62*, 413-426.

Roeser, R. W., Galloway, M., Casey-Cannon, S., Watson, C., Keller, L., & Tan, E. (2008). Identity representations in patterns of school achievement and well-being among early adolescent girls. *Journal of Early Adolescence, 28(1)*, 115-152.

Ross, C.E. (1994). Overweight and depression. *Journal of Health and Social Behavior, 33*, 63-78.

Royston, P. (2005). Multiple imputation of missing values: Update of ice. *The Stata Journal, 5*, 527-536.

Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development, 72*, 1135-1150.

Schiller, K. S. (1999). Effects of feeder patterns on students' transition to high school. *Sociology of Education, 72*, 216-233.

Schneider, B. (2007). *Forming a college-going community in U.S. schools*. Seattle, WA: Bill and Melinda Gates Foundation.

Schneider, B. & Stevenson, D. (1999). *The ambitious generation: America's teenagers, motivated but directionless*. New Haven: Yale.

Shanahan, M. J. (2000). Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective. *Annual Review of Sociology, 26*, 667-692.

Sibulkin, A. E. & Butler, J. S. (2005). Differences in graduation rates between young Black and White college students: Effects of entry into parenthood and historically Black universities. *Research in Higher Education, 46*, 327-348.

Simmons, R. & Blyth, D. (1987). *Moving into adolescence: The impact of pubertal change and school context*. Hawthorne, NY: Aldine de Gruyter.

Smock, P. J. (2000). Cohabitation in the United States: An appraisal of research themes, findings, and implications. *Annual Review of Sociology, 26*, 1-20.

Snyder, M., Tanke, E. D., & Berscheid, E. (1977). Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. *Journal of Personality and Social Psychology*, *35*, 656-666.

Sparacino, J., & Hansell, S. (1979). Physical attractiveness and academic performance: Beauty is not always talent. *Journal of Personality, 47*, 449-469.

Speed, A., & Gangestad, S. W. (1997). Romantic popularity and mate preferences: A peer-nomination study. *Personality and Social Psychology Bulletin,23*, 928-936.

Spenner, K. I. (1988). Social stratification, work and personality. *Annual Review of Sociology, 14* 69-97.

Staff, J. & Kreager, D. A. (2008). Too cool for school? Peer status and high school dropout. *Social Forces, 87,* 445-471.

Steinberg, L. D. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review, 28*, 78-106.

Steinberg, L. D. & Morris, A. S. (2000). Adolescent development. *Annual Review of Psychology, 52*, 83-100.

Steinle, A. T. (2006). Appearance and grooming standards as sex discrimination in the workplace. *Catholic University Law Review, 56*, 261-296.

Stone, M. S., Barber, B. L., & Eccles, J .S. (2008). We knew them when: Sixth grade characteristics that predict adolescent high school social identities. *Journal of Early Adolescence, 28(2)*, 304-328.

Stryker, S. (1987). Identity theory: Developments and extensions. In. K. Yardley & T. Holmes (Eds.) *Self and identity: Psychosocial perspectives* (pp. 89-104). New York: Wiley.

Thye, S. R., Willer, D., & Markovsky, B. (2006). From status to power: New models at the intersection of two theories. *Social Forces, 84*, 1471-1495.

Tourangeau, R., & Shin, H. (1999). *National Longitudinal Survey of Adolescent Health: Grand sample weight.* Carolina Population Center, University of North Carolina at Chapel Hill.

Retrieved from http://www.cpc.unc.edu/projects/addhealth/data/guides/weights.pdf.

Turner, C. F., Ku, L., Rogers, S. M., Lindberg, L. D., Pleck, J. H., & Sonenstein, F.L. (1998). Adolescent sexual behavior, drug use, and violence: increased reporting with computer survey technology. *Science, 280*, 867–873.

Udry, J. R., & Billy, J. O. G. (1987).Initiation of coitus in early adolescence. *American Sociological Review,52,* 841-855.

Umberson, D., & Hughes, M. (1987). The impact of physical attractiveness on achievement and psychological well-being. *Social Psychology Quarterly, 50*, 227-236.

U.S. Census Bureau. (2007). *Poverty thresholds, 1994*. Retrieved from http://www.census.gov/hhes/www/poverty/data/threshld/thresh94.html

Vaillancourt, T., & Hymel, S. (2006). Aggression and social status: The moderating roles of sex and peer-valued characteristics. *Aggressive Behavior,32*, 396-408.

Vannatta, K., Garstein, M. A., Zeller, M., & Noll, R. B. (2009). Peer acceptance and social behavior during childhood and adolescence: How important are appearance, athleticism, and academic competence? *International Journal of Behavioral Development, 33*, 303-311.

Vermunt, J.K. & Magidson, J. (2005). *Latent GOLD 4.0 user's guide*. Belmont, Massachusetts: Statistical Innovations Inc

Wagner, D. G., & Berger, J. (2002). Expectation states theory: An evolving research program. In J. Berger & M. Jr. Zelditch (Eds.), *New directions in contemporary sociological theory* (pp. 41-76). New York, NY: Rowman & Littlefield.

Wang, S. S., Treat, R. A., & Brownell, K. D. (2008). Cognitive processing about classroom-relevant contents: Teachers' attention to and utilization of girls' body size, ethnicity, attractiveness, and facial affect. *Journal of Educational Psychology, 100(2)*, 473-489.

Waite, L. J. & Lehrer, E. L. (2003). The benefits from marriage and religion in the United States: A comparative analysis. *Population and Development Review, 29*, 255-275.

Webster, M. Jr., & Driskell, J. E. Jr. (1983).Beauty as status. *American Journal of Sociology, 89,* 140-165.

Wolf, N. (2002). *The beauty myth: How images of beauty are used against women.* New York, NY: Harper Collins.

Wooldridge, J.M. (2009). *Introductory econometrics: A modern approach (4th edition).* Mason, OH: South-Western (Thomson Learning).

Zebrowitz, L. A., Andreoletti, C., Collins, M. A., Lee, S. Y., & Blumenthal, J. (1998). Bright, bad, babyfaced boys: Appearance stereotypes do not always yield self-fulfilling prophecy effects. *Journal of Personality and Social Psychology,75*, 1300-1320.

Zebrowitz, L. A., Collins, M. A., & Dutta, R. (1998).The relationship between appearance and personality across the life span. *Personality and Social Psychology Bulletin, 24*, 736-749.

Zebrowitz, L. A., Hall, J. A., Murphy, N. A., & Rhodes, G. (2002). Looking smart and looking good: Facial cues to intelligence and their origins. *Personality and Social Psychology Bulletin,28*, 238-249.

Zimmer-Gembeck, M. J., Siebenbruner, J., & Collins, W. A. (2001). Diverse aspects of dating: Associations with psychosocial functioning from early to middle adolescence. *Journal of Adolescence, 24,* 313-336.

Zimmer-Gembeck, M. J., Siebenbruner, J., & Collins, W. A. (2004). A prospective study of intraindividual and peer influences on adolescents' heterosexual romantic and sexual behavior. *Archives of Sexual Behavior, 33,* 381-394.

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Tables

Table 1
Descriptive Statistics for Individual Variables (n = 8,918)

	M or %	*(SD)*	*Min*	*Max*
FOCAL PREDICTOR				
Physical Attractiveness				
Very attractive[a]	15.2 %			
Attractive	34.7 %			
About average	44.0 %			
Unattractive/very unattractive	6.1 %			
OUTCOMES				
Young Adult Human Capital				
Have college degree?	32.5 %			
Self-placement on SES ladder	5.06	(1.70)	1	10
Annual earnings (logged dollars)	7.02	(4.89)	0	13.82
Young Adult Social Capital				
Interpersonal Ties				
Number of close friends	4.62	(2.82)	0	10
Ever married?	51.2 %			
Ever cohabited?	49.1 %			
Ever had children?	50.6 %			
Log of number of sexual partners	1.97	(1.06)	0	6.90
Psychosocial Resources				
Extraversion	13.23	(3.07)	4	20
Optimism	14.95	(2.45)	4	20
Depression (10 items)	6.04	(4.63)	0	30
High School Academic Achievement				
Overall transcript GPA	2.52	(0.94)	0.10	4.00
English, humanities, social sciences transcript GPA[b]	2.41	(1.06)	0.00	4.00
Mathematics and science transcript GPA[b]	2.31	(0.99)	0.30	4.00
High School Social Achievement				
Interpersonal Ties				
Friendship nominations	4.27	(3.97)	0	101
Teacher caring	3.47	(0.98)	1	5
Success getting along	6.34	(1.51)	0	8
Any sexual partners	41.2 %			
Any romantic partners (without sex)	48.5 %			
Formal/informal Activities				
Cheer/dance	9.7 %			
Sports	52.7 %			
Drinking problems	1.87	(4.22)	0	45
Psychosocial Resources				
Self-esteem	24.58	(3.60)	6	30
Depression (19 items)	11.30	(7.53)	0	56

Table continues

Table 1 (continued)
Descriptive Statistics for Individual Variables (n = 8,918)

	M or %	*SD*		
CONTROLS				
Controls: Youth Demographics				
Male	46.1 %			
Race-ethnicity				
Non-Latino/a White[a]	52.8 %			
Non-Latino/a African American	19.8 %			
Latino/a	15.6 %			
Other	6.6 %			
Multiracial	5.1 %			
Age in high school (Wave I or II; in months)	195.97	(15.31)	153	256
Controls: Youth Academics				
Grade level				
Ninth	43.4 %			
Tenth	24.4 %			
Eleventh	18.7 %			
Twelfth[a]	13.5 %			
In lowest grade level offered by school	24.4 %			
Math and science course sequences				
Highest math sequence code	4.11	(2.22)	0	9
Highest science sequence code	2.58	(1.63)	0	6
English courses				
At least one honors/AP[a]	15.5 %			
At least one regular	74.3 %			
At least one remedial	6.4 %			
None	3.8 %			
Humanities/social science courses				
At least one honors/AP[a]	11.0 %			
At least one regular or remedial	72.4 %			
None	16.7 %			
Add Health Picture Vocabulary Test	100.29	(15.05)	9	137

Table continues

Table 1 (continued)
Descriptive Statistics for Individual Variables (n = 8,918)

	M or %	*SD*		
CONTROLS (CONTINUED)				
Controls: Family Demographics				
Family income-to-needs	3.06	(3.39)	0	97.80
Family structure				
Two biological parents[a]	53.7 %			
One biological and one step parent	15.4 %			
One biological parent (no step parent)	23.8 %			
No biological parents	7.0 %			
Interviewed parent's educational attainment	13.18	(2.61)	0	18
Gender/relationship of interviewed parent				
Biological mother[a]	84.9 %			
Non-biological mother or mother figure	10.8 %			
Father or father figure	4.3 %			
Controls: Wave/Month of Interview				
Wave I and:				
April or May	25.4 %			
June or July	47.6 %			
August	16.1 %			
September through December[a]	10.9 %			
Wave II and:				
April or May	50.3 %			
June or July	44.3 %			
August or September[a]	5.4 %			
Controls: Oversample Flags				
Disabled	2.5 %			
Race-ethnicity				
Cuban	2.8 %			
Puerto Rican	2.3 %			
Chinese	1.8 %			
Highly educated African American	5.5 %			
Genetic				
Twin	7.2 %			
Full sibling	5.7 %			
Half sibling	2.9 %			
Sibling of twin	0.7 %			
Non-related adolescent	2.2 %			

Note. [a] Omitted category. [b] Subject-specific GPAs were imputed only for youth who were taking the relevant classes in that grade, resulting in a sample size of 8,756 for English, Humanities and Social Studies and 8,361 for Math and Science.

Table 2
Associations of Physical Attractiveness with Social Achievement During Adolescence

	Physical Attractiveness					
	Diffuse Status: Fairest of All Very Attractive versus Attractive		Diffuse Status: Standing Out Attractive versus About Average		Stigma About Average versus Unattractive	
	B (SE B)	B	B (SE B)	B	B (SE B)	B
Interpersonal Ties						
Friendship nominations	0.20 (0.14)	0.05	0.70* (0.10)	0.18	0.65* (0.17)	0.17
Teaching caring	0.03 (0.03)	0.03	0.08* (0.02)	0.09	0.07 (0.06)	0.07
Success getting along	-0.01 (0.05)	0.00	0.10* (0.04)	0.06	0.12 (0.08)	0.08
Any sexual partners	0.03 (0.02)		0.00 (0.01)		0.07* (0.02)	
Any romantic partners	0.00 (0.02)		0.05* (0.01)		0.05 (0.03)	
Formal/Informal Activities						
Cheer/dance	0.02 (0.01)		0.01 (0.01)		0.01 (0.01)	
Sports	-0.01 (0.02)		0.08* (0.01)		0.04 (0.02)	
Drinking problems	0.21 (0.16)	0.05	-0.08 (0.10)	-0.02	0.44* (0.17)	0.11
Psychosocial Resources						
Self-esteem	0.18 (0.13)	0.05	0.47* (0.08)	0.13	0.47* (0.18)	0.13
Depression	0.42 (0.23)	0.06	-0.64* (0.18)	-0.09	-.90* (0.41)	-0.12

Note. Results from Path A of the structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. Robust standard errors adjust for clustering of youth within schools. n = 8,918 observations in each of the five multiply imputed datasets. *B* is the semi-standardized coefficient (B/SD Y) for continuous outcome variables predicted by dummy indicator variables. The base rates for categorical outcomes are 41% for sexual partners and 49% for romantic partners, 10% for cheerleading/dance and 53% for sports.
* $p < .05$ (two-sided significance tests).

Table 3
Associations of Social Achievement with Academic Achievement During Adolescence

	Overall Transcript GPA		
	B (SE B)	β	*B*
Interpersonal Ties			
Friendship nominations[a]	0.14* (0.02)	0.06	--
Teaching caring	0.11* (0.01)	0.12	--
Success getting along	0.06* (0.01)	0.10	--
Any sexual partners	-0.30* (0.03)	--	-0.16
Any romantic partners	-0.09* (0.02)	--	-0.05
Formal/Informal Activities			
Cheer/dance	-0.05 (0.03)	--	-0.02
Sports	0.11* (0.03)	--	0.06
Drinking problems	-0.01* (0.00)	-0.05	--
Psychosocial Resources			
Self-esteem	0.01 (0.00)	0.02	--
Depression[a]	-0.06* (0.01)	-0.05	--

Note. Results from Path B of the structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. Robust standard errors adjust for clustering of youth within schools. n = 8,918 observations in each of the five multiply imputed datasets. β is the fully standardized coefficient (B*SD X/SD Y) for continuous predictor variables. *B* is the semi-standardized coefficient (B/SD Y) for dummy predictor variables.

[a] In units of 10.

* $p < .05$ (two-sided significance tests).

Table 4
Total, Direct, and Indirect Effects of Physical Attractiveness on Academic Achievement (Overall Transcript GPA) During Adolescence

	Physical Attractiveness		
	Diffuse Status: Fairest of All	Diffuse Status: Standing Out	Stigma
	Very Attractive versus Attractive	Attractive versus About Average	About Average versus Unattractive
Total Effect	0.035	0.080*	0.022
	(0.032)	(0.022)	(0.040)
Direct Effect	0.044	0.045*	0.015
	(0.029)	(0.021)	(0.038)
Indirect Effect	-0.009	0.036*	0.006
	(0.011)	(0.008)	(0.016)
Indirect Effect through Social Assets	0.004	0.040*	0.035*
	(0.007)	(0.006)	(0.011)
Friendship nominations	0.003	0.010*	0.009*
	(0.002)	(0.002)	(0.003)
Teaching caring	0.003	0.009*	0.007
	(0.004)	(0.003)	(0.006)
Success getting along	0.000	0.006*	0.007
	(0.003)	(0.002)	(0.004)
Sports	-0.001	0.009*	0.004
	(0.003)	(0.003)	(0.003)
Self-esteem	0.001	0.002	0.002
	(0.001)	(0.002)	(0.002)
Depression	-0.002	0.004*	0.005*
	(0.001)	(0.001)	(0.003)
Indirect Effect through Social Distractions	-0.012	-0.004	-0.029*
	(0.007)	(0.004)	(0.007)
Any sexual partners	-0.009	-0.001	-0.020*
	(0.006)	(0.003)	(0.006)
Any romantic partners	0.000	-0.005*	-0.004
	(0.002)	(0.001)	(0.003)
Drinking problems	-0.002	0.001	-0.005*
	(0.002)	(0.001)	(0.002)
Indirect Effect through Cheer/dance	-0.001	0.000	0.000
	(0.001)	(0.001)	(0.001)

Note. Total, direct, and indirect effects on overall transcript GPA from Paths A and B of structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. n = 8,918 observations in each of the five multiply imputed datasets. Values are unstandardized coefficients (robust standard errors that adjust for clustering within schools are in parentheses). Semi-standardized coefficients (B/SD Y) for the dummy coded physical attractiveness variables can be calculated by dividing by the standard deviation of the outcome, which is 0.94.

* $p < .05$ (two-sided significance tests).

Table 5

Total, Direct, and Indirect "Fairest of Them All" Effects of Being "Very Attractive Versus Attractive" on Social Achievement During Young Adulthood

	Diffuse Status, Fairest of Them All: Very Attractive versus Attractive							
	Psychosocial Resources			Interpersonal Ties				
	Extraversion	Optimism	Depression	Number Friends	Ever Married?	Ever Cohabited?	Any Children?	Log Number Sex Partners
Outcome SD or % coded 1	3.07	2.45	4.63	2.82	51.2%	49.1%	50.6%	1.06
Total Effect	0.286*	0.107	-0.395*	0.205*	-0.012	0.004	-0.009	0.027
Direct Effect	0.253*	0.096	-0.426*	0.192*	-0.014	0.000	-0.012	0.008
Indirect Effect	0.033	0.011	0.031	0.013	0.002	0.003	0.003	0.019
Indirect Effect through High School Social Assets	0.010	-0.002	0.048	0.010	0.000	0.000	0.001	0.000
Friendship nominations	0.009	0.001	-0.003	0.005	0.000	0.000	0.001	0.002
Teaching caring	0.000	0.001	0.001	0.003	0.000	0.000	0.000	-0.001
Success getting along	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Sports	-0.003	-0.001	0.002	-0.002	0.000	0.000	0.000	-0.001
Self-esteem	0.015	0.014	-0.017	0.006	0.000	0.000	0.000	0.000
Depression	-0.011	-0.017	0.063	-0.003	0.000	0.000	0.000	-0.001
Indirect Effect through High School Social Distractions	0.022	0.005	-0.006	-0.003	0.001	0.005	0.004	0.023
Any sexual partners	0.013	0.001	-0.004	-0.008	0.002	0.004	0.005	0.018
Any romantic partners	0.002	0.001	-0.001	0.001	0.000	0.000	0.000	0.001
Drinking problems	0.007	0.003	-0.002	0.004	-0.001	0.001	-0.001	0.004
Indirect Effect through High School Cheer/dance	0.008	0.000	-0.002	0.002	0.000	0.000	0.000	-0.001
Indirect Effect through High School Overall Transcript GPA	-0.007	0.007	-0.008	0.004	0.001	-0.002	-0.002	-0.003

Note. Total, direct, and indirect effects on young adult social achievement from Paths E1 and E2 of structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. n = 8,918 observations in each of the five multiply imputed datasets. Values are unstandardized coefficients. Semi-standardized coefficients (B/SD Y) for the dummy coded physical attractiveness variables can be calculated by dividing by the standard deviation of the continuous outcomes which are shown in the first row. Base rates (% coded 1) are shown for indicator outcomes.

* $p < .05$ (two-sided significance tests).

Table 6

Total, Direct, and Indirect "Standing Out" Effects of Being "Attractive Versus About Average" on Social Achievement During Young Adulthood

	Diffuse Status, Standing Out: Attractive versus About Average							
	Psychosocial Resources			Interpersonal Ties				
	Extraversion	Optimism	Depression	Number Friends	Ever Married?	Ever Cohabited?	Any Children?	Log Number Sex Partners
Outcome SD or % coded 1	3.07	2.45	4.63	2.82	51.2%	49.1%	50.6%	1.06
Total Effect	0.104	0.155*	-0.126	0.036	0.069*	-0.023	0.033*	0.046
Direct Effect	-0.023	0.031	0.086	-0.059	0.060*	-0.022	0.033*	0.032
Indirect Effect	0.127*	0.124*	-0.212*	0.095*	0.009*	-0.001	0.000	0.014
Indirect Effect through High School Social Assets	0.117*	0.096*	-0.181*	0.074*	0.003	0.000	0.001	0.012*
Friendship nominations	0.031*	0.005	-0.009	0.019*	0.002	0.000	0.002	0.007*
Teaching caring	0.001	0.004	0.004	0.008*	0.000	-0.001	0.000	-0.003*
Success getting along	-0.004	0.003	-0.012*	0.000	0.000	-0.001	0.000	-0.003*
Sports	0.034*	0.019*	-0.022*	0.027*	0.000	0.001	-0.002	0.008*
Self-esteem	0.039*	0.038*	-0.046*	0.016*	0.001	0.001	0.001	0.001
Depression	0.017*	0.026*	-0.096*	0.004	0.000	0.000	0.000	0.002
Indirect Effect through High School Social Distractions	0.023*	0.012*	-0.010	0.012	0.003*	0.003	0.003	0.010
Any sexual partners	0.001	0.000	0.000	-0.001	0.000	0.000	0.000	0.001
Any romantic partners	0.025*	0.013*	-0.010	0.014*	0.002*	0.003*	0.002*	0.010*
Drinking problems	-0.003	-0.001	0.001	-0.002	0.001	0.000	0.001	-0.002
Indirect Effect through High School Cheer/dance	0.004	0.000	-0.002	0.001	0.000	0.000	0.000	0.000
Indirect Effect through High School Overall Transcript GPA	-0.017*	0.016*	-0.019*	0.008*	0.003*	-0.005*	-0.004*	-0.007*

Note. Total, direct, and indirect effects on young adult social achievement from Paths E1 and E2 of structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. n = 8,918 observations in each of the five multiply imputed datasets. Values are unstandardized coefficients. Semi-standardized coefficients (B/SD Y) for the dummy coded physical attractiveness variables can be calculated by dividing by the standard deviation of the continuous outcomes which are shown in the first row. Base rates (% coded 1) are shown for indicator outcomes.

* $p < .05$ (two-sided significance tests).

Table 7

Total, Direct, and Indirect "Stigma" Effects of Being "About Average versus Unattractive" on Social Achievement During Young Adulthood

	Stigma: About Average versus Unattractive							
	Psychosocial Resources			Interpersonal Ties				
	Extraversion	Optimism	Depression	Number Friends	Ever Married?	Ever Cohabited?	Any Children?	Log Number Sex Partners
Outcome SD or % coded 1	3.07	2.45	4.63	2.82	51.2%	49.1%	50.6%	1.06
Total Effect	0.356*	-0.009	-0.198	0.070	0.026	0.030	0.042*	0.181*
Direct Effect	0.187	-0.130	0.040	0.004	0.018	0.018	0.030	0.117*
Indirect Effect	0.169*	0.120*	-0.238*	0.067*	0.008*	0.012*	0.012*	0.064*
Indirect Effect through High School Social Assets	0.103*	0.096*	-0.211*	0.058*	0.003*	0.000	0.002	0.008
Friendship nominations	0.029*	0.005	-0.008	0.018*	0.001	0.000	0.002	0.006*
Teaching caring	0.001	0.003	0.003	0.007	0.000	-0.001	0.000	-0.003
Success getting along	-0.005	0.004	-0.015	0.000	0.000	-0.001	0.000	-0.003
Sports	0.015	0.009	-0.010	0.012	0.000	0.001	-0.001	0.004
Self-esteem	0.039*	0.038*	-0.045*	0.016*	0.001	0.001	0.001	0.001
Depression	0.024*	0.037*	-0.135*	0.005	0.001	0.000	0.001	0.003
Indirect Effect through High School Social Distractions	0.067*	0.020*	-0.021	0.006	0.004*	0.014*	0.011*	0.060*
Any sexual partners	0.028*	0.001	-0.008	-0.017*	0.004*	0.010*	0.011*	0.039*
Any romantic partners	0.023	0.012	-0.010	0.013	0.002	0.003	0.002	0.009
Drinking problems	0.016*	0.007	-0.003	0.009	-0.002*	0.001*	-0.002	0.009*
Indirect Effect through High School Cheer/dance	0.004	0.000	-0.001	0.001	0.000	0.000	0.000	0.000
Indirect Effect through High School Overall Transcript GPA	-0.005	0.004	-0.005	0.003	0.001	-0.001	-0.001	-0.002

Note. Total, direct, and indirect effects on young adult social achievement from Paths E1 and E2 of structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. n = 8,918 observations in each of the five multiply imputed datasets. Values are unstandardized coefficients. Semi-standardized coefficients (B/SD Y) for the dummy coded physical attractiveness variables can be calculated by dividing by the standard deviation of the continuous outcomes which are shown in the first row. Base rates (% coded 1) are shown for indicator outcomes.

* $p < .05$ (two-sided significance tests).

Table 8
Associations of Social Capital with Human Capital During Young Adulthood

	Have College Degree?	Self-Placement on SES Ladder			Log of Annual Earnings		
	B (SE B)	B (SE B)	β	B	B (SE B)	β	B
Interpersonal Ties							
Number of close friends	0.01* (0.00)	0.04* (0.01)	0.06		0.04* (0.02)	0.03	
Ever married?	-0.01 (0.01)	0.17* (0.05)		0.05	0.43* (0.13)		0.04
Ever cohabited?	-0.08* (0.01)	-0.06 (0.04)		-0.02	0.26* (0.12)		0.03
Any children?	-0.15* (0.01)	-0.10* (0.04)		-0.03	-0.43* (0.13)		-0.04
Log of number of sexual partners	-0.02* (0.01)	-0.05* (0.02)	-0.03		0.07 (0.06)	0.01	
Psychosocial Resources							
Extraversion[a]	-0.01 (0.02)	0.18* (0.06)	0.03		0.07 (0.19)	0.00	
Optimism[a]	0.13* (0.02)	0.75* (0.09)	0.11		-0.69* (0.29)	-0.03	
Depression[a]	-0.02* (0.01)	-0.51* (0.04)	-0.14		-1.07* (0.14)	-0.10	
Have College Degree?	--	0.74* (0.05)		0.21	0.83* (0.15)		0.08

Note. Results from Path E3 of the structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. Robust standard errors adjust for clustering of youth within schools when they were adolescents. n = 8,918 observations in each of the five multiply imputed datasets. β is the fully standardized coefficient (B*SD X/SD Y) for continuous outcomes with continuous predictor variables. *B* is the semi-standardized coefficient (B/SD Y) for continuous outcomes with dummy predictor variables. The base rate for college degree is 33%.

* $p < .05$ (two-sided significance tests).

[a] In units of 10.

Table 9
Total, Direct, and Indirect Effects of Physical Attractiveness on Human Capital Attainment During Young Adulthood

	Diffuse Status, Fairest of All: Very Attractive versus Attractive			Diffuse Status, Standing Out: Attractive versus About Average			Stigma: About Average versus Unattractive		
	College Degree? (1)	Log Earnings (2)	Self-Placement SES Ladder (3)	College Degree? (4)	Log Earnings (5)	Self-Placement SES Ladder (6)	College Degree? (7)	Log Earnings (8)	Self-Placement SES Ladder (9)
Outcome SD or % coded 1	32.5%	4.89	1.70	32.5%	4.89	1.70	32.5%	4.89	1.70
Total Effect	0.028	0.159	0.168*	0.026*	0.008	0.170*	0.007	0.399	0.017
Direct Effect	0.019	0.084	0.100*	0.010	-0.091	0.095*	0.009	0.302	-0.013
Indirect Effect	0.009	0.075*	0.068*	0.016*	0.099*	0.075*	-0.003	0.097*	0.030
Indirect Effect through High School Social Assets	0.001	0.000	0.005	0.008*	0.039*	0.016*	0.006*	0.035	0.010
Friendship nominations	0.001	0.005	0.000	0.004*	0.020	0.001	0.004*	0.019	0.001
Teaching caring	0.000	0.000	0.001	0.000	-0.001	0.004*	0.000	-0.001	0.003
Success getting along	0.000	0.000	0.000	0.000	0.005	-0.001	0.000	0.006	-0.001
Sports	0.000	-0.001	-0.001	0.004*	0.011	0.006	0.002	0.005	0.003
Self-esteem	0.000	0.000	0.003	0.000	-0.001	0.008*	0.000	-0.001	0.008*
Depression	0.000	-0.004	0.001	0.000	0.006	-0.002	0.000	0.008	-0.003
Indirect Effect through High School Social Distractions	0.000	0.003	0.001	0.001	0.009	0.002	0.000	0.014	0.004
Any sexual partners	-0.001	0.001	-0.001	0.000	0.000	0.000	-0.002	0.003	-0.002
Any romantic partners	0.000	0.001	0.000	0.001*	0.010	0.003	0.001	0.009	0.003
Drinking problems	0.000	0.001	0.001	0.000	0.000	-0.001	0.001	0.002	0.003
Indirect Effect through High School Cheer/dance	0.000	-0.003	-0.001	0.000	-0.002	-0.001	0.000	-0.002	0.000
Indirect Effect through High School Overall GPA	0.004	0.006	0.004	0.010*	0.012	0.009*	0.003	0.004	0.003

Table continues

Table 9 (continued).

Total, Direct, and Indirect Effects of Physical Attractiveness on Human Capital Attainment During Young Adulthood

	Diffuse Status, Fairest of All: Very Attractive versus Attractive			Diffuse Status, Standing Out: Attractive versus About Average			Stigma: About Average versus Unattractive		
	College Degree? (1)	Log Earnings (2)	Self-Placement SES Ladder (3)	College Degree? (4)	Log Earnings (5)	Self-Placement SES Ladder (6)	College Degree? (7)	Log Earnings (8)	Self-Placement SES Ladder (9)
Indirect Effect through Young Adult Social Assets	0.003*	0.041*	0.039*	0.002	0.035*	0.033*	0.000	0.039	0.023
Extraversion	0.000	0.002	0.005*	0.000	0.001	0.002	0.000	0.002	0.006
Optimism	0.001	-0.007	0.008	0.002*	-0.011	0.012*	0.000	0.001	-0.001
Depression	0.001	0.042*	0.020*	0.000	0.013	0.006	0.000	0.021	0.010
Number of close friends	0.001*	0.009	0.008*	0.000	0.002	0.001	0.000	0.003	0.003
Ever married?	0.000	-0.005	-0.002	-0.001	0.030*	0.012*	0.000	0.011	0.005
Indirect Effect through Young Adult Social Distractions/Constraints	0.001	0.007	-0.001	-0.004*	-0.017	-0.004	-0.012*	0.001	-0.014*
Ever cohabited?	0.000	0.001	0.000	0.002	-0.006	0.001	-0.002	0.008	-0.002
Any children?	0.001	0.004	0.001	-0.005*	-0.014*	-0.003	-0.006*	-0.018	-0.004
Log of number of sexual partners	0.000	0.002	-0.001	-0.001	0.003	-0.002	-0.003*	0.012	-0.008*
Indirect Effect through College Degree	--	0.023	0.020	--	0.022*	0.020*	--	0.006	0.005

Note. Total, direct, and indirect effects from Paths E1, E2 and E3 of the structural equation models depicted in Figure 2, with all outcome equations estimated simultaneously and with all equations including the controls listed in Table 1. n = 8,918 observations in each of the five multiply imputed datasets. Values are unstandardized coefficients. Semi-standardized coefficients (B/SD Y) for the dummy coded physical attractiveness variables can be calculated by dividing by the standard deviation of the continuous outcomes which are shown in the first row. Base rates (% coded 1) are shown for indicator outcomes.

* $p < .05$ (two-sided significance tests).

Table 10

Descriptive Statistics for Variables Capturing Differences Within Sibling Pairs in Attractiveness, Overall Transcript GPAs, Earnings, and Self-Perceived SES

	Difference Between Siblings in:											
Type of Siblings	Attractiveness Rating			Overall Transcript GPA			Earnings			Self-Placement on SES Ladder		
	n	*M*	*SD*	*n*	*M*	*SD*	n	M	SD	n	M	*SD*
All sibling pairs	2905	0.02	0.86	2905	-0.01	1.01	723	-0.03	1.20	1495	-0.06	2.18
Monozygotic twins	383	0.04	0.62	383	-0.01	0.77	96	-0.09	0.93	186	0.12	1.87
Dizygotic twins	548	0.05	0.86	548	0.02	0.92	117	-0.17	1.14	257	-0.18	2.20
All full sibling non-twin	1143	0.00	0.90	1143	-0.02	1.02	339	0.01	1.16	654	0.02	2.16
Full, male-male	345	-0.06	0.85	345	-0.07	1.00	131	0.00	1.07	181	0.40	1.90
Full, female-female	325	-0.05	0.87	325	-0.07	0.83	80	-0.01	0.82	203	-0.15	1.99
Full, male-female	473	0.07	0.95	473	0.05	1.15	128	0.04	1.41	270	-0.10	2.40
Half sibling	218	-0.07	0.91	218	-0.15	1.20	51	-0.18	1.03	127	-0.35	2.54
Not related	562	0.06	0.92	562	0.02	1.16	109	0.12	1.63	249	-0.06	2.28

*Note. A*ttractiveness ratings scored 1 = *Very unattractive/unattractive*, 2 = *About average*, 3 = *Attractive*, and 4 = *Very attractive*.

Forty-nine twins of *unspecified* type are included in "all sibling pairs" but not shown in the within-type results.

Table 11
Sibling Correlations and Regressions of Variables Capturing Differences within Sibling Pairs.

	Sibling Correlations				Coefficients for Sibling Difference in Attractiveness From Regression Predicting		
Type of Siblings	Attractiveness	Overall GPA	Earnings	SES Ladder	Sibling Difference in Overall GPA	Sibling Difference in Earnings	Sibling Difference in SES Ladder
All sibling pairs	.41*	.43*	.14*	.19*	0.11*	-0.05	0.17*
Monozygotic twins	.72*	.65*	.55*	.31*	0.00	-0.12	0.07
Dizygotic twins	.41*	.51*	.08	.16*	0.07	0.06	0.29
All full sibling non-twin	.37*	.41*	.10	.21*	0.17*	-0.09	0.23*
Full, male-male	.36*	.41*	.08	.29*	0.15*	-0.06	0.18
Full, female-female	.43*	.57*	.26*	.31*	0.10	0.01	0.04
Full, male-female	.31*	.29*	.05	.12	0.21*	-0.20	0.37*
Half sibling	.22*	.23*	.00	.03	0.16	0.16	-0.08
Not related	.31*	.25*	.02	.07	0.06	0.00	0.13

Note. Sample sizes shown in Table 10. *A*ttractiveness ratings scored 1 = *Very unattractive/unattractive*, 2 = *About average*, 3 = *Attractive*, and 4 = *Very attractive*.
*$p < .05$. (two-sided significance test)

Table 12
Associations of Physical Attractiveness with Overall GPAs, with Young Adult Logged Earnings, and with Adult Self-Placement on SES Ladder in OLS Regression Models: With Sibling Fixed Effects

	Overall Transcript GPA		Log of Annual Earnings		Self-Placement on SES Ladder	
	Without Sibling Fixed Effects (1)	With Sibling Fixed Effects (2)	Without Sibling Fixed Effects (3)	With Sibling Fixed Effects (4)	Without Sibling Fixed Effects (5)	With Sibling Fixed Effects (6)
Physical Attractiveness						
Diffuse status: Fairest of all Very attractive versus attractive	0.08* (0.02)	0.07* (0.03)	0.11* (0.03)	0.05 (0.12)	0.15* (0.05)	0.18 (0.21)
Diffuse status: Standing out Attractive versus about average	0.08* (0.02)	0.07* (0.02)	0.09* (0.02)	0.07 (0.14)	0.21* (0.04)	0.16 (0.14)
Stigma About average versus unattractive	0.00 (0.03)	0.00 (0.04)	0.03 (0.04)	-0.13 (0.23)	0.08 (0.06)	0.10 (0.21)

Note. n = 25,962 for GPAs. n = 8,893 for earnings. n = 12,997 for SES ladder. Values are unstandardized coefficients (standard errors in parentheses adjust for the clustering of youth within schools). Each outcome equation is estimated on its own using Stata's *regress* (without sibling effects) or *xtreg* (with sibling fixed effects) command and includes all of the controls listed in Table 1. Both models also adjust for interviewer fixed effects using the Stata *xi* command.
* $p < .05$. (two-sided significance tests).

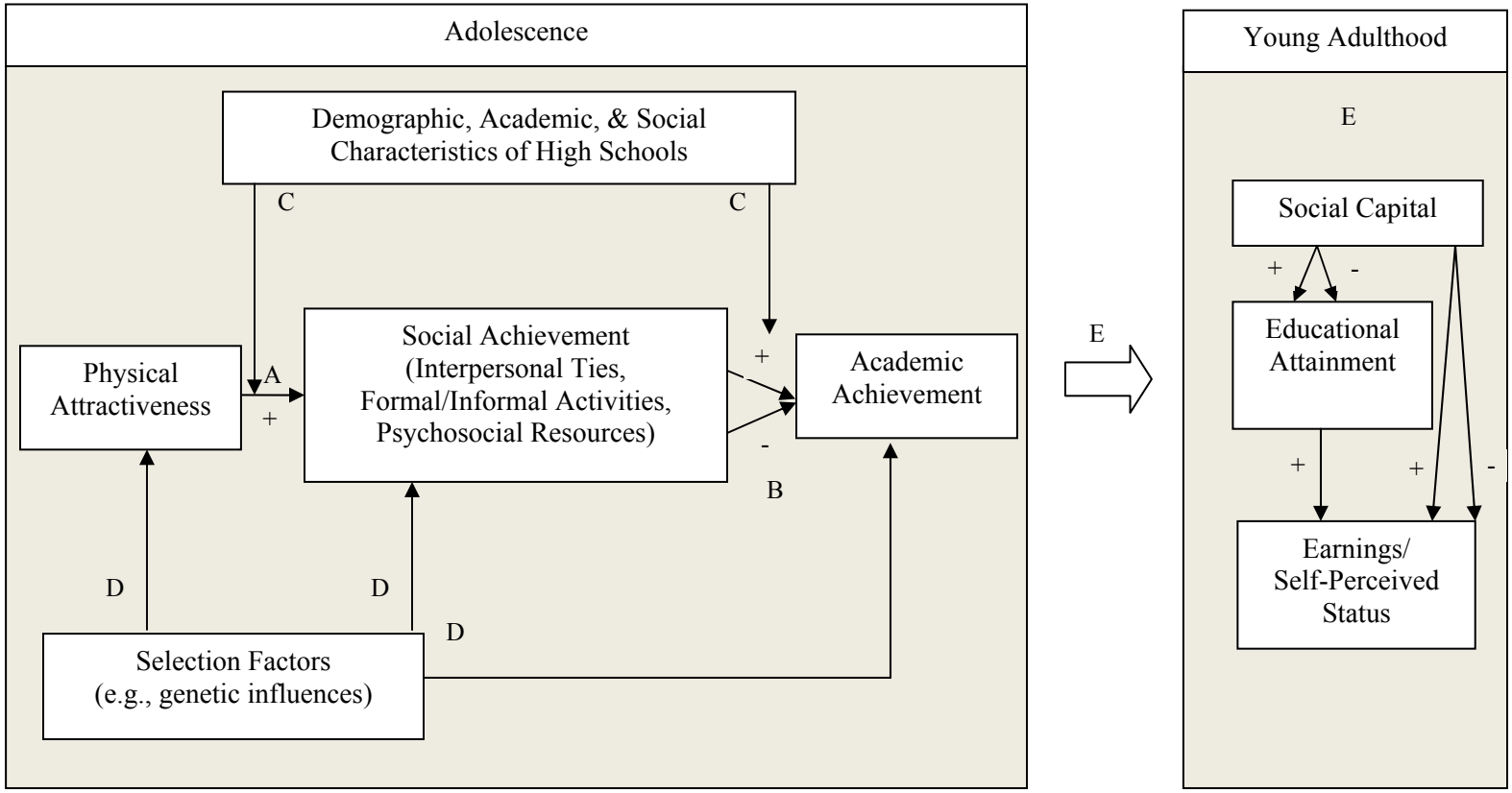
Table 13
Descriptive Statistics of Schools

	M or %	*(SD)*
School Size		
Number of students	864.55	(710.18)
Big school (more than 2000 students)	9.0	
Educational Climate		
Average student expectations about college attendance	6.32	(0.57)
College-bound climate (Average more than "pretty likely")	38.6	
Attractiveness Climate		
Percentage of students average in looks	0.46	(0.23)
Average-looks climate (More than 50 percent are of average looks)	25.0	
Dating Climate		
Percentage of students with a romantic partner	0.47	(0.20)
Dating-intensive climate (More than 50 percent have romantic partners)	39.0	
Friendship Climate		
Average number of friendship nominations	4.32	(2.22)
Friendship-intensive climate (Average more than four)	53.5	
Mental Health Climate		
Average depression level	11.12	(3.61)
Poor mental health climate (Average above 11)	55.3	
Public School	91.7	

Note. $n = 132$.

Figures

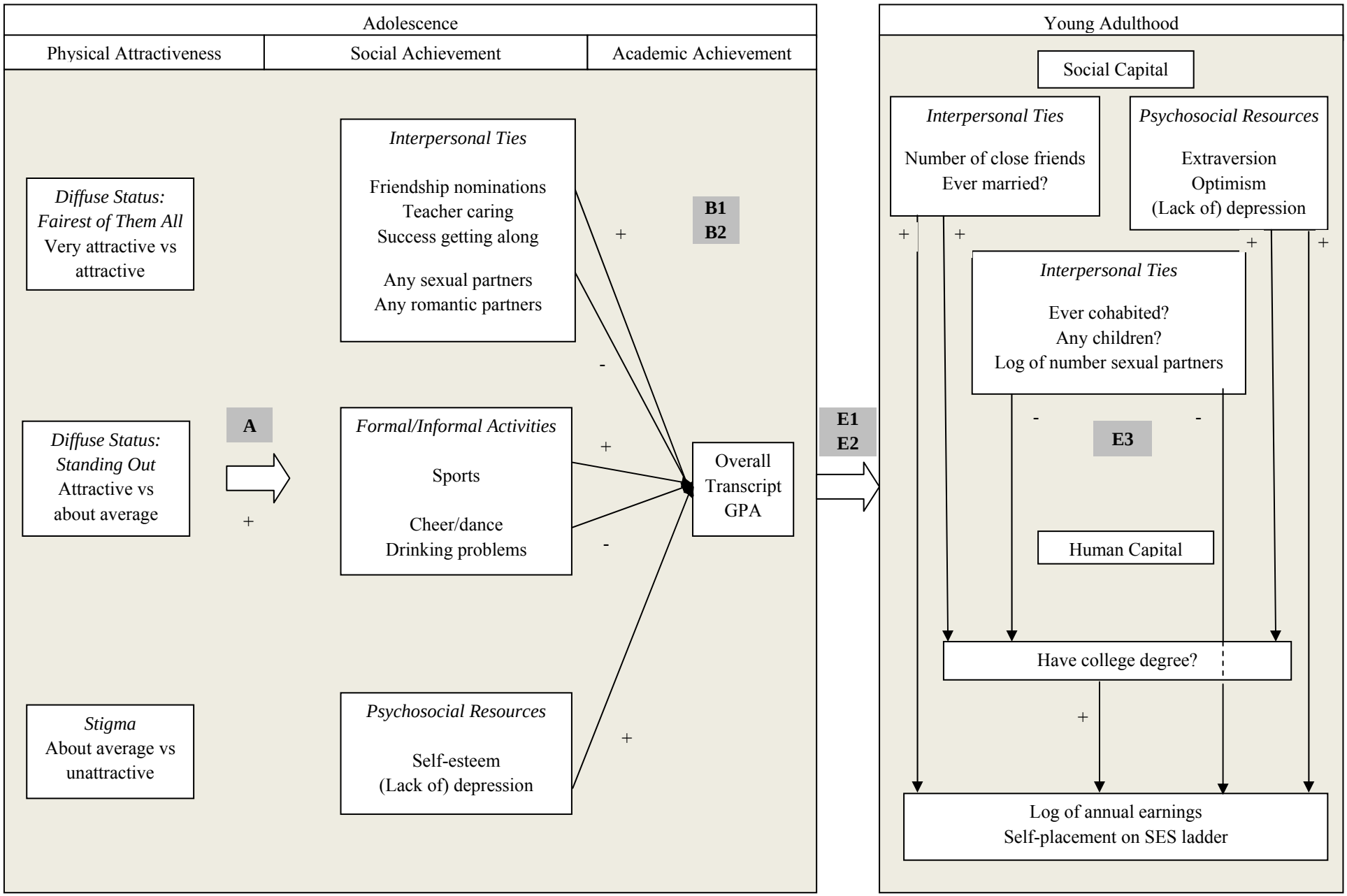
Figure 1
Working Conceptual Model



Note. For simplicity, we focus on the paths central to our hypotheses, and do not show all paths we anticipate (for example, an anticipated direct pathway from physical attractiveness to academic achievement is omitted).

Figure 2.

Operationalization of Working Conceptual Model in Add Health

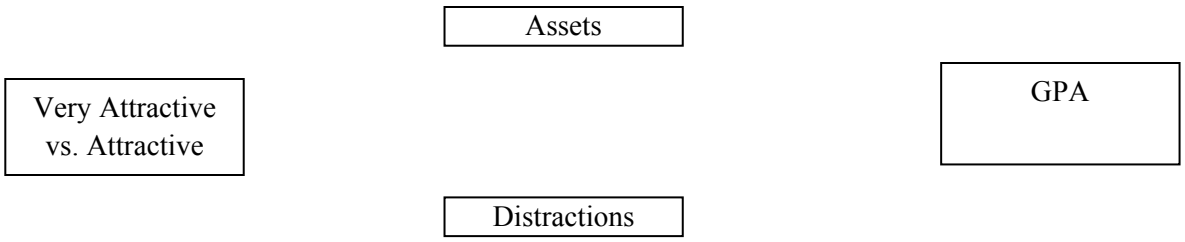


Note. For simplicity, we focus on the paths central to our hypotheses, and do not show all paths we anticipate (for example, an anticipated direct pathway from physical attractiveness to academic achievement is omitted). We also omit from this figure control variables and school-level moderators (Hypotheses C and D).

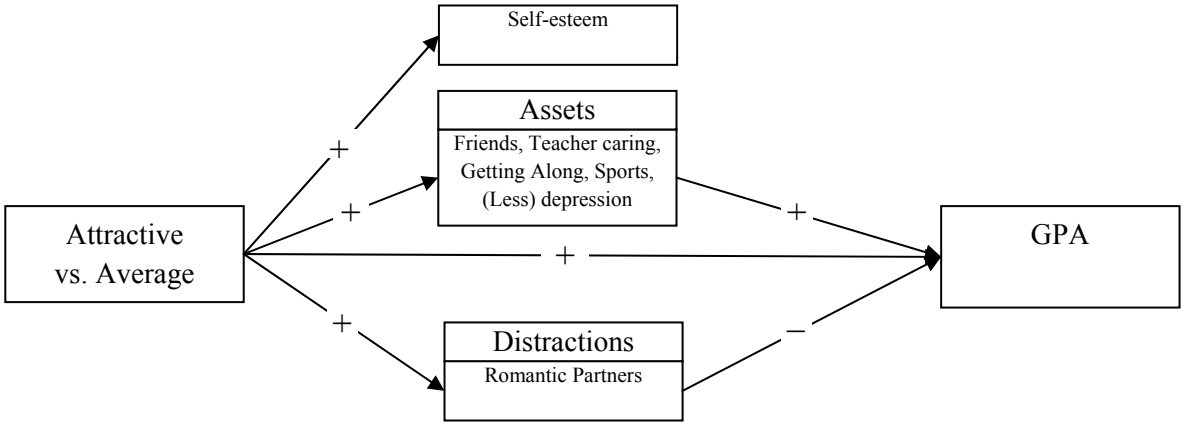
Figure 3

Summary of Add Health Findings in High School

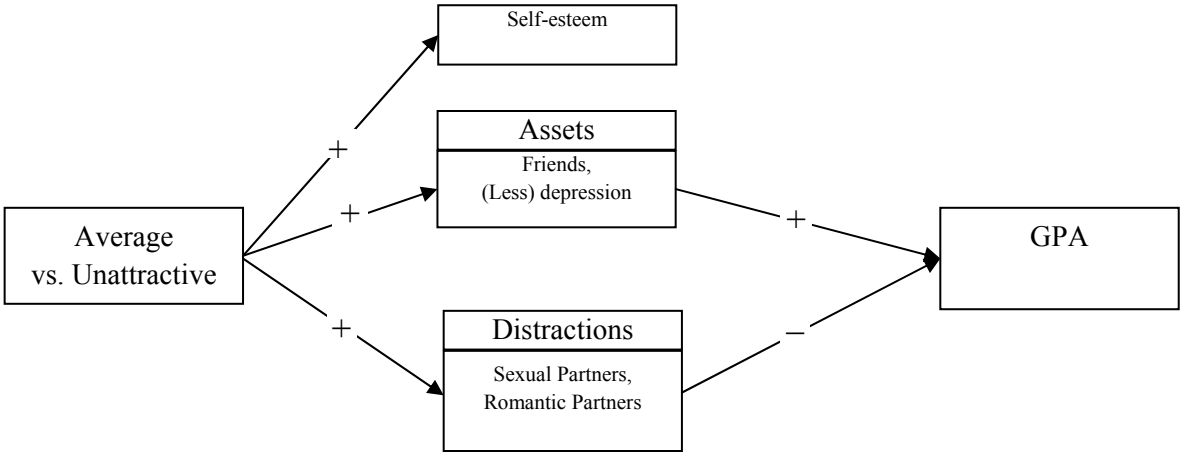
a. Diffuse Status: Fairest of Them All



b. Diffuse Status: Standing Out



c. Stigma

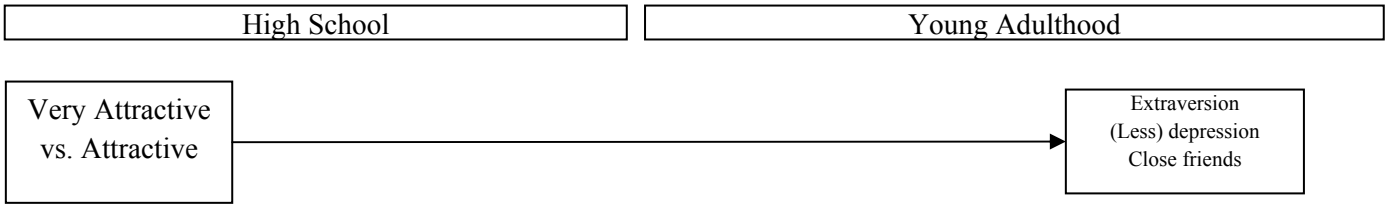


Note. These figures are summaries of portions of our full structural equation models. Not all paths and covariates are shown.

Figure 4

Summary of Add Health Findings for Social Attainment in Young Adulthood

a. Diffuse Status: Fairest of Them All



b. Diffuse Status: Standing Out

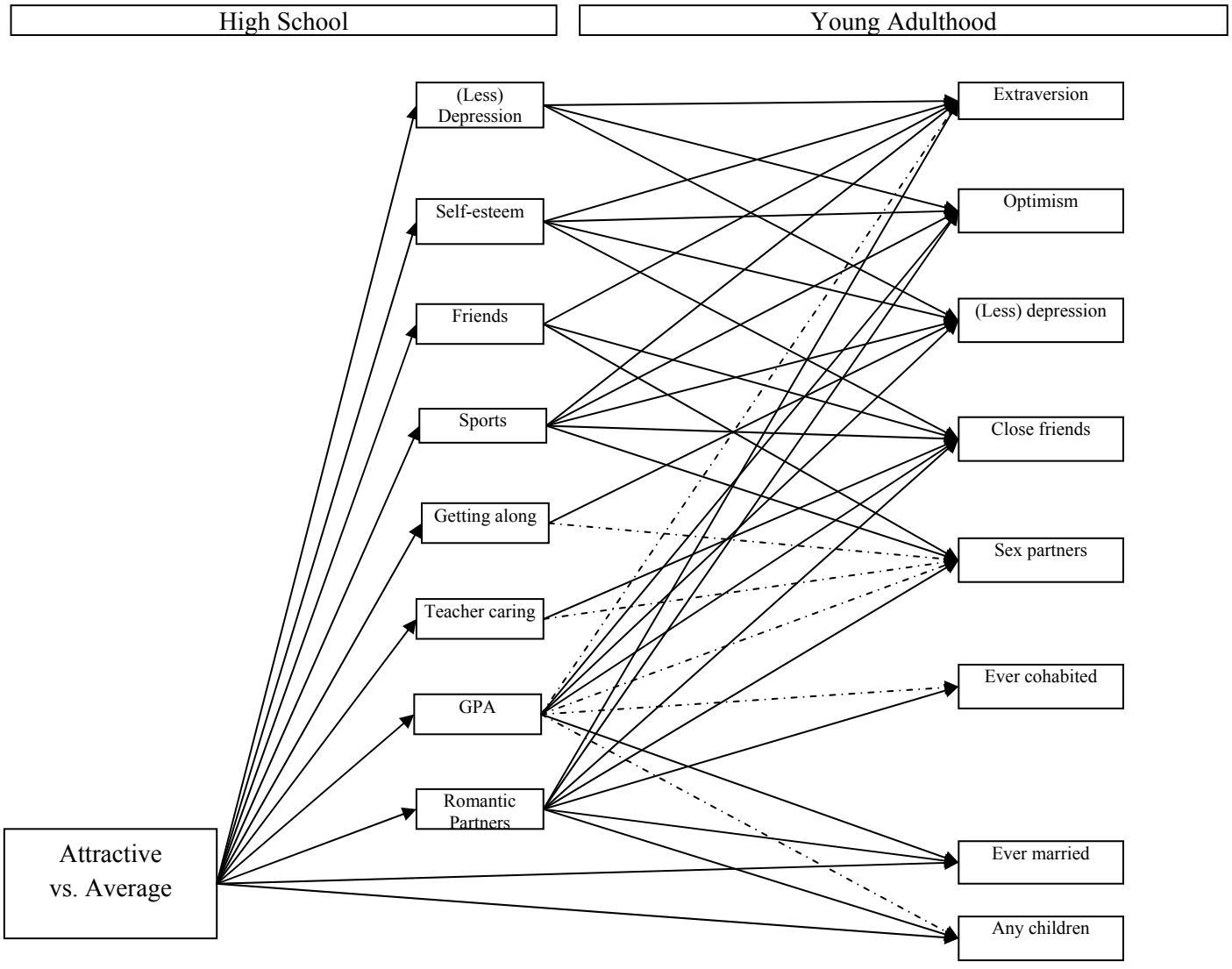


Figure 4

Summary of Add Health Findings for Social Attainment in Young Adulthood (continued)

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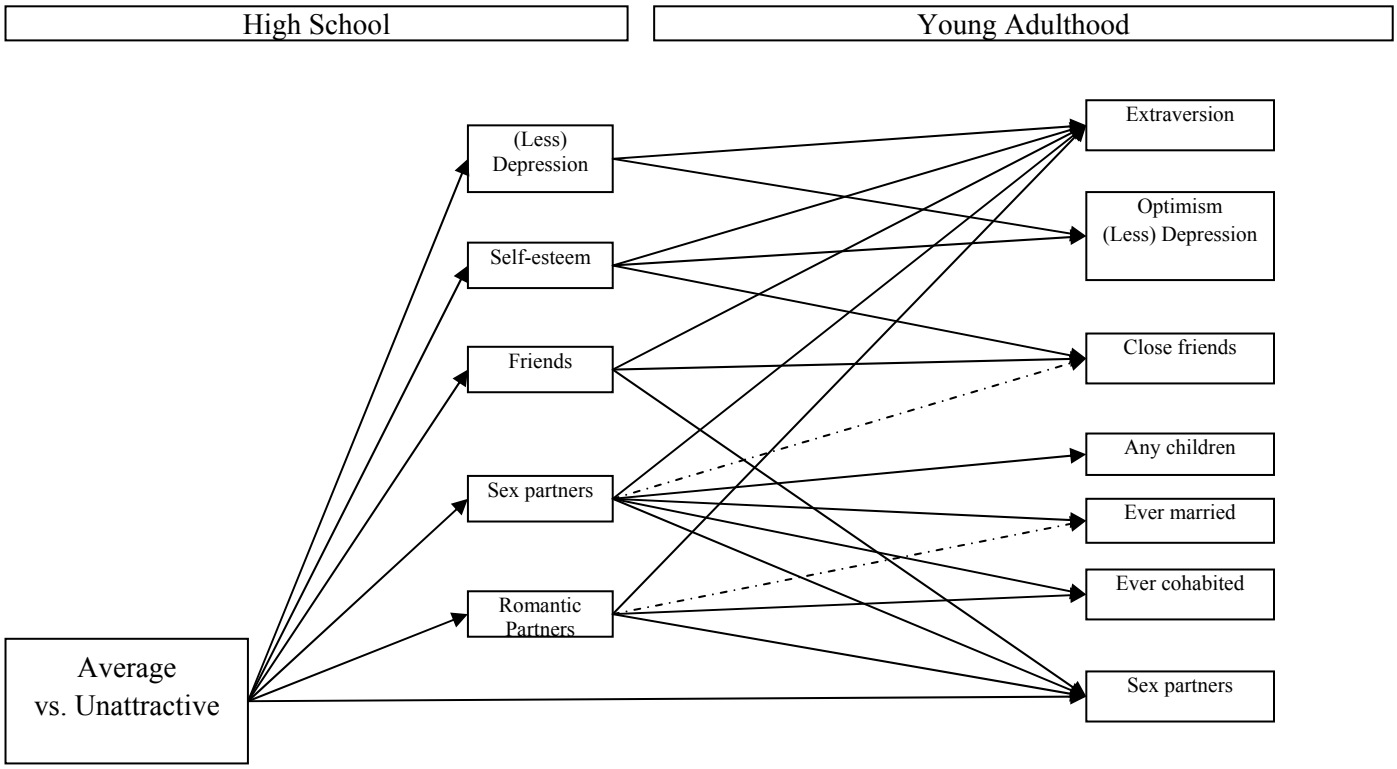
c. Stigma

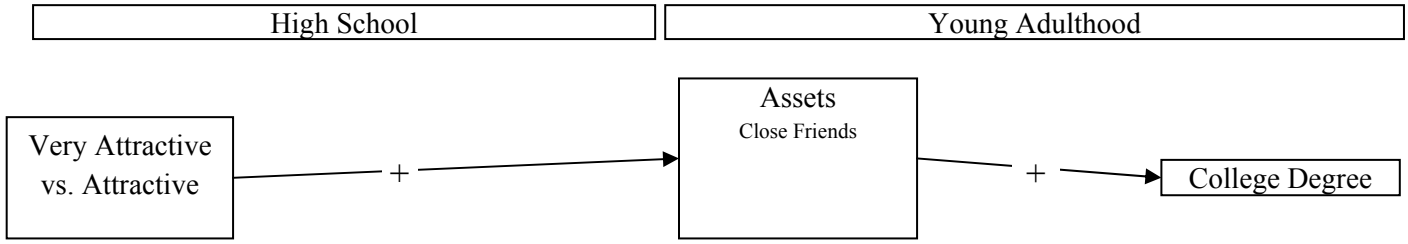


Note. These figures are summaries of portions of our full structural equation models. Not all paths and covariates are shown. Due to the number of lines in these figures, we use solid lines to represent positive association and dashed lines to represent negative associations.

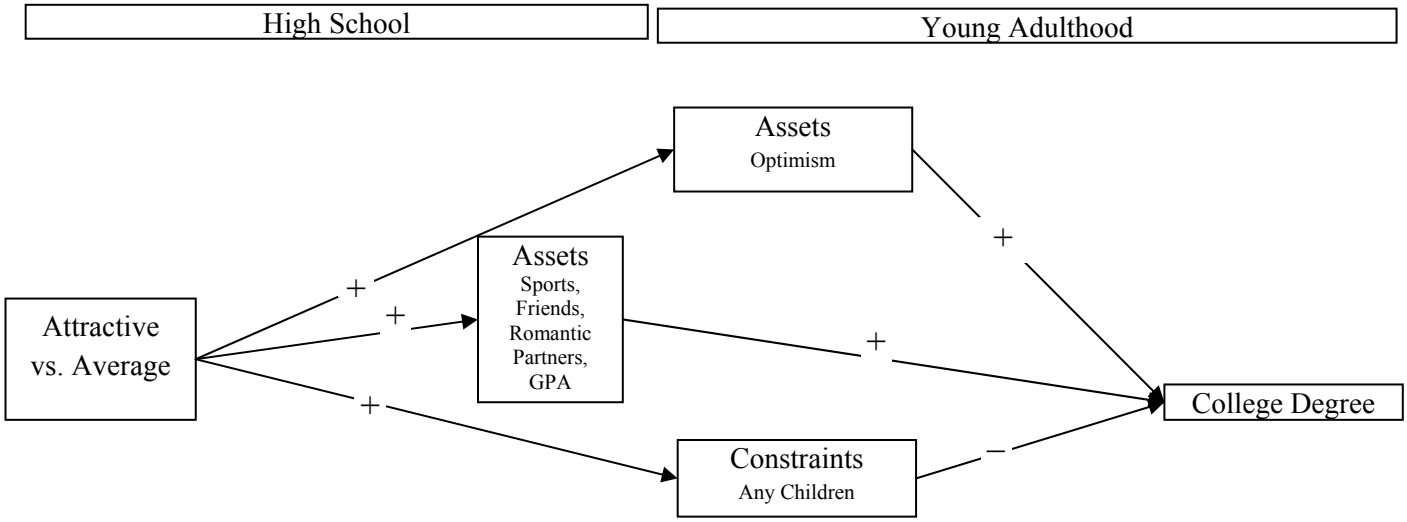
Figure 5

Summary of Add Health Findings for College Degree Attainment in Young Adulthood

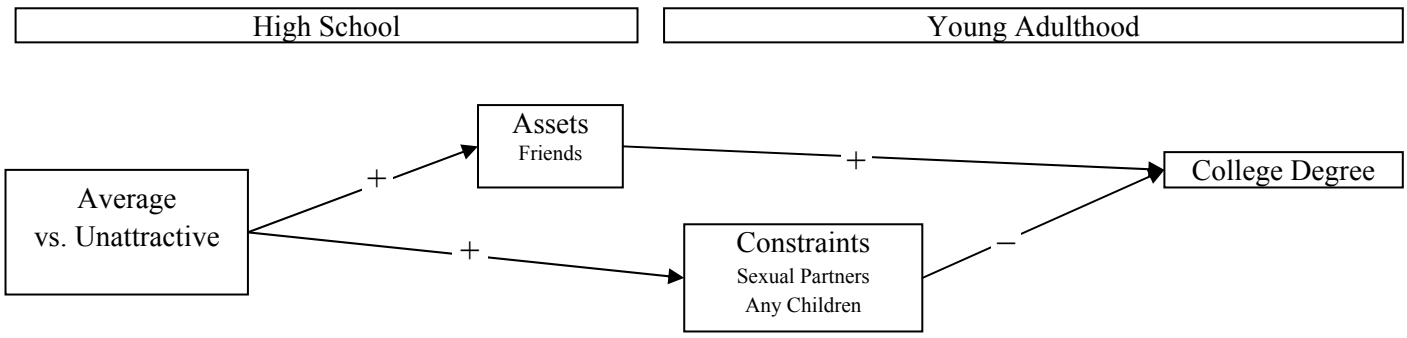
a. Diffuse Status: Fairest of Them All



b. Diffuse Status: Standing Out



c. Stigma

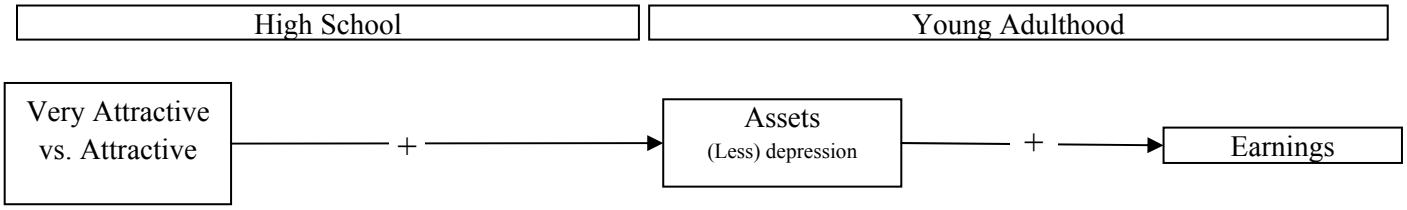


Note. These figures are summaries of portions of our full structural equation models. Not all paths and covariates are shown.

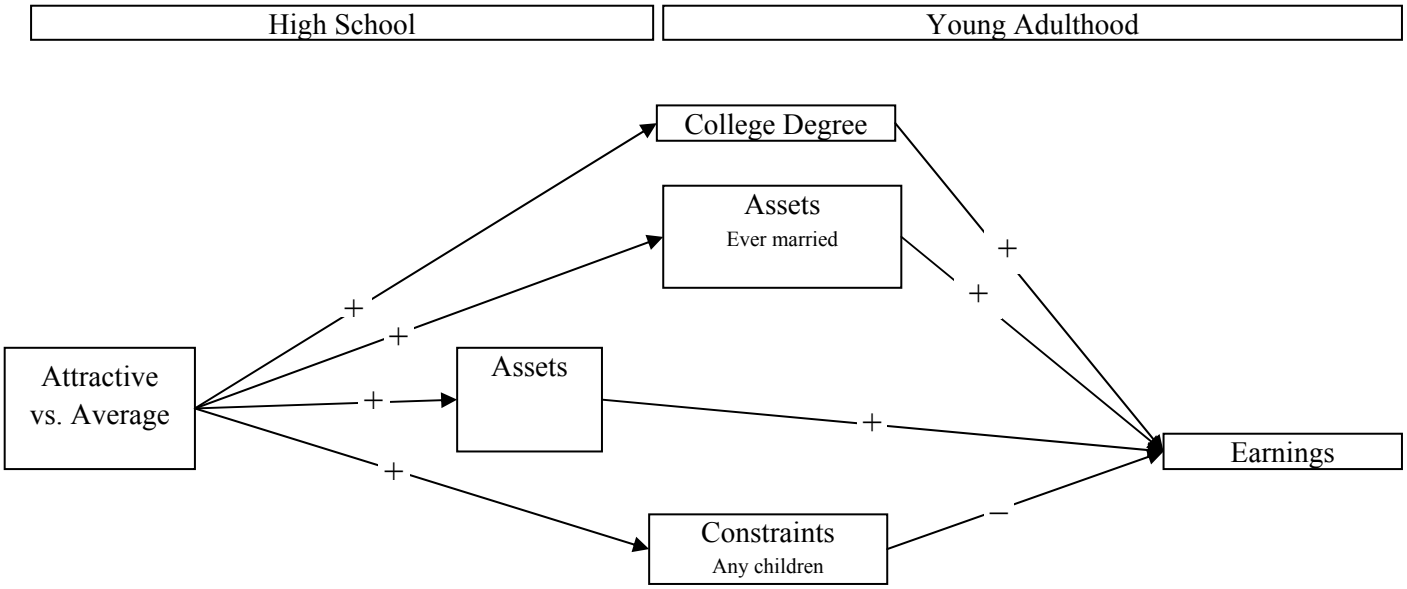
Figure 6

Summary of Add Health Findings for Earnings in Young Adulthood

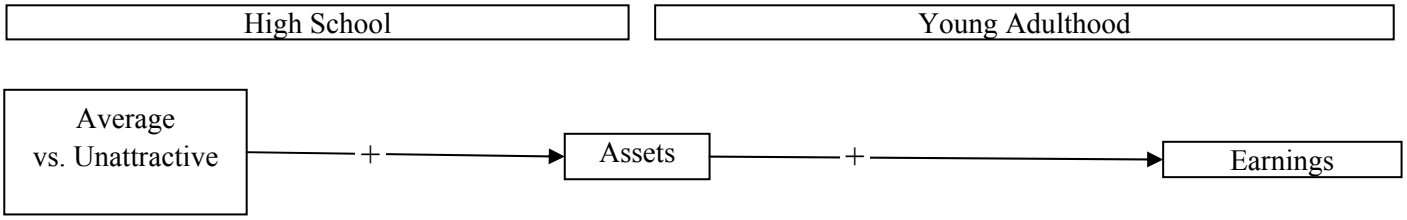
a. Diffuse Status: Fairest of Them All



b. Diffuse Status: Standing Out



c. Stigma

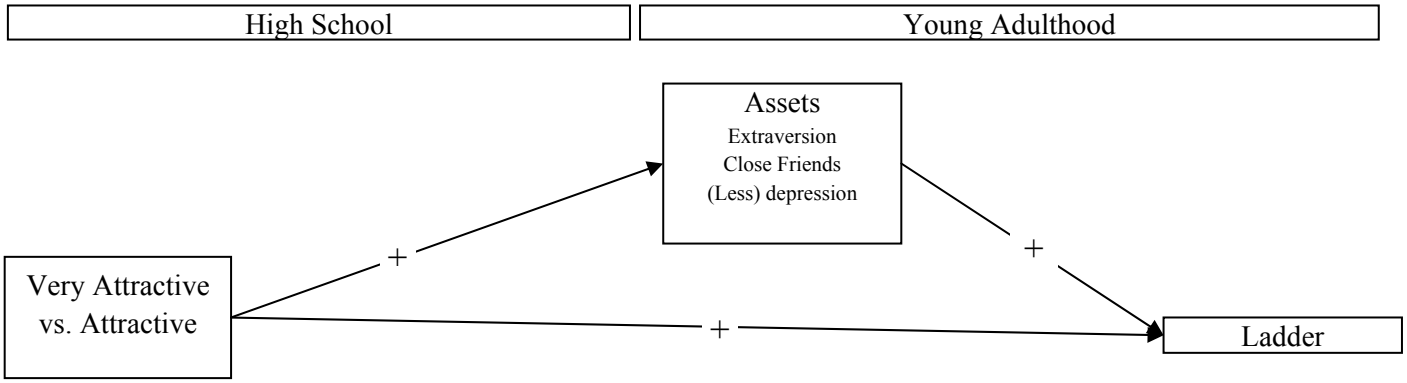


Note. These figures are summaries of portions of our full structural equation models. Not all paths and covariates are shown.

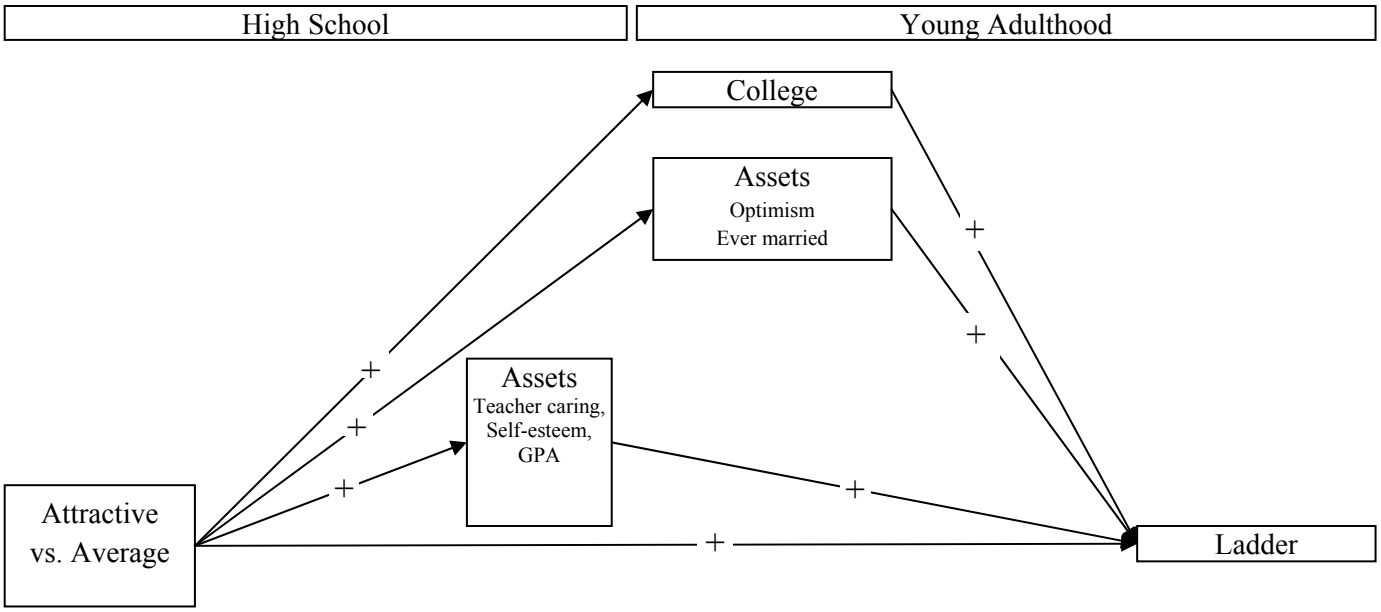
Figure 7

Summary of Add Health Findings for SES Ladder Placement in Young Adulthood

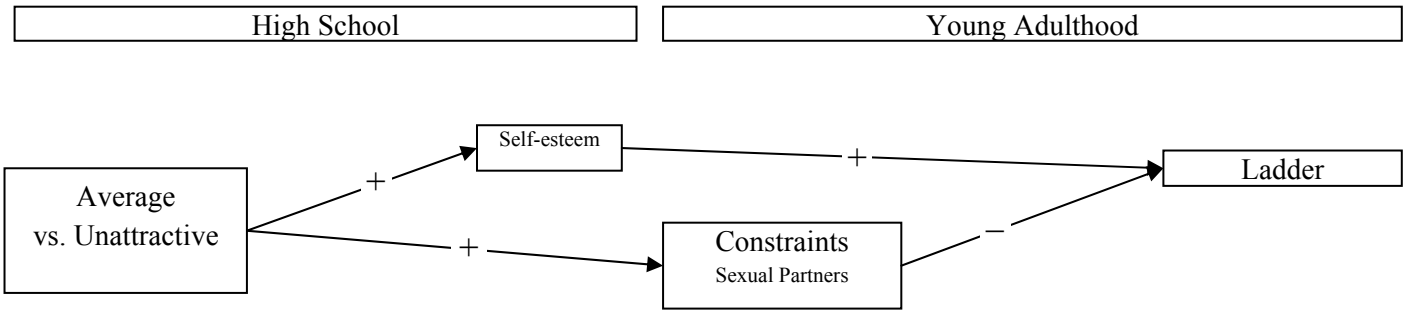
a. Diffuse Status: Fairest of Them All



b. Diffuse Status: Standing Out



c. Stigma



Note. These figures are summaries of portions of our full structural equation models. Not all paths and covariates are shown.

Figure 8

Indicator Response Probabilities from Latent Class Analysis

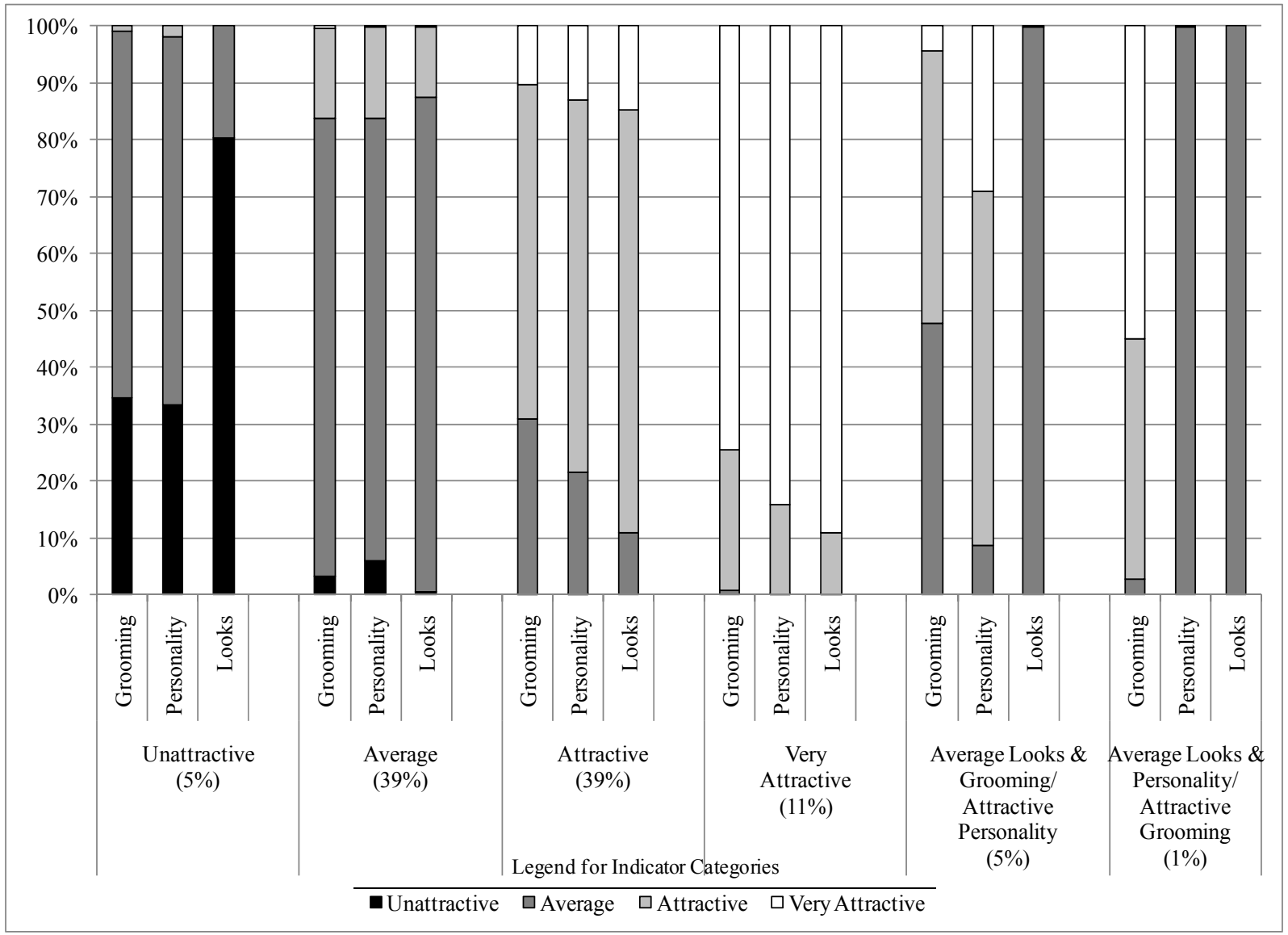


Figure 9

Percentage Distribution in Six Latent Class Categories by Gender and Race-Ethnicity

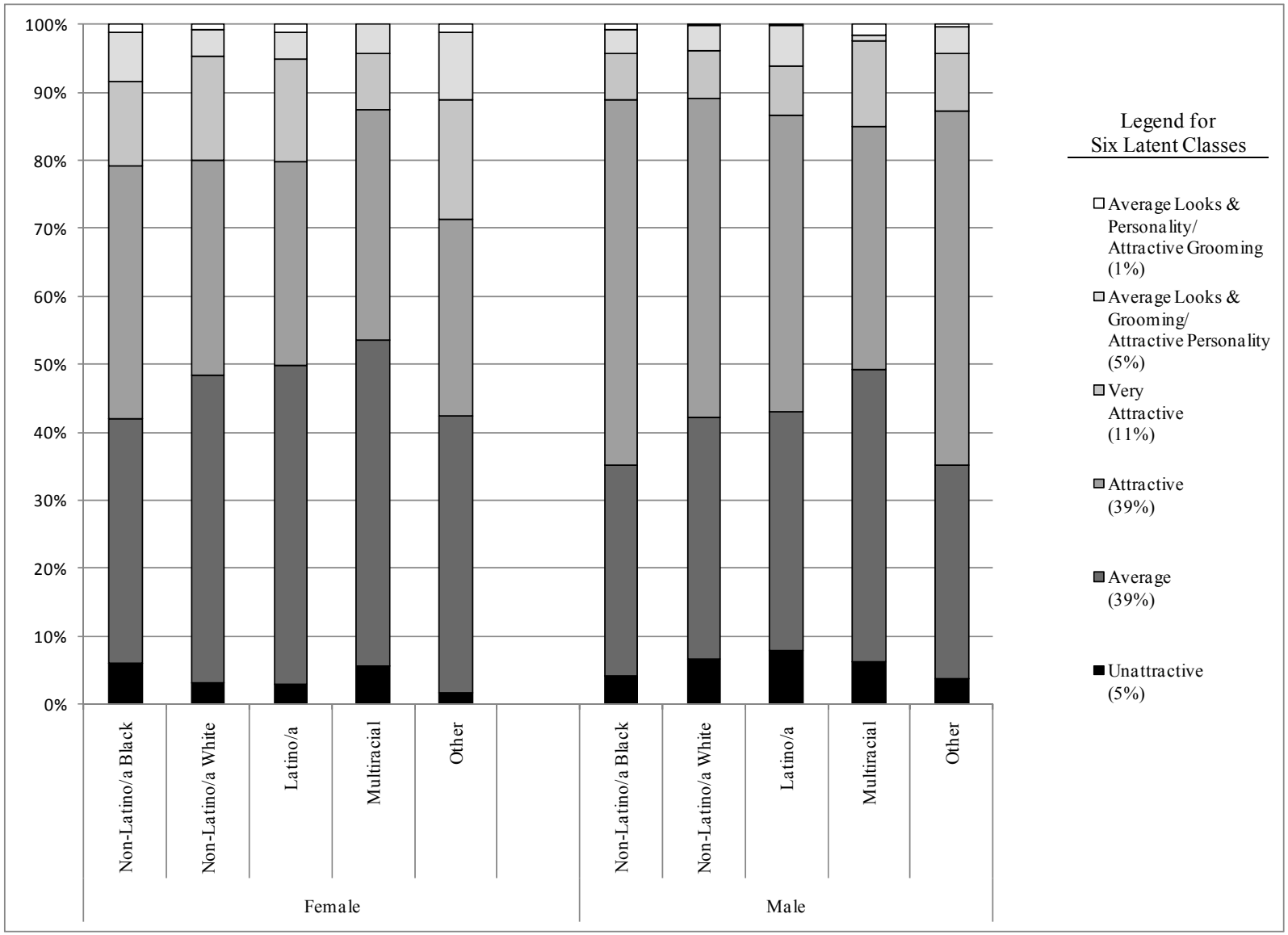


Figure 10
Average GPA within Six Latent Class Categories

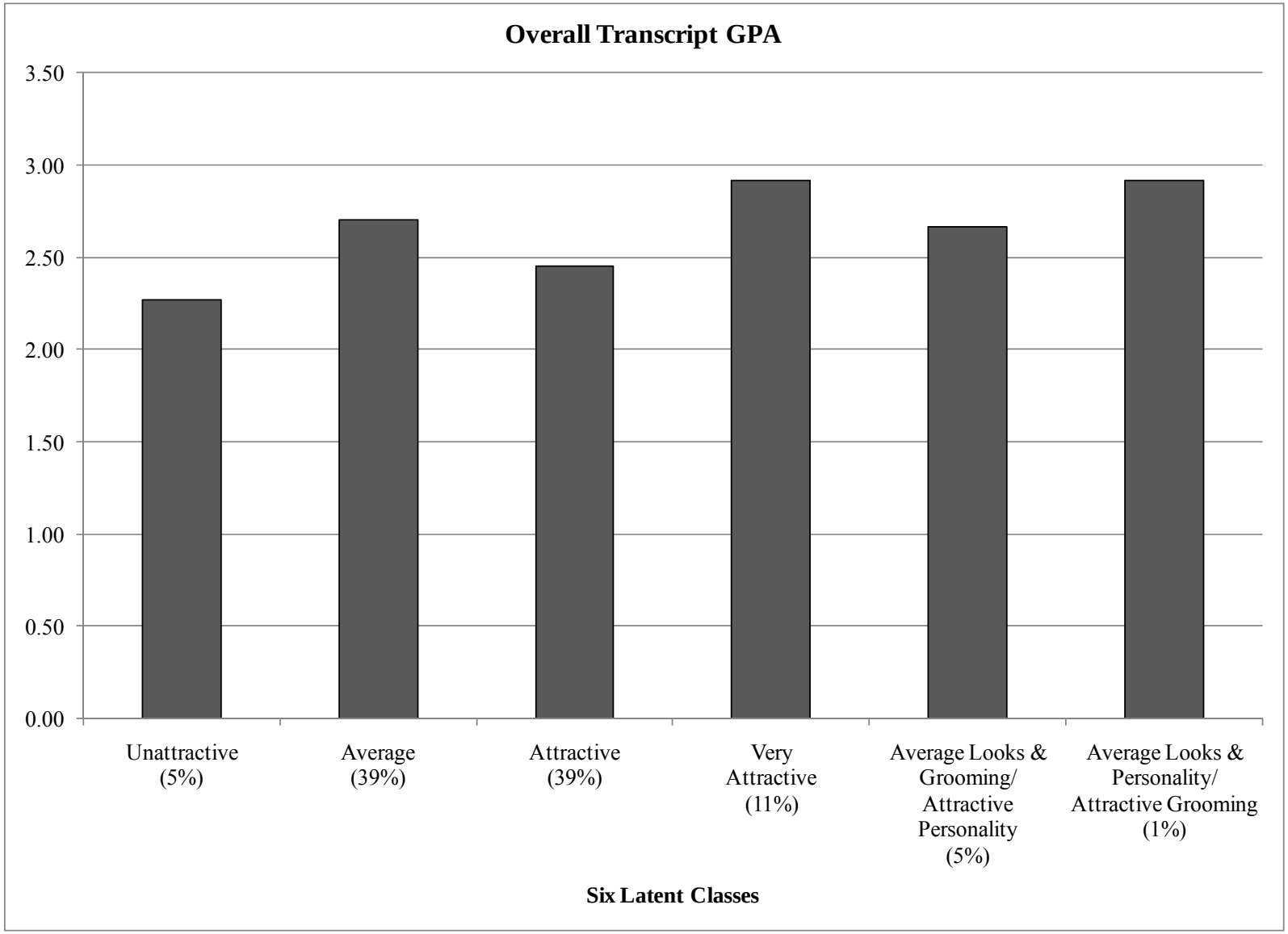
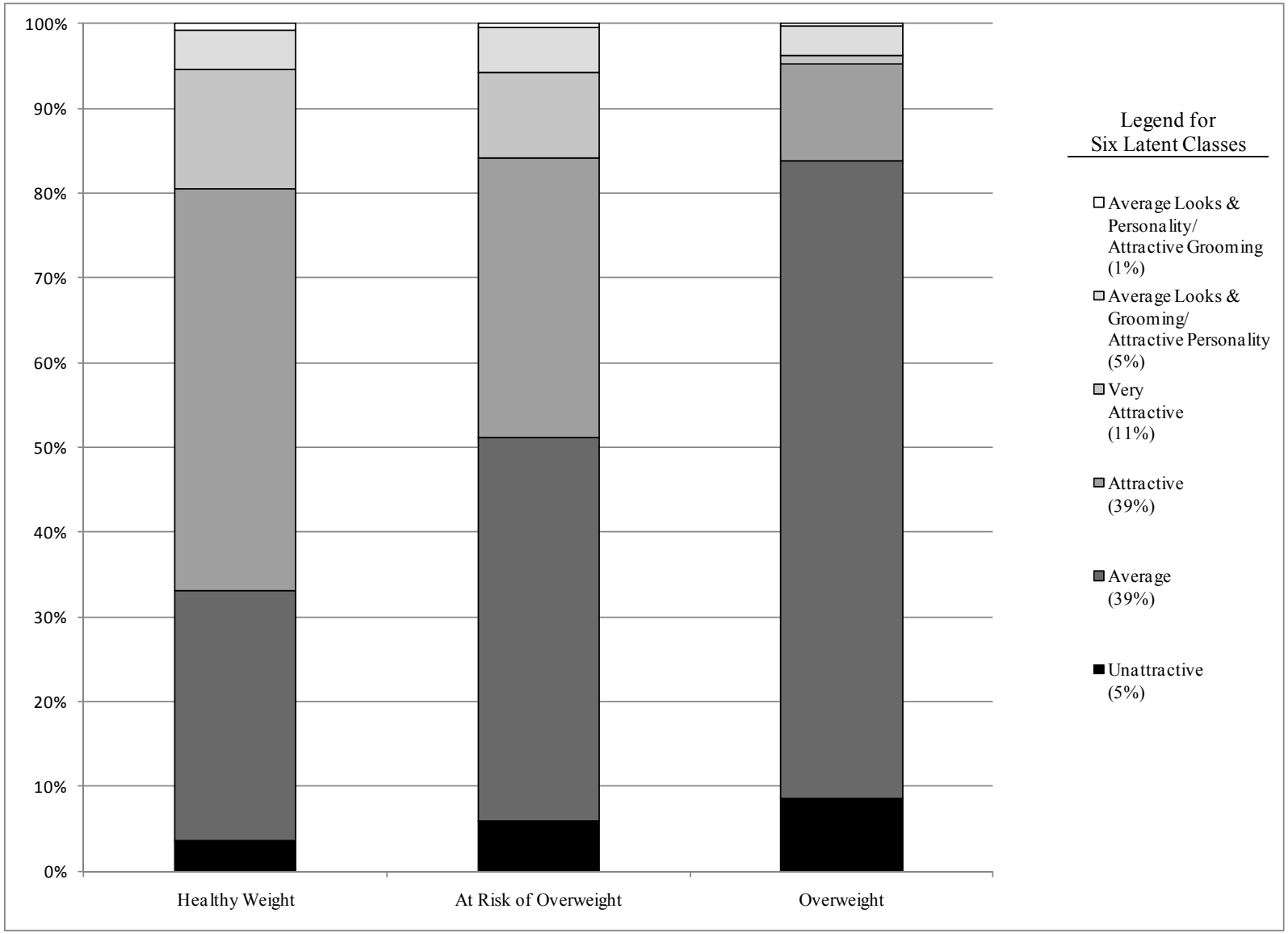


Figure 11

Percentage Distribution in Six Latent Class Categories by Weight Status



Endnotes

[1] If youth had both Wave I and Wave II data, we kept the earlier wave (6,898 youth were from Wave I and 1,512 from Wave II). If siblings were in the datafile, we kept the younger sibling.
[2]We obtained similar results with listwise deletion (results available from the authors).
[3] We defined multiracial youth as those who selected more than one response to the question "What is your race?" Youth who selected only one race were assigned to the selected race category if they also responded "no" to the question "Are you of Hispanic or Latino origin." Youth who selected one race but responded "yes" to the question on Latino/a ancestry were coded as Latino/a.
[4] Characteristics of interviewers, like gender and race-ethnicity, were not available at Add Health Waves I and II, although we obtained similar results in models that included dummy indicators for interviewers in order to adjust for unmeasured interviewer fixed effects. We also demonstrated that results were robust to adjusting for measured characteristics of interviewers using Wave IV attractiveness ratings (please see Appendix S1, available online at XX_WILEY_URL_XX).
[5] If the association between attractiveness and achievement increased by the same amount with each one unit increase on the attractiveness scale, we could use a linear term for attractiveness., We found evidence of non-linearity for most outcomes, however, providing empirical support that dummy coding was preferable (results available from the authors).
[6]We included cheerleading/dance and sports, and not other activities, because these were the only activities that were correlated with physical attractiveness in initial models. We separated the two activities because initial results suggested that sports would be a social asset, but that cheerleading might be a social distraction. Specifically, in initial models, all school activities except for cheerleading were positively associated with overall GPAs. Of note, initial models also suggested that all activities, except participation in computer, math and science clubs, were also positively associated with the number of friendship nominations.
[7]In adolescence, the sum of 19 items was correlated at .96 with the sum of the 10 items that were repeated at Wave IV and was correlated at .88 with a 5-item measure identified by Perreira, Deeb-Sossa, Harris and Bollen (2005). Additionally, although Perreira and colleagues (2005) found greater measurement invariance across racial-ethnic groups at the high school waves with the 5-item measure, in initial models we found the same pattern of significance and no interactions by race-ethnicity (nor by gender or gender and race-ethnicity) when predicting the 5-item measure based on physical attractiveness (results available from the authors).
[8] In initial models, we examined additional school characteristics, including a heterogeneity index for race-ethnicity and for parent education, a measure of "academic press" (average GPA, percent of students taking math/science classes, average expectations about the chances of attending college, the percentage of seniors who go on to college), the within-school correlation between attractiveness and GPAs, school-level sex segregation in networks, and school-level average network size. Since these were not significant, and to reduce the volume of results in the manuscript, we focused on the variables described in the text.
[9] Again, all equations depicted in Figure 2 were estimated in a single structural equation model, controlling for all of the control variables listed in Table 1. We used separate tables only to simplify the presentation.

[10] In part the difference between our finding and prior research on adult earnings may also reflect our focus on indirect pathways from looks in high school to earnings. In additional models, we found significant total effects for interviewers' contemporaneous ratings of young adults' looks at study Wave IV (results available from the authors).

[11] In these analyses, the attractiveness ratings were in continuous form, coded from 1 to 4.

[12] For these analyses, we included all siblings in the data at each wave, and so the total sample size was larger than the sample size we relied on for our structural equation models.

[13] We examined several additional school characteristics, including the racial-ethnic diversity of the school, but focus on this set because of their emergence in the qualitative analyses and their performance in initial quantitative analyses.

[14] We similarly examined associations of attractiveness with outcomes by the dummy indicators of different types of schools listed in Table 13. In most cases, significant associations were evident in schools with and without a particular characteristic, solidifying the evidence that the lack of interactions was not just due to low power but rather that the effect of attractiveness was evident across schools of various types (results available from the authors).

Appendix S1

Examining the Effect of Interviewer Characteristics on Ratings of Physical Attractiveness, Personality, and Grooming and the Implications of Controlling for Interviewer Characteristics for Associations of Physical Attractiveness with Adolescent and Young Adult Outcomes

Unfortunately, Add Health did not record interviewer characteristics at the first two waves of the study, and interviewer IDs cannot be linked across waves. Thus, we could not examine how interviewer characteristics affected the ratings of youth attractiveness, personality, and grooming during high school.

We were fortunate, however, that interviewer characteristics were recorded at the young adult follow-up (Wave IV), and these interviewers also rated the young adults' attractiveness, personality, and grooming. For this Appendix, we used these data to examine the extent to which interviewers with particular characteristics might systematically differ in their ratings of the young adults and whether adjusting for these interviewer characteristics affected the associations of their ratings with the young adults' outcomes. Doing so provided a robustness check—gauging how much of a problem the lack of interviewer characteristics in the adolescence waves was likely to be for our analyses.

Throughout our project, we have been able to control for unobserved differences among interviewers with the interviewer fixed effects strategy. We also demonstrated in this Appendix with the Wave IV data that controlling for measured interviewer characteristics and controlling for interviewer fixed effects produce comparable results in our application (largely because we found little bias due to interviewer characteristics in the estimation of the effect of beauty on youth outcomes).

Effect of Interviewer Characteristics on Ratings of Physical Attractiveness, Personality and Grooming

As shown in Table A1, the Wave IV interviewers were primarily non-Latino/a White (64%) and female (89%). They averaged 55 years of age. The majority had attained some college (37%), a college degree (29%) or some graduate training (20%). Although they averaged nearly 8 years of experience interviewing, most (74%) had not participated in prior Add Health interviews.

Since most interviewers were female, a super-majority of young adult women had same-gender interviewers (90%), and few young adult men had same-gender interviewers (12%). Matching on race-ethnicity was most common for non-Latino/a White young adults, not surprisingly given that most interviewers and most interviewees were non-Latino/a White. Specifically, three-quarters (75%) of non-Latino/a White, over one-third of non-Latino/a African American (38%), and one quarter of Latino/a (25%) young adults had same-race interviewers.

To examine how interviewer characteristics predicted attractiveness ratings, we used ordered logit models with the five-category Wave IV ratings of attractiveness, personality, and grooming as the outcomes and Wave IV interviewer characteristics as the predictors. We tested for interactions between gender of the respondent and gender of the interviewer and between each racial-ethnic category of the respondent and the interviewer. We also included main effects for the rest of the variables shown in Table A1. Additionally, we adjusted for the youths' attractiveness ratings in high school, so that we could test for interviewer effects above and beyond any stable aspects of youth physical attractiveness.

Overall, these analyses revealed that gender of the respondent and the interviewer were significantly associated with all three ratings (looks, personality, and grooming), race-ethnicity of interviewer was associated with two ratings (looks and grooming), and interviewer age and education were each associated with one rating (age with personality; education with grooming). The effect of interviewer gender depended on respondent gender (interactions were statistically significant at $p < .05$ for personality and grooming and approached significance at $p < .07$ for looks). The effect of interviewer race generally did not depend on respondent race, except that non-Latino/a African American and White interviewers' ratings of grooming depended on whether the respondent was the same race as the interviewer.

We calculated predicted probabilities to illustrate the significant results. Figure A1 shows the results for interviewer and respondent gender. The figure also lists the percentage of youth in each prediction category. The results show that both male and female interviewers were more likely to rate women than men as attractive, although this difference was greater among male interviewers. For example, in Figure A1a, we see that, among young adult men rated by male interviewers, 54% were rated average in looks and 30% attractive in looks. In contrast, among young adult women rated by male interviewers, just 47% were rated as average in looks and 37% were rated as attractive. These two groups, however, made up just 6% and 5% of the sample, respectively. Most youth were rated by female interviewers, and here the gap by respondent gender was smaller (e.g., 36% of men rated by female interviewers were coded as attractive in contrast to 39% of women rated by female interviewers). We see similar results in Figure A1b and Figure A1c—the widest gaps were evident between men and women rated by male interviewers, two groups that made up a relatively small fraction of the sample.

Figure A2 shows the magnitude of the significant results for race-ethnicity. In Figure A2a, we show the results for non-Latino/a Whites and African Americans, the groups in which interviewer and respondent race-ethnicity interacted. We see that interviewers who were non-Latino/a White rated respondents who were of the same race-ethnicity as more attractive than those who were not (32% of non-Latino/a African American respondents rated as attractive versus 35% of non-Latino/a White respondents). Likewise, interviewers who were non-Latino/a African American rated respondents of their same race-ethnicity as more attractive than those who were not (37% of non-Latino/a African American respondents rated as attractive versus 32% of non-Latino/a White respondents). In terms of Latino/a ethnicity, Figures 2b and 2c show

that Latino/a interviewers rated young adults as less attractive, on average, than did non-Latino/a interviewers, regardless of respondent ethnicity (33% versus 38% on looks in Figure A2b; 32% versus 35% on grooming in Figure A2c).

Figure A3 shows that there was also a tendency for older interviewers to rate respondents as more attractive and for better educated interviewers to rate respondents as less attractive, although the differences were small in absolute terms. For example, Figure A3a shows that interviewers in their 60s and 70s rated about 41% of respondents as attractive, in comparison to interviewers in their 20s, who rated about 36% of respondents as attractive. Likewise, in Figure A3b we see that whereas 38% of interviewers with a high school diploma rated respondents as attractive, just 35% of interviewers with some graduate school or a graduate degree did so.

In short, there was evidence of a systematic association between interviewer characteristics and attractiveness ratings, although the differences were generally small in substantive magnitude and/or applied to groups of interviewers and youth that made up a relatively small portion of the Add Health sample. It is also worth pointing out that, of course, we could not separate interviewer characteristics from true differences because only one interviewer rated each study participant (in other words, it is possible that the young adults that Latino/a interviewers rated may have truly been less attractive than the young adults who were rated by Latino/a interviewers).

Implications of Controlling for Interviewer Characteristics on Associations of Physical Attractiveness on Outcomes

To examine the implications of controlling for interviewer characteristics on the associations of physical attractiveness with social and academic achievement, we estimated a series of three models for each Wave IV outcome. The first model (Model A) mirrored the models reported in the manuscript, although we focused on the total effects (adjusting for the youth, family, and parental controls listed in manuscript Table 1) and used Wave IV ratings (rather than Wave I or Wave II ratings) of attractiveness. The second model (Model B) added the measured interviewer characteristics from Table A1 to the model. The third model (Model C) added interviewer fixed effects to Model A. These latter fixed effects models capitalized on the fact that the interviewers rated more than one youth (the median number of youth rated per interviewer was 34, with a range from 1 to 162). These multiple ratings per interviewer allowed us to adjust for stable characteristics of interviewers, even those that were not directly measured by the study (e.g., not only race-ethnicity and gender but also harder to measure attributes like personal aesthetic tastes). Fixed effects models can be estimated in several equivalent ways, but the intuition may be best conveyed by the approach that adds a dummy variable for each interviewer. This estimation method adjusts for an interviewer's own average attractiveness rating, thus washing away the tendency for particular interviewers to be more or less stringent in their beauty ratings (or to have rated more or less attractive youth). We used Stata to estimate these models, because

it has built in routines for the fixed effects approach. We ran a separate model for each outcome, and adjusted standard errors for the clustering of youth within interviewers.

Table A2 shows the results of these models. We bolded significant associations in order to make the patterns of results easier to discern. Indeed, in all but two cases, the pattern was consistent across the three models: always non-significant or always significant across the three models. Additionally, the coefficient estimates were highly similar in magnitude across models, generally rounding to within one or two-hundredths of a point of each other. In several cases, failing to adjust for interviewer characteristics made results *more conservative*. That is, where coefficients differed most in magnitude, the coefficients were often larger in Models B and/or C (e.g., for the contrast of "Attractive versus About Average" on Logged Earnings, coefficient of 0.46 in Model C versus 0.42 in Model A and 0.44 in Model B). These results provide evidence that associations between interviewer attractiveness ratings and youth social and human capital outcomes were not systematically biased by interviewer characteristics.

Note that the associations themselves in Table A2 differ from those presented in the monograph because, in these models, we associated young adult (Wave IV) attractiveness ratings with young adult (Wave IV) outcomes. Our manuscript focused on adolescent (generally Wave I) beauty and both adolescent (generally Wave II) and young adult outcomes. We preferred the manuscript specification because the predictor (beauty) preceded the outcomes, a particular valuable time ordering given our focus on meditational pathways from adolescent looks to young adult human and social capital. It was also the case that using Wave I or II ratings when predicting Wave IV outcomes avoided the problem that the rater had heard the interview at which outcomes were reported (as in prior waves). However, as noted at the beginning of this Appendix, we only examined the biasing effect of interviewer characteristics with the Wave IV ratings because interviewer characteristics were not collected by Add Health at Waves I and II.

Summary

In sum, the results revealed some evidence that interviewers' characteristics affected their ratings of respondents, sometimes in interaction with respondents' own characteristics. Women were rated as more attractive than were men, same-race matches of interviewers and respondents resulted in higher attractiveness ratings (at least for non-Latino/a African American and White respondents), Latino/a interviewers on the whole rated young adults as less attractive than did non-Latino/a interviewers, and interviewers who were older and who were less educated provided higher attractiveness ratings.

Many of these significant differences were small in magnitude in terms of predicted probabilities and/or were evident for groups that comprised a small fraction of the Add Health sample. Given this, the striking similarity in results when we did and when we did not adjust for interviewer characteristics may not be surprising. Beyond the fact that interviewer bias appears relatively small in magnitude and limited in scope (in terms of cell sizes), these consistent results likely

also reflect the fact that interviewer characteristics would have to be associated with *both* attractiveness ratings *and* outcomes in order to bias our results in a systematic way. In short, this Appendix suggests that the analytic approaches we took in the manuscript are appropriate.

Table A1

Descriptive Statistics for Interviewer Characteristics at Wave IV

	M (%)	SD
Female	89.2%	
Race-ethnicity		
Non-Latino/a White	63.5%	
Non-Latino/a African American	22.7%	
Latino/a	11.3%	
Other	2.5%	
Age (years)	54.72	10.15
Education		
High school only	13.9%	
Some college	36.9%	
College degree only	29.4%	
Some graduate	19.9%	
Interviewing experience (years)	7.86	6.63
Any prior Add Health experience?	25.9%	

n = 12,367

Table A2

Implications of Adjusting for Interviewer Characteristics

	Logged Earnings			SES Ladder			College Degree?		
	A	B	C	A	B	C	A	B	C
Very Attractive versus Attractive	.07 (.20)	.07 (.20)	.08 (.21)	**.20*** **(.07)**	**.21*** **(.07)**	**.21*** **(.07)**	**.05*** **(.02)**	**.04*** **(.02)**	**.04*** **(.02)**
Attractive versus About Average	**.42*** **(.12)**	**.44*** **(.12)**	**.46*** **(.12)**	**.15*** **(.04)**	**.16*** **(.04)**	**.18*** **(.04)**	**.04*** **(.01)**	**.05*** **(.01)**	**.06*** **(.01)**
About Average versus Unattractive	**.77*** **(.22)**	**.76*** **(0.22)**	**.84*** **(.23)**	-.01 (.10)	.00 (.09)	.13 (.08)	-.04 (.02)	-.03 (.02)	-.03 (.02)

	Ever Married?			Ever Children?			Ever Cohabit?		
	A	B	C	A	B	C	A	B	C
Very Attractive versus Attractive	-.02 (.02)	-.02 (.02)	-.03 (.02)	-.02 (.02)	-.02 (.02)	-.04 (.02)	.00 (.02)	.00 (.02)	.01 (.03)
Attractive versus About Average	**.04*** **(.01)**	**.04*** **(.01)**	**.04*** **(.01)**	-.01 (.01)	-.01 (.01)	-.02 (.01)	-.01 (.01)	-.01 (.01)	.00 (.01)
About Average versus Unattractive	**.09*** **(.02)**	**.09*** **(.02)**	**.09*** **(.02)**	**.08*** **(.02)**	**.08*** **(.02)**	**.09*** **(.02)**	.00 (.02)	.00 (.02)	-.01 (.02)

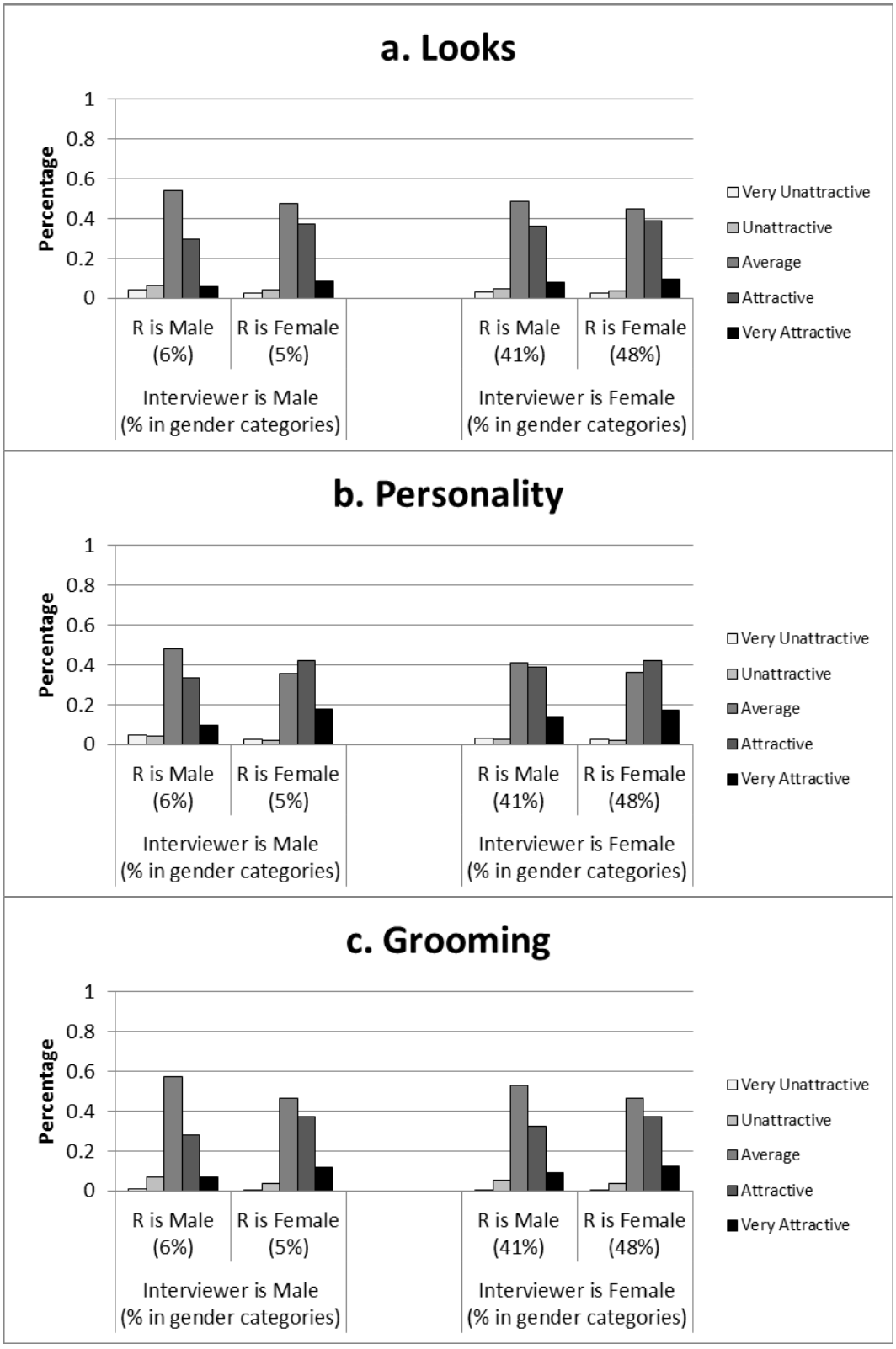
	Number Close Friends			Log Sexual Partners		
	A	B	C	A	B	C
Very Attractive versus Attractive	.15 (.13)	.15 (.12)	.14 (.13)	.05 (.05)	.05 (.05)	.04 (.05)
Attractive versus About Average	**.28*** **(.07)**	**.28*** **(.07)**	**.30*** **(.07)**	**.10*** **(.03)**	**.10*** **(.03)**	**.12*** **(.03)**
About Average versus Unattractive	.18 (.13)	.17 (.13)	.17 (.13)	.06 (.05)	.05 (.05)	.08 (.05)

	Extraversion			Optimism			Depression		
	A	B	C	A	B	C	A	B	C
Very Attractive versus Attractive	**.53*** **(.12)**	**.54*** **(.12)**	**.53*** **(.12)**	**.23*** **(.10)**	**.23*** **(.10)**	**.26*** **(.10)**	-.28 (.19)	-.26 (.19)	**-.34*** **(.20)**
Attractive versus About Average	**.34*** **(.08)**	**.34*** **(.07)**	**.39*** **(.08)**	**.35*** **(.06)**	**.36*** **(.06)**	**.34*** **(.06)**	**-.62*** **(.12)**	**-.63*** **(.12)**	**-.69*** **(.11)**
About Average versus Unattractive	-.11 (.14)	-.14 (.14)	-.13 (.15)	**.21*** **(.10)**	**.23*** **(.10)**	.20 (.11)	-.36 (.24)	-.36 (.24)	-.30 (.24)

Note. n = 8494. Values are OLS regression coefficients (standard errors in parentheses). Model A includes all of the youth, parent, and school control variables from manuscript Table 1 but does not include any interviewer characteristics. Model B adds to Model A all of the interviewer characteristics shown in Appendix Table A1 and an interaction between interviewer and respondent gender. Model C adds to Model A interviewer fixed effects.

Figure A1.

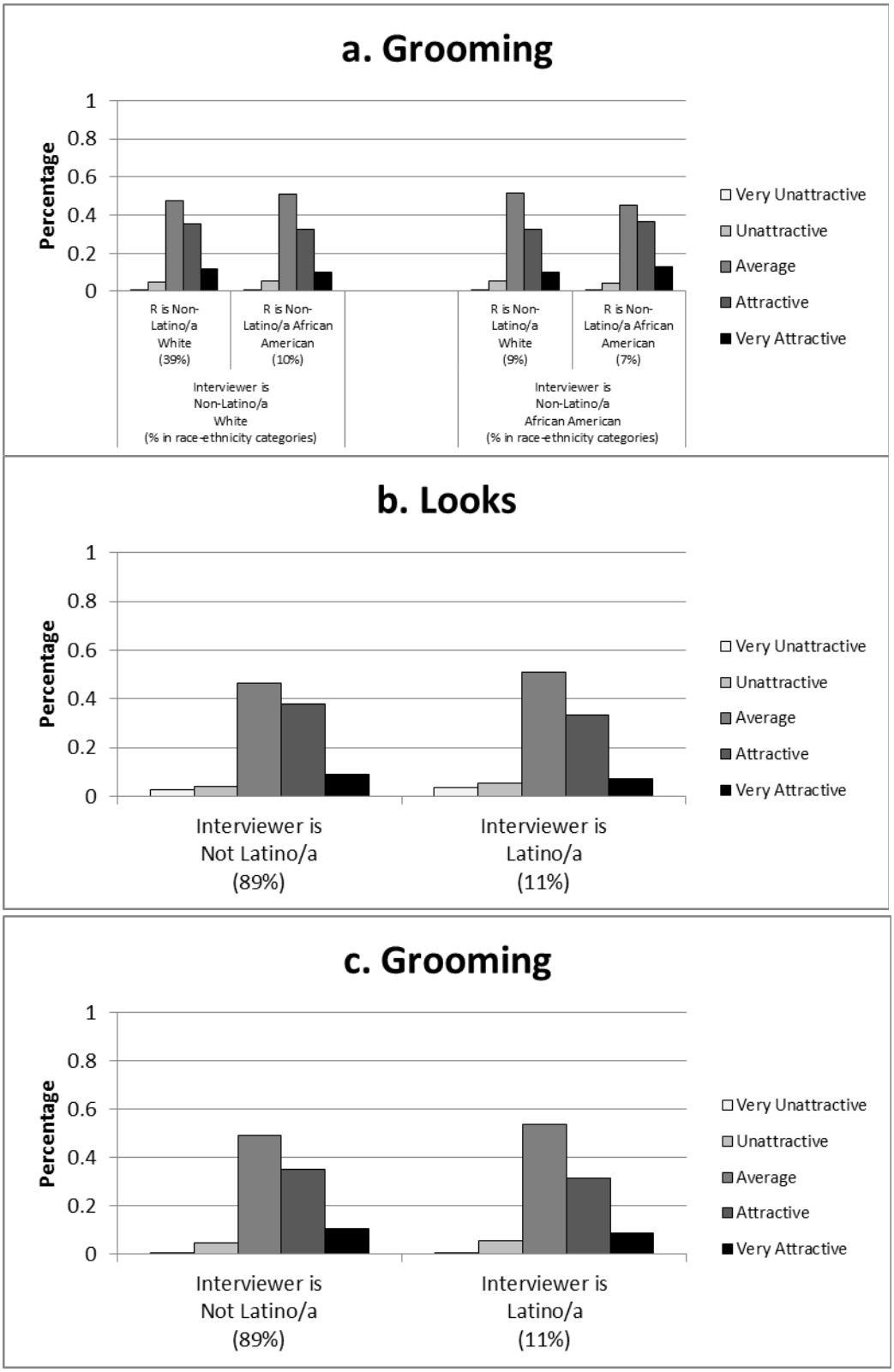
Association of Interviewer and Respondent Gender with Attractiveness Ratings



Note. R is "Respondent." Values are predicted probabilities from ordered logit models predicting the 5-category attractiveness rating by interviewer characteristics listed in Table A1, respondent gender and race-ethnicity, and respondents' attractiveness ratings in high school.

Figure A2

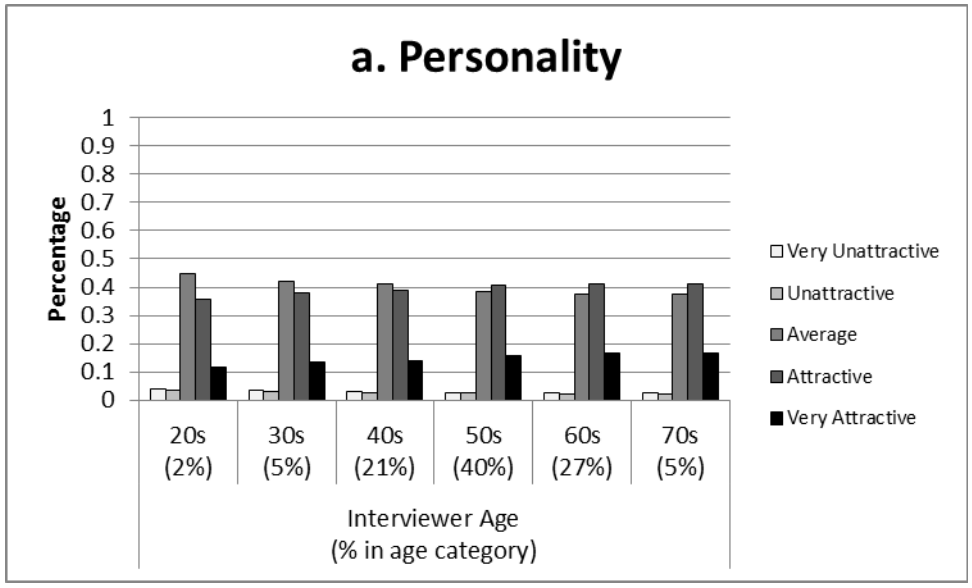
Association of Interviewer and Respondent Race-Ethnicity with Attractiveness Ratings

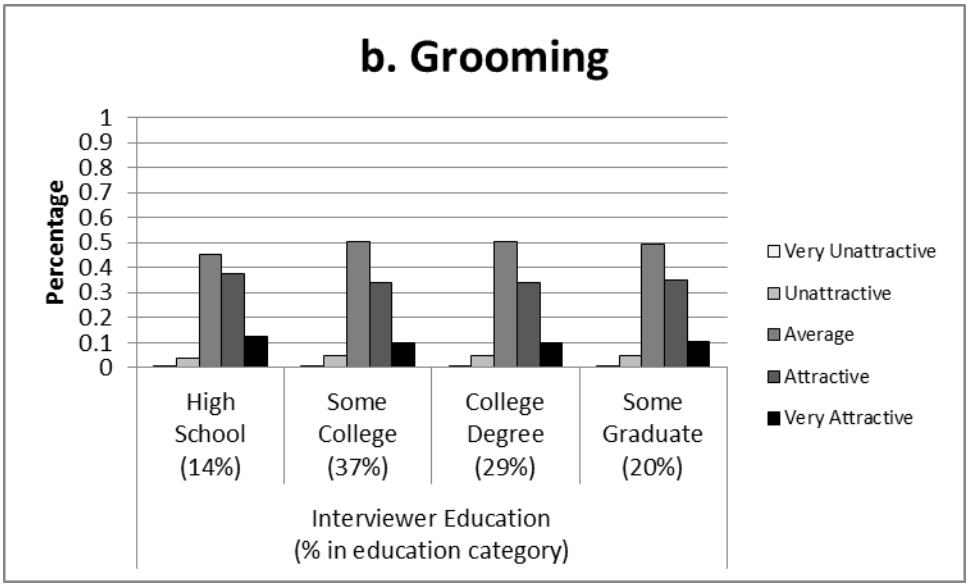


Note. R is "Respondent." Values are predicted probabilities from ordered logit models predicting the 5-category attractiveness rating by interviewer characteristics listed in Table A1, respondent gender and race-ethnicity, and respondents' attractiveness ratings in high school.

Figure A3

Association of Interviewer Age and Education with Attractiveness Ratings





Note. R is "Respondent." Values are predicted probabilities from ordered logit models predicting the 5-category attractiveness rating by interviewer characteristics listed in Table A1, respondent gender and race-ethnicity, and respondents' attractiveness ratings in high school.