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Self-esteem and self-efficacy in the status attainment process and the multigenerational transmission of advantage

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Abstract

Despite considerable evidence of the importance of self-esteem and self-efficacy for agentic, goal-oriented behavior, little attention has been directed to these psychological dimensions in the status attainment literature. The present research uses data from the longitudinal, three-generation Youth Development Study ($N = 422$ three-generation triads) to examine the extent to which adolescent self-esteem and economic self-efficacy affect adult educational and income attainment, and whether these psychological resources are transmitted from one generation to the next, accumulating advantage across generations. We present evidence indicating that both self-esteem and economic self-efficacy are implicated in the attainment process. Adolescent economic self-efficacy had a direct positive effect on adult educational attainment and an indirect effect through educational plans. The influence of self-esteem on adult educational attainment was entirely indirect, through school achievement. We also find evidence that economic self-efficacy was transmitted from parents to children. We conclude that future research should more broadly consider psychological resources in attainment processes from a longitudinal multigenerational perspective.

Keywords

Self-appraisals, psychological resources, social psychology, adolescence, life course, three-generation study

Introduction

Self-esteem and self-efficacy are two major self-evaluative traits that have been studied widely in sociological (e.g., Gecas 1989; Rosenberg et al. 1995) and psychological (e.g., Judge and Bono 2001; Orth 2018) social psychology. These self-appraisals are linked to educational performance (Carroll et al 2009; Owens 1994), life course expectations (Hitlin and Johnson 2015), psychological well-being (Booth and Gerard 2011), life satisfaction (Burger and Samuel 2017), and prosocial behavior (Caprara and Steca 2005). Moreover, they are essential components of basic identity processes (Cast and Burke 2002). However, investigations of the role that subjective self-evaluations may play in the process of socioeconomic attainment are relatively scarce (Abele and Spurk 2009; Grabowski, Call, and Mortimer 2001; Wang et al. 1999) and little is known about the extent to which they are transmitted across generations (Mortimer et al. 2017). Given that subjective self-evaluations affect individuals' capacity to navigate and succeed in the education system (James and Amato 2013; Lareau 2003), and later in the labor market (Judge and Hurst 2007, 2008), transmission of self-concept dimensions across generations might set in motion dynamics of cumulative advantage and disadvantage with long-run consequences for the intergenerational persistence of social inequality.

Hence, in this paper we note the neglect of self-esteem and self-efficacy in the status attainment model and in theory on the intergenerational transmission of resources, suggest the potential role that these self-appraisals may play in the attainment process, and present a rationale for thinking that they may be important in the transmission of educational and income advantage across generations. Specifically, we focus on global self-esteem and a specific domain of self-efficacy, economic self-efficacy, representing an individual's judgment about the capacity to achieve economic goals. We thereby seek to extend research on status attainment and the transmission of (dis)advantage from a social psychological (Burger and Walk 2016; Hollander and Howard 2000; McLeod, Lawler, and Schwalbe 2014) and multigenerational (Chiang and Park 2015; Zhang and Li 2019) perspective.

In the following sections we review research focusing on status attainment and transmission of psychological resources multigenerationally; describe the Youth Development Study (Mortimer 2012), the intergenerational longitudinal data source used in our analysis; and present a structural equation model of the process of attainment with the two self-appraisals—self-esteem and economic self-efficacy—specified as intervening between socioeconomic origins and educational and income attainments, and as transmitted across generations. We conclude that self-esteem and especially economic self-efficacy, are significant psychological

resources in the attainment process that may ultimately contribute to the social reproduction of inequality.

Self-esteem, self-efficacy, and the multigenerational process of attainment

The well-researched Wisconsin status attainment model prioritizes educational aspirations and plans, and significant others' influence on those plans, as major drivers of attainment (e.g., Haller and Portes 1973; Johnson and Reynolds 2013). Parents of high socioeconomic status have high educational goals for their children; they communicate their educational expectations to their offspring, who then develop similarly lofty aspirations and plans for themselves. Parents of lower socioeconomic status expect that their offspring will be less successful in the educational realm; their children are accordingly less ambitious. While the Wisconsin model has been confirmed in many studies conducted over several decades (Ashby and Schoon 2010; Bozick et al. 2010; Sewell, Haller, and Portes 1969; Sewell and Hauser 1975, 1980), educational goals are not the only psychological orientations that can affect achievement-related striving and foster social class reproduction (cf., Mortimer 1996). Various facets of the self-concept may also play a role in such processes (Booth and Gerard 2011; Marsh and O'Mara 2008; Peixoto and Almeida 2010). Hence, we seek to investigate whether key self-concept dimensions—self-esteem and self-efficacy—also intervene in the process of socioeconomic attainment and contribute to the intergenerational transmission of advantage. We seek to determine whether “intergenerational development” (Cairns et al. 1998)—that is, parallels in individual self-concepts between parents and their children at the same developmental stage—occurs for self-esteem and economic self-efficacy.

Self-esteem and self-efficacy are two central components of the self-concept. Self-esteem is a person's global evaluation of self-worth, the moral dimension of the self-image (Gecas 2001; Orth 2018). People with high self-esteem like themselves and believe that they are worthy human beings (Orth, Robins, and Widaman 2012). In contrast, self-efficacy is a judgment of one's capacity to achieve goals in the face of difficulties (Bandura 2006; Judge et al. 2002). Persons with a strong sense of self-efficacy expect that their actions will be successful; they set high goals for themselves, initiate action strategies, put considerable effort into goal-oriented action, and persevere in attempts to attain their objectives despite obstacles. Given their more vigorous follow-through, actors are more likely to achieve their goals when they believe they have the capacity to enact the behaviors needed to attain them.

While both self-concept dimensions—self-esteem and self-efficacy—strongly affect how individuals act and react in a wide variety of settings, and both seemingly reflect a more

or less positive self-image, they are theoretically and empirically distinct (Chen et al. 2000). Regardless of their beliefs about their skills and abilities, individuals with a high level of self-esteem “generally feel good about themselves, whereas low-self-esteem individuals tend to feel bad about themselves even if they conceive of themselves as highly efficacious” (Chen, Gully, and Eden 2004:376). Importantly, however, both self-evaluations may be associated with goal attainment because individuals with high levels of self-esteem and self-efficacy tend to have stronger motivation and set more ambitious goals for themselves (Dweck 2000; Judge and Hurst 2008).

Incorporating self-esteem and self-efficacy in research on status attainment and intergenerational transmission of advantage is crucial in order to improve our understanding of the complexity of self-evaluations, and how they are involved in processes of social reproduction.

Self-esteem and (multigenerational) attainment processes

Self-esteem has been shown to predict educational achievement and attainment (Booth and Gerard 2011; Marsh and O’Mara 2008), although effect sizes linking self-esteem to such outcomes vary across studies (Baumeister et al. 2003; Leary and Baumeister 2000) and may depend on the specific instruments and analytic techniques utilized (Swann, Chang-Schneider, and Larsen McClarty 2007). More generally, even though the predictive validity of self-esteem with regard to achievement-related outcomes has been questioned (Marsh and Craven 2006), self-esteem is strongly linked to many aspects of human functioning, including various dimensions of mental health, a generally positive outlook, and behavioral adjustment (Mann et al. 2004; Rosenberg 1979; Swann et al. 2007). The “self-esteem motive provokes individuals to think well of themselves” (Owens 2006:209). Persons with high self-esteem seek contexts and tasks and attend to information that affirm their positive appraisals of themselves, whereas those with low self-esteem are more strongly oriented to self-protection. Confirmative tendencies may provide advantages for those with high self-esteem in the quest for educational, occupational, and income attainments. For example, individuals with a positive sense of self-worth are less likely to engage in delinquent behaviors, they engage in more normative and pro-social behaviors (Owens 1993), and they tend to exhibit higher levels of achievement at various academic levels (Lockett and Harrell 2003; Román, Cuestas, and Fenollar 2008; Topçu and Leana-Taşçılar 2018). It must be noted, however, that distinguishing between cause and effect has been difficult in much prior research on the links between self-esteem and academic outcomes (Ross and Broh 2000; Tetzner, Becker, and Maaz 2017), with some research finding

reciprocal interrelations between the two (Liu, Kaplan, and Risser 1992; Marsh and O'Mara 2008; Trautwein et al. 2006). Furthermore, putative effects of self-esteem on academic outcomes may be mediated through other variables, including the academic self-concept (Peixoto and Almeida 2010) and educational aspirations and plans (e.g., Yogev and Ilan 1987).

In this study, we use a longitudinal design to examine whether self-esteem serves as a precursor of educational and income attainment. We expect that self-esteem will be related to educational plans and school achievement, and eventually to educational and income attainment (see also Wickrama, Simons and Baltimore 2012). Moreover, drawing on evidence for intergenerational transmission of psychosocial resources (Hank, Salzbunger and Silverstein 2017; Putney and Bengtson 2002; Settersten 2002), we expect that self-esteem will be transmitted across generations, potentially contributing to the intergenerational accumulation of advantage. Specifically, we assess whether parallels in this psychological resource exist between parents and children at the same developmental stage, in adolescence (cf., Cairns et al. 1998).

Parents' psychological resources during their own adolescence may have an indirect influence on the development of their children's psychological resources because they shape parents' adult lives and socioeconomic attainments as well as their approaches to parenting (cf., Hitlin and Johnson 2015; Johnson and Hitlin 2017). Parents' earlier psychological resources in adolescence matter for children because parents' early experiences affect their own subsequent development and, thus, the developmental environment for children over long time periods, even when circumstances change (cf., Taylor, Clayton and Rowley 2004).

Although the present study cannot disentangle the mechanisms involved in intergenerational psychological transmission, several possibilities exist. Associations between parents' psychological resources in adolescence and their children's psychological resources may be driven by genetic inheritance, or they may be mediated through specific family cultures, where, for instance, messages to children convey and help them to acquire positive self-evaluations. Research in this field is still scarce, although a few studies have found empirical evidence of intergenerational parallels in social psychological resources (Cairns et al. 1998; Duncan et al. 2005; Johnson and Hitlin 2017). Because parent-child similarities in adolescent self-appraisals might be a possible mechanism of cross-generational continuity and persistence of advantage, this phenomenon could also contribute to social class reproduction (see also Mortimer et al. 2017; Serbin and Karp 2004).

Economic self-efficacy and (multigenerational) attainment processes

Self-efficacy is a second major dimension of the self-concept. General self-efficacy refers to individuals' beliefs about the capability to perform given behaviors, master challenging new tasks, and exercise control over events (Bandura 2006). It is a critical resource that facilitates socioeconomic attainment (e.g., Abele and Spurk 2009) and health (Oi and Alwin 2017; O'Leary 1985), among other life outcomes.

In this study, rather than investigating general self-efficacy, we focus on a specific facet of self-efficacy, that which pertains to the economic realm. Many scholars recognize that self-efficacy perceptions, and their outcomes, are domain specific (e.g., Bandura 1977a; McAvay, Seeman and Rodin 1996; Thorsen 2018). For example, one may feel highly efficacious in the social realm—feeling quite able to make and keep friends, but inefficacious in the occupational domain. Efforts to attain goals in each realm and success in achieving them will vary accordingly. Elsewhere in the status attainment literature, the academic self-concept, an academic efficacy belief focused on perceived intelligence, reading ability and school ability, has been shown to shape educational attainment (Mortimer et al., 2017). Likewise, scholars have found it useful to consider sexual self-efficacy in understanding sexual behavior and relationship formation (e.g., Thorsen 2018). In contrast, the present study examines efficacy in the economic domain, adolescents' beliefs about whether they will be able, as adults, to acquire interesting work that they enjoy doing, to have a job that pays well, and to own a home. Youth with a strong sense of economic self-efficacy would likely set high goals for themselves, aiming for occupations of high standing that provide incomes that enable a desired quality of life. They are likely to be more strongly engaged in developing action strategies to achieve their economic goals than their less efficacious counterparts. Research has shown that high school students with stronger economic efficacy beliefs have higher educational expectations and take more steps to prepare for college admission (Grabowski et al. 2001). By extension, those who have stronger economic self-efficacy beliefs, which convince them that success is attainable, will likely be more successful in achieving higher education and, later, occupational and economic success. In fact, empirical evidence indicates that economic self-efficacy in the teen years predicts educational attainment, income, and financial independence in early adulthood (Lee and Mortimer 2009).

Bandura (1977b) saw self-efficacy beliefs as social in origin. He posited that people develop a sense of efficacy not only by noting their own successes and failures, but also by observing the efficacy-related successes of significant others around them. In line with this tenet, research shows that children's observations of parental occupational and economic

struggles lessen their optimism about their own lives (Mortimer et al. 2014; see also Whitbeck et al. 1997). Thus, it is reasonable to suppose that those whose parents have achieved higher levels of education and income would be likely to have stronger economic self-efficacy beliefs than those whose parents have been less efficacious and successful in these realms. Consistent with the intergenerational development hypothesis, parents who held strong economic self-efficacy beliefs when they were adolescents may foster such beliefs in their children, in part through these attainments. If economic self-efficacy is transmitted across generations, this transmission would likely contribute to intergenerational persistence of psychological (dis)advantage, potentially exacerbating inequalities in status attainment (see also Waithaka 2014).

So far, despite the few above-mentioned studies, research on the intergenerational transmission of economic self-efficacy and its longer-term consequences for attainment is still very limited, and no research considers economic self-efficacy in conjunction with self-esteem as sources of both educational and income attainment. Moreover, to our knowledge, none of the extant studies examine such processes in the context of a three-generation model.

Research Objectives

In light of the above theory and empirical evidence, this study examines (1) whether self-esteem and economic self-efficacy in adolescence play a role in shaping educational plans, school achievement, and subsequent educational and income attainment; (2) the extent to which parental education and income affect a child's educational plans, school achievement and attainments indirectly, through the child's self-esteem and economic self-efficacy, thereby contributing to social class reproduction; (3) and whether self-esteem and economic self-efficacy are transmitted across generations, resulting in parallels in these self-appraisals between parents and children and potentially strengthening intergenerational persistence of (dis)advantage.

Method

Data Source

This research draws on data from the Youth Development Study (YDS) obtained from three generations: grandparents (G1), parents (G2) and grandchildren (G3). This longitudinal study began in the academic year 1987-1988 with a randomly selected cohort of 1139 adolescents enrolled in the ninth grade in the St. Paul Public School District, Minnesota

(Mortimer 2012). According to United States Census data this site is comparable to the nation as a whole with regard to social and economic indicators (Mortimer 2003).

The study participants completed questionnaires in their classrooms annually from 1988 to 1991. Thereafter, data were collected by mail almost every year until 2011. At the onset of the study the participants were 14 or 15 years old (6% were 16 or 17). In 2011, the participants were 37 or 38 years old. The cohort was mostly white (65%), the largest minority groups being Hmong (11%) and African American (9%), reflecting the population of the St. Paul public schools at that time. The study did not recruit pupils from private and parochial schools. Thus, while the initial panel mirrored the socioeconomic composition of the public school community, higher income families were presumably underrepresented (the median household income in the sample was between \$30,000 and \$39,000 in 1987 dollars). Twenty-three percent of adolescents were from single-parent families, which corresponded to the proportion of single-parent families in the St. Paul community at large.

Panel retention to 2011 was approximately two-thirds of the original cohort. Panel attrition in recent years was unrelated to a wide array of indicators of socioeconomic status, mental health, behavioral problems, and achievement orientations, but the likelihood of attrition was higher for men, non-whites, and participants whose parents had no employment at the beginning of the study.

In addition to following a cohort of participants from 1988 to 2011, the YDS also collected data from these participants' parents and from their children. In the first and fourth waves of the study (i.e., in 1988 and 1991) the first-generation respondents, including both mothers and fathers, were surveyed by mail. Information about the first-generation respondents' educational attainment and household income was drawn from these reports. In 2009, third-generation respondents who were age eleven and older were recruited and surveyed by mail. Additional third-generation participants were recruited in 2010 and 2011, including those who had not responded previously and those who had turned eleven. By 2011, 67% of eligible parents (by virtue of having a child aged 11 or older) had agreed to allow their children to participate in the study, yielding 422 third-generation participants who completed at least one of three surveys.

The present study uses data from 422 three-generation triads, obtained from 265 families (with multiple G3 children from a given family contributing to the sample). Where available, data from both first-generation respondents (mothers and fathers) were used to measure educational attainment and household income. Including G1, G2, and G3, a total of 1,041 individual participants contributed to the current study. As a result of the study design, the

subsample of participants used here is of lower socioeconomic origin than the YDS G2 cohort at large, because relatively early child-bearers are overrepresented. For instance, in this subsample only 21 percent of second-generation participants had a 4-year college degree, as opposed to nearly 35 percent of the entire YDS cohort. A detailed discussion of the correlates of G2 parental consent for their children's participation in the survey can be found in Hussemann, Mortimer and Zhang (2016).

Economic changes associated with advances in globalization and technology, and changes in labor markets that began in the 1970s, continued over the period from second-generation participants' adolescence in the late eighties to third-generation participants' adolescence two decades later. The increasing precarity of work (Kalleberg 2011; Kalleberg and Vallas 2018) and difficulties in achieving a successful school-to-work transition could affect each generation's self-concepts, particularly their sense of economic efficacy. The historical period covered by the YDS included several recessions in the United States, notably in 1991, 2001, and 2008-2009. Second-generation participants' self-esteem and economic self-efficacy, in adolescence, were assessed in pre-recession year 1989, when participants were 15-16 years old, and third-generation participants' self-esteem and economic self-efficacy, in adolescence, were assessed in (post-) recession years 2009-2011, when participants were on average 15.8 years old.

The YDS offers unique advantages for our research, as it provides data extending across three generations. It allows us to examine the role of self-esteem and economic self-efficacy in the development of G2 educational plans, achievement and attainment, as well as in income attainment, without relying on retrospective data. We are not aware of any other data set with this unique combination of measures. Importantly, the long time series also enables us to observe the intergenerational transmission of educational attainment and the transmission of self-esteem and economic efficacy across G2 and G3 generations.

Measures

Second- and third-generation participants' self-esteem and economic self-efficacy were measured at roughly the same ages, using identical scales, with measurements up to 22 years apart. The second-generation measures were collected in 1989, when the majority of participants were 15-16 years old. Third-generation measures were collected in 2009, 2010 and 2011. We primarily used data from the 2011 panel wave. When data were unavailable in that wave because of non-participation in that survey, we substituted data from the 2010 or 2009

waves (26% for the self-esteem scale, 18% for the economic self-efficacy scale). The third-generation participants were on average 15.8 years old at the last available survey.

Self-esteem

We used a three-item version of the Rosenberg Self-Esteem Scale (Rosenberg 1965): (1) I take a positive attitude toward myself, (2) On the whole, I am satisfied with myself, and (3) I wish I could have more respect for myself (responses reverse-coded so that higher scores reflected stronger self-esteem). The four-point rating scale ranged from 1 = strongly disagree to 4 = strongly agree (Cronbach's alpha = 0.785 [G2] and 0.707 [G3], respectively). In robustness tests, we specified additional models that included seven items of the Rosenberg Self-Esteem Scale. While all models corroborate the findings presented here, we achieved the best overall model fit when using the parsimonious (three-item) self-esteem construct.

Economic self-efficacy

Three items were used to measure economic self-efficacy in adolescence. Respondents were asked to estimate the likelihood that they will (1) have a job that pays well, (2) be able to own their own home, and (3) have a job that they enjoy doing. Response options ranged from 1 = very high to 5 = very low (Cronbach's alpha = 0.837 [G2] and 0.833 [G3], respectively). Responses were reverse coded so that higher scores reflected stronger economic self-efficacy. Adolescents' responses to these items might to some extent reflect expectations about likely success in view of knowledge about relatives' success or simply their own prior achievement. However, such indicators are widely regarded as reflecting optimism and efficacy in anticipating the future and of individual accomplishments that require a good deal of effort (Grabowski et al. 2001). Thus, self-efficacy fosters effort and perseverance needed for accomplishment (cf., Hitlin and Johnson 2015)

School achievement (grade point average)

Second-generation respondents' self-reported grade point average (GPA) provided a measure of school achievement in high school (12 categories, ranging from A to F). We used the GPA reported in 1991, when the participants were in the fourth year of high school, 17-18 years old. Although caution is required when using GPA to compare individual achievement across classes and schools, GPA has been found to be a predictor of future educational attainment and longer-term success (Robbins et al. 2004).

Educational plans

Second-generation respondents' educational plans during adolescence were assessed in 1991 (age 17-18), using the item 'What is the highest level of schooling you really think you will finish?', with a response scale ranging from '1 = less than high school' to '6 = PhD or professional degree.'

Educational attainment

First- and second-generation respondents' educational attainment was assessed using an ordinal scale ranging from (1) elementary or junior high school to (6) PhD or professional degree. The first-generation measure was collected in 1988, when the second-generation respondents were in the first year of high school (grade 9). When data for both first-generation respondents were available, we used the higher educational attainment. The second-generation's measure of educational attainment was obtained in 2009, when the participants were 35 or 36 years old. The scale was adjusted slightly to address change in widespread terminology. For instance, "associate degree" was used (for G2) instead of "community or junior college degree" (for G1).

Household income

First-generation respondents' household income was assessed in 1988 by the question: "What was your total household income in 1987 before taxes? Include wages and salaries, net income from business or farm, child support, dividends, interest, rent, and any other money income received by persons in your household." The response scale included thirteen categories, ranging from "under \$5,000" to "\$100,000 or more". We transformed the responses using the natural logarithm of the midpoint of each category to take into account the diminishing utility of a one-unit increase in income for higher-income households. Second-generation respondents' household income was measured by the question: "What was the income for your entire household in [previous year], before taxes? (Include all earners in your household)." Here the reports of household income were continuous, as the respondents were asked to write their incomes. We calculated average logged incomes across eight study waves, conducted between 1999 and 2009. Inflation was taken into account by converting all incomes to 2008 equivalents (since this measure embraces the period from 1998 to 2008). The measure thus captures G2 income attainment over a formative early stage of the G3 child's life.

Control variables

Considering the role that gender plays in the development of self-esteem, efficacy beliefs and educational attainment (Bandura et al. 2001; Buchmann, DiPrete, and McDaniel 2008; Correll 2001; Pajares 2003), we control second- and third-generation respondents' gender. Moreover, because self-esteem, efficacy beliefs and school achievement vary with age (Huang 2013), we controlled third-generation respondents' age. Second-generation respondents' age was not controlled because it is virtually the same across all waves, given that the panel originated in a cohort of ninth-graders. Race (white vs. nonwhite) was included in a series of robustness tests that confirm the results reported here. Table 1 displays descriptive statistics for the study variables. Table 2 summarizes correlations between all manifest study variables.

Analytic Approach

We estimated a fully recursive structural equation model in R version 3.0.2, using the package lavaan (Rosseel 2017). This approach has several important strengths, including modeling of residual correlations and multiple endogenous variables. Moreover, it enabled us to map both direct and indirect effects, in accord with the theoretical model outlined above. Figure 1 displays the model, showing how influence flows from first-generation characteristics to second-generation characteristics, assessed from adolescence (at age 15-16 and 17-18) through adulthood (at age 37-38), and then to third-generation characteristics, assessed at mean age 15.8. The model includes G1 educational attainment and household income; G2 self-esteem and economic efficacy (measured at age 15-16), G2 educational plans and grade point average (measured at age 17-18); G2 household income (measured from age 24-25 through 34-35) and educational attainment (measured at age 35-36); as well as G3 self-esteem and economic efficacy (at mean age 15.8). When variables were assessed at the same time, we did not specify a path between them (e.g., G2 self-esteem and economic self-efficacy). Instead, their relationships are expressed by residual correlations. Furthermore, because second-generation participants may have obtained their highest educational credential at various times, no causal path is modelled between their educational attainment and household income (assessed over more than a decade of observation). Instead, the association between these variables is also expressed by their residual correlation in Table 4. Finally, the model includes the following control variables: G2 gender and G3 gender and age (not depicted in the figure). While Figure 1 reports only statistically significant paths and does not display any control variables, Table 3

summarizes all coefficients from the fully recursive structural equation model including controls.

The model takes into account the clustering of multiple children in the same family by estimating cluster robust standard errors. We used full information maximum likelihood estimation to adjust for a small number of missing values. Most measures had between 0% and 4.5% missing, although the proportion of missing values ranged from 0% to 13.7%. G1 educational attainment was the only measure with more than 9% of missing values.

Model fit was assessed by examining three goodness-of-fit indices. Fit is considered acceptable when the comparative fit index (CFI) > .90, the root mean square error of approximation (RMSEA) < .06, and the standardized root-mean-square residual (SRMR) < .08 (cf., Kline 2011). Given the following fit parameters: CFI = .947; RMSEA = .047 (90% confidence interval: .037—.056); and SRMR = .044, we consider the model as representing a good fit to the data.

Findings

Descriptive Statistics

Descriptives for all variables are shown in Table 1. We note some upgrading of self-esteem, economic efficacy, educational plans, and educational attainments across generations. Specifically, the scores of the adolescent self-esteem indicators increased very slightly across generations, ranging from 2.59 to 2.95 for G2, and from 2.78 to 3.07 for G3. Similarly, scores on the economic efficacy indicators have risen across generations. With a score of 3 indicating a «fifty-fifty» likelihood of success and 4 indicating a «high» likelihood of success in the economic realm, G2's score-range from 3.66 to 3.93 indicates relatively high likelihood of economic success, but the G3's score-range from 3.97 to 4.03 indicates an even higher likelihood. Whereas increases in economic efficacy might appear to be counterintuitive given the recent «Great Recession» that has dampened the prospects of young people, they are consistent with a pattern of increasing optimism in the YDS panel across generations over a range of life domains. This sanguine trend may be responsive to the broad expansion of higher education, the growing economic returns to college degrees, and increasing labor force opportunities for women (Mortimer, Mont'Alvao, and Aronson forthcoming).

Table 1.
Descriptive statistics

Measures	Assessed in	Mean	SD	Min.	Max.
<i>1st generation (N = 265)</i>					
Educational attainment	1988	2.70	1.01	1	6
Household income (logged)	1988	10.64	0.78	8.42	12.06
<i>2nd generation, as adolescents (N = 265)</i>					
Self-esteem	1989				
Positive attitude		2.95	0.74	1	4
Satisfied with myself		2.92	0.73	1	4
Respect for myself		2.59	0.73	1	4
Economic efficacy	1989				
Job that pays well		3.73	0.83	1	5
Able to own home		3.66	1.05	1	5
Enjoy job		3.93	0.92	1	5
Educational plans	1991	3.42	1.12	1	6
Grade point average	1991	8.06	2.07	1	12
Gender (1 = male)	1988	0.25	---	0	1
Race (1 = white)	1988	0.66	---	0	1
<i>2nd generation, as adults (N = 265)</i>					
Educational attainment	2009	2.85	0.95	1	5
Household income (logged) ^(a)	1999-2009	10.67	0.67	7.92	12.41
<i>3rd generation, as adolescents (N = 422)</i>					
Self-esteem	2011 ^(b)				
Positive attitude		3.07	0.66	1	4
Satisfied with myself		3.06	0.66	1	4
Respect for myself		2.78	0.85	1	4
Economic efficacy	2011 ^(b)				
Job that pays well		3.97	0.85	1	5
Able to own home		4.03	0.93	1	5
Enjoy job		4.03	0.91	1	5
Gender (1 = male)	2011	0.47	---	0	1
Age at last available panel wave	2011 ^(b)	15.83	2.73	11	23

Note. The *Measures* section reports more detailed information about the variables. ^(a) Average household income per year assessed from 1998 to 2008 (converted to 2008 dollars to consider inflation). ^(b) Where data were unavailable in the 2011 wave, we substituted data from the 2010 or 2009 wave.

Regarding educational plans, with a mean score of 3.42, the second-generation respondents on average aimed for post-secondary education between a community college degree (coded 3) and a 4-year college degree (4). Their grade point average was 8.06, or a B- (8).

Mean G1 educational attainment is 2.70, between a high school graduate (coded 2) and some college (3); average G2 educational attainment is just slightly higher at 2.85, closer to “some college.” The maximum values of educational attainment differ for G1 (6) and G2 (5) since no G2 parent achieved a Ph.D. or professional degree. As noted earlier, by virtue of the

study design, the G2 sample for this multigenerational analysis consists of relatively young parents, who had their children before their mid-twenties. Parenthood likely shortened the educational careers of many G2's.

G1 and G2 annual income measures are substantially the same. The mean log household income in 2008 dollars for G1 is 10.64; the average adjusted income of G2 from 1998 to 2008 is 10.67, indicating incomes in 2008 dollars of \$41,687 for G1 and \$42,962 for G2. However, these indicators are not directly comparable. G1 parents were older on average (age 41) than G2's, surveyed at a time when their careers were well established; G1 income pertains to the year prior to the initial 1988 data collection. In contrast, G2 average incomes describe the early years of the economic trajectory, from ages 24-35 (1998-2008).

Since G2 mothers were more likely to consent to allow their children to participate in this multigenerational study than fathers (Hussemann et al. 2016), just 25 percent of G2 parents are male; nearly half (47 percent) of G3 children are male. Two-thirds of the (G2) panel is white. The age range of the third generation was 11 to 23 years in 2011 ($M = 15.83$, $SD = 2.73$).

Table 2.
Zero-order correlations

Measures	1	2	3.1	3.2	3.3	4.1	4.2	4.3	5	6
<i>1st generation</i>										
1. Educational attainment										
2. Household income (logged)	.332***									
<i>2nd generation, as adolescents</i>										
Economic efficacy										
3.1. Job that pays well	.002	.030								
3.2. Able to own home	.041	.093	.730***							
3.3. Enjoy job	-.008	.044	.573***	.602***						
Self-esteem										
4.1. Positive attitude	.051	.072	.263***	.246***	.232***					
4.2. Satisfied with myself	.108*	.015	.082	.082	.227***	.623***				
4.3. Respect for myself	.000	.166**	.198***	.219***	.241***	.559***	.500***			
5. Educational plans	.135*	.152**	.192***	.277***	.180***	.147**	.161**	.172**		
6. Grade point average	.241***	.067	.152***	.142*	.114*	.196***	.129*	.049	.404***	
7. Gender (1 = male)	-.096	-.012	.061	.137**	-.057	.106*	.049	.113*	.004	-.131*
<i>2nd generation, as adults</i>										
8. Educational attainment	.255***	.086	.245***	.293***	.149**	.217***	.146**	.096*	.496***	.440***
9. Household income (logged)	.126*	.199***	.134**	.270***	.085	.125*	-.026	.090	.254***	.178**
<i>3rd generation, as adolescents</i>										
Economic efficacy										
10.1. Job that pays well	.012	.097	.118*	.148**	.100	.057	.046	.079	.098	.071
10.2. Able to own home	.118*	.050	.178**	.272***	.108	.079	.015	.062	.109	.088
10.3. Enjoy job	-.002	.048	.138*	.126*	.100	.117*	.061	.114*	.053	.043
Self-esteem										
11.1. Positive attitude	.025	.048	.027	.051	.057	.062	.032	-.009	.049	.007
11.2. Satisfied with myself	.028	.034	.114*	.127*	.085	.052	-.011	.028	.108*	.003
11.3. Respect for myself	.029	-.056	.012	.058	.089	-.004	-.003	.039	.095	.051
12. Gender (1 = male)	.038	-.038	.033	.090	.057	-.004	-.073	-.072	.014	.036
13. Age (at last panel wave)	-.128*	-.167**	-.060	-.117*	-.033	-.064	-.041	.061	-.063	-.090

Note. Pearson correlations, point-biserial correlations, and Phi coefficients. For Phi coefficients (which measure the relationship between two dichotomous variables), approximate significance is reported.

*** $p < .001$, ** $p < .01$, * $p < .05$.

Table 2.
Zero-order correlations (continued)

Measures	7	8	9	10.1	10.2	10.3	11.1	11.2	11.3	12
<i>2nd generation, as adults</i>										
8. Educational attainment	-.036									
9. Household income (logged)	.266***	.280***								
<i>3rd generation, as adolescents</i>										
Economic efficacy										
10.1. Job that pays well	-.021	.119*	.153*							
10.2. Able to own home	.077	.203***	.317***	.683***						
10.3. Enjoy job	.037	.160**	.148**	.595***	.603***					
Self-esteem										
11.1. Positive attitude	.052	.149**	.127*	.085	.134*	.166**				
11.2. Satisfied with myself	.016	.223***	.138**	.182**	.207***	.238***	.602***			
11.3. Respect for myself	-.108*	.186***	.056	.138*	.135*	.116*	.376***	.429***		
12. Gender (1 = male)	-.109*	.050	.041	-.025	-.018	-.053	.173***	.153**	.104*	
13. Age (at last panel wave)	-.195***	-.140**	-.188***	-.061	-.217***	-.157**	-.112*	-.118*	.034	.012

Note. Pearson correlations, point-biserial correlations, and Phi coefficients. For Phi coefficients (which measure the relationship between two dichotomous variables), approximate significance is reported.

*** $p < .001$, ** $p < .01$, * $p < .05$.

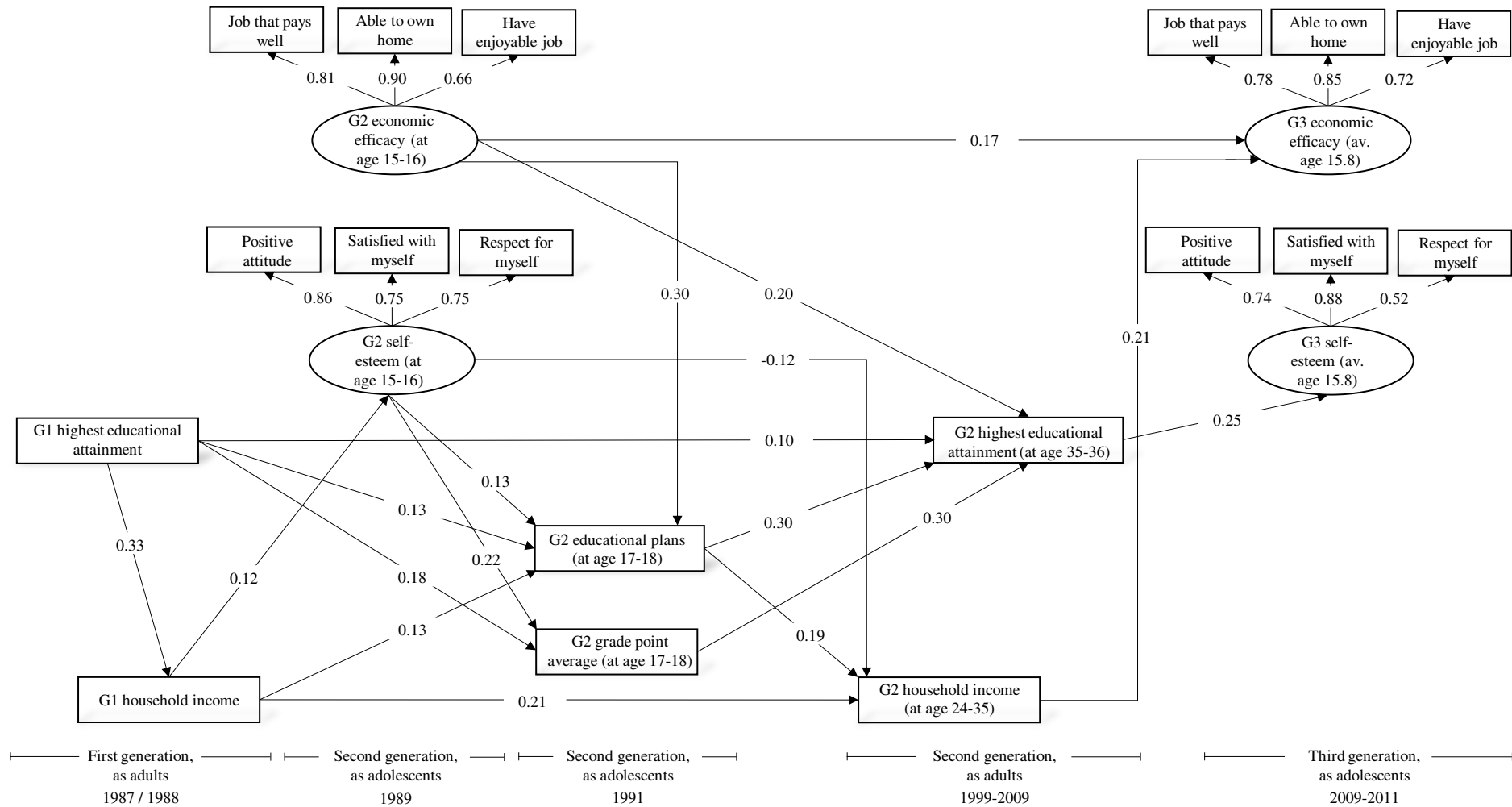


Figure 1. Structural equation model of the process of status attainment and intergenerational transmission of psychological resources (self-esteem and economic self-efficacy). The model controls for second-generation gender and third-generation gender and age. Solid lines signify significant coefficients ($p < .05$).

Results from the Structural Equation Model

Significant coefficients from the structural equation model are shown in Figure 1. Moving from G1 highest educational attainment in the left portion of the figure, we find an expected pattern of relationships, in accord with the status attainment model. G1 educational attainment has a direct positive effect on G1 household income (.33, $p < .001$). Documenting status transmission across generations, G1 educational attainment has a positive direct effect on G2 educational attainment (.10, $p < .05$). We further note that the effect of G1 educational attainment on G2 educational attainment is significantly mediated through G2 educational plans (indirect effect .04, $p < .05$) and grade point average (indirect effect .05, $p < .01$). G1 income has a positive effect on G2 educational plans (.13, $p < .05$), which, in turn, has substantial impact on G2 educational attainment (.30, $p < .001$). Moreover, G1 household income has a direct effect on G2 household income (.21, $p < .001$).

Self-esteem and economic self-efficacy in the status attainment process: We now turn to our first research objective, the analysis of the extent to which adolescent self-esteem and economic self-efficacy, variables that have received relatively little attention by status attainment researchers, influence adult attainments directly and/or indirectly through educational plans and school achievement. The findings indicate that these psychological resources are, in fact, implicated in the attainment process. We find that economic self-efficacy at age 15-16 has a positive direct effect on educational attainment, as measured at age 35-36 (.20, $p < .001$). Economic self-efficacy also affects educational attainment indirectly through its positive effect on educational plans at age 17-18 (.30, $p < .001$; the indirect effect on educational attainment is .09, $p < .05$). Furthermore, G2 adolescent economic self-efficacy affects adult income indirectly through educational plans (indirect effect .05, $p < .05$).

The findings suggest that, relative to economic self-efficacy, self-esteem has a more limited role in the attainment process. Self-esteem at age 15-16 influences adult educational attainment only indirectly, through its positive effect on grade point average (.22, $p < .01$; indirect effect: .07, $p < .05$). Although adolescent self-esteem has a positive effect on educational plans (.13, $p < .05$), the indirect effect of self-esteem on educational attainment through educational plans is not statistically significant (.04, $p > .05$). Likewise, the indirect effect of G2 adolescent self-esteem on G2 household income (measured at age 24-35) through adolescent educational plans is not statistically significant (.03, $p > .05$).

We find a seemingly anomalous direct negative effect of adolescent self-esteem on adult household income (-.12, $p < .05$). It should be noted, however, that adolescents with higher self-esteem achieved higher educational attainment (an indirect relationship through grade

point average, as described above), which likely limited their incomes in the early occupational career. Table 4 shows that the residual correlation between G2 educational attainment and G2 household income (as assessed during the prior decade) was essentially zero (.024). Note also that G2 household income is not an individual-level variable, but measures the income for the entire household. Thus, it is unclear whether we should expect a positive relationship between adolescent self-evaluations and adult household income.

Self-esteem and self-efficacy as mediators of the effects of socioeconomic origin on status attainment: Our second research objective was to examine whether self-esteem and economic self-efficacy in adolescence mediate the effects of parental education and income on a child's educational plans, achievement and attainment. We find that G1 income has a positive direct effect on G2 self-esteem (.12, $p < .05$). Although there is no significant direct effect of G1 educational attainment on G2 self-esteem, the indirect effect through G1 household income is statistically significant, albeit weak (.04, $p < .05$). Furthermore, we find that G2 self-esteem mediates the effect of G1 household income on G2 educational plans to a very limited degree (indirect effect .02, $p < .05$). G1 education and household income are not significantly related to G2 economic self-efficacy. Thus, our findings suggest that economic self-efficacy does not mediate the effect of socioeconomic origin on child attainments.

Intergenerational parallels in self-esteem and economic self-efficacy: Regarding our third objective, we find evidence of intergenerational parallels in self-efficacy, but not self-esteem. Specifically, G2 economic self-efficacy, measured in adolescence, affects the same resource in the next generation through several direct and indirect processes. Remarkably, G2 economic self-efficacy has a significant direct effect on G3 economic self-efficacy (.17, $p < .05$), though the measurements are separated by two decades. G2 economic self-efficacy also has a weak, but statistically significant, multiply mediated effect on G3 self-esteem (.02, $p < .05$)—through its effect on G2 educational plans (.30, $p < .001$), which in turn affects G2 educational attainment (.30, $p < .001$), which in turn influences G3 self-esteem (.25, $p < .001$). G2 adolescent self-esteem has no significant direct effect on G3 adolescent self-esteem, and the indirect effects through the education-related intervening variables—educational plans and grade point average—are not statistically significant at the conventional level ($p < .05$).¹ Finally, we find that G2 household income has a direct effect on G3 economic efficacy (.21, $p < .05$), and that G2 educational attainment has a direct effect on G3 self-esteem (.25, $p < .001$).

¹ Because intergenerational parallels in self-esteem might be found among specific groups of respondents rather than in the whole sample, we performed subgroup analyses by gender and race (white vs. non-white). These subgroup analyses confirm the non-significant relationship between G2 adolescent self-esteem and G3 adolescent self-esteem for males, females, whites, and non-whites.

Table 3.*Standardized path coefficients from the fully recursive structural equation model*

Outcome	Predictor	Coefficient
G1 household income (logged)	G1 educational attainment	.333***
	G2 self-esteem	.042
G2 economic self-efficacy	G1 household income (logged)	.118*
	G2 gender	.135*
	G1 educational attainment	.005
	G1 household income (logged)	.126
G2 educational plans	G2 gender	.157**
	G1 educational attainment	.127**
	G1 household income (logged)	.129*
	G2 self-esteem	.133*
G2 grade point average	G2 economic self-efficacy	.295***
	G2 gender	-.062
	G1 educational attainment	.183**
	G1 household income (logged)	.106
G2 household income (logged)	G2 self-esteem	.217**
	G2 economic self-efficacy	.143
	G2 gender	-.147*
	G1 educational attainment	.037
	G1 household income (logged)	.211***
	G2 self-esteem	-.117*
	G2 economic self-efficacy	.140
	G2 educational plans	.185*
	G2 grade point average	.089
	G2 gender	.331***
G2 educational attainment	G1 educational attainment	.099*
	G1 household income (logged)	.002
	G2 self-esteem	.012
	G2 economic self-efficacy	.204***
	G2 educational plans	.300***
	G2 grade point average	.297***
	G2 gender	-.007
G3 self-esteem	G1 educational attainment	-.035
	G1 household income (logged)	-.020
	G2 self-esteem	-.006
	G2 economic self-efficacy	.041
	G2 educational plans	.043
	G2 grade point average	-.094
	G2 educational attainment	.250***
	G2 household income	.059
	G3 age	-.115*
	G3 gender	.194**
G3 economic self-efficacy	G1 educational attainment	.004
	G1 household income (logged)	.004
	G2 self-esteem	.007
	G2 economic self-efficacy	.173*
	G2 educational plans	-.104
	G2 grade point average	.081
	G2 educational attainment	.068
	G2 household income (logged)	.205*
	G3 age	-.091
	G3 gender	-.016

Note. The *Method* section describes the measures.

*** $p < .001$, ** $p < .01$, * $p < .05$.

Table 4.
Latent constructs and residual correlations

Latent constructs	Indicators	Loading
G2 economic self-efficacy	Job that pays well	.813***
	Able to own home	.902***
	Have enjoyable job	.657***
G3 economic self-efficacy	Job that pays well	.777***
	Able to own home	.845***
	Have enjoyable job	.723***
G2 self-esteem	Positive attitude	.862***
	Satisfied with myself	.750***
	Respect for myself	.746***
G3 self-esteem	Positive attitude	.738***
	Satisfied with myself	.883***
	Respect for myself	.521***
Residual correlation between	and	Coefficient
G2 economic self-efficacy	G2 self-esteem	.312***
G2 educational plans	G2 grade point average	.400***
G2 household income (logged)	G2 educational attainment	.024
G3 economic self-efficacy	G3 self-esteem	.261**

Note. Standardized coefficients. Measures described in the *Method* section.
*** $p < .001$, ** $p < .01$, * $p < .05$.

Discussion

We began this paper with a critique of the status attainment model for its limited consideration of psychological resources that may influence educational, occupational, and income attainments (Dubow, Boxer, and Huesmann 2009; Johnson and Hitlin 2017; Magnusson and Neramo 2018). The Wisconsin model of status attainment is widely and justifiably acclaimed for its incorporation of social psychological processes, supplementing the earlier structural model of attainment set forth in Blau and Duncan's classic work (1967). The importance of parental educational expectations for their children, teacher and peer influences, and children's educational and occupational aspirations and plans is highlighted in the Wisconsin scholars' original work (Sewell and Hauser 1975, 1980; Sewell, Haller, and Ohlendorf 1970; Sewell, Haller and Portes 1969), as well as in numerous subsequent studies extending over several decades (Andrew and Hauser 2011; Bozick et al. 2010; Kerckhoff 1995; Reynolds and Johnson 2011; Warren, Hauser, and Sheridan 2002).

The question arises, however, about whether other general or domain-specific psychological orientations matter for the process of attainment. The present paper draws

attention to two dimensions of the self-concept, self-esteem and economic self-efficacy. Self-esteem is a global phenomenon, encompassing myriad aspects of subjective self-worth (Gecas 2001; Orth 2018). The wide-ranging implications of self-esteem for positive developmental outcomes warrant its consideration in extensions of the status attainment model. Self-efficacy, another general self-appraisal, is a valuable personal resource, which takes shape in adolescence and facilitates a range of positive life outcomes (e.g., Abele and Spurk 2009; Oi and Alwin 2017). The current study complements theory and findings regarding self-efficacy by further developing our understanding of domain-specific forms of self-efficacy (Bandura 1981, 1997; Thorsen 2018). While other work drawing from the Youth Development Study examined self-efficacy in the academic domain (Mortimer et al., 2017), this study focuses on economic self-efficacy, which references confidence with respect to occupational and income spheres. We now find that economic self-efficacy is an important factor in understanding the educational attainment process; education is one of the key means for achieving success in the economic realm.

We find justification for our basic criticism of status attainment research, in that it fails to consider how self-appraisals may serve as resources heightening goal setting and facilitating agentic striving. Specifically, we find that the self-concept dimensions of interest to us here—self-esteem and economic self-efficacy—are linked to two central variables in the status attainment process: educational plans and achievement (grade point average). Moreover, we find that adolescent economic self-efficacy has a significant direct positive effect on adult educational attainment even when the two educationally-relevant status attainment mediators (educational plans and grade point average) are controlled.

Taken altogether, we find a stronger role for economic self-efficacy in the attainment process than for self-esteem. Though we noted in the introduction the advantages individuals with high self-esteem may have in this process, we find that self-esteem in and of itself is not a significant direct antecedent of educational or income attainment. However, self-esteem indirectly influences adult educational attainment through grade point average. In contrast, economic self-efficacy directly predicts educational attainment, a prerequisite for subsequent socioeconomic status attainment. It also indirectly influences educational attainment via adolescent educational plans. We find no evidence that positive self-concept dimensions, measured in adolescence, directly promote income attainment in the early occupational career and we find little evidence that self-esteem and economic self-efficacy directly mediate the effects of socioeconomic origin on attainments. Nevertheless, these self-concept dimensions

are implicated in the status attainment process because they are associated with antecedents of individual attainments—educational plans and school achievement.

Furthermore, this study permits us to see that positive self-appraisals not only matter in the process of attainment, but may also be transmitted across generations. Second-generation economic self-efficacy is directly related to the same psychological resource in the third generation, auguring well for the children of adults so endowed. This is in line with previous research, which found a similar process of intergenerational transmission with respect to the self-concept of academic ability (Mortimer et al. 2017) and optimistic life expectations (Johnson and Hitlin 2017). However, we do not find significant empirical evidence of intergenerational parallels in self-esteem across the two generations examined here, a finding that may be considered at odds with some prior research suggesting that psychological resources may be transmitted across generations when considering these resources contemporaneously, that is, when parents are adults and children are adolescents (Bridgett et al. 2015). In this study, parental and child orientations are examined in the same developmental phase (adolescence) separated by two decades.

This is the first three-generation study of the role of self-esteem and economic self-efficacy in status attainment and the multigenerational persistence of inequality, highlighting that adolescent self-esteem and economic self-efficacy are linked directly and/or indirectly to adult attainments, and that the latter self-evaluation is passed on, to some extent, to children. Despite notable strengths of the data and the analytic approach—such as a long observation span, simultaneous modeling of several endogenous variables and indirect effects, and a good model fit even though several measurements were separated by over two decades—we acknowledge a number of limitations. First, this is a single community study. Although the study site is comparable to the nation as a whole regarding social and economic indicators (Mortimer 2003), the findings are not necessarily generalizable to the nation at large. Future investigations should extend this research by studying more racially and ethnically diverse samples in various study sites representing a broader fraction of the population.

Second, by virtue of the study design, the subsample of participants studied here is of lower socioeconomic origin than the YDS second-generation cohort at large, because relatively early (second-generation) child-bearers are overrepresented. However, as a result of the truncated sample, the correlations identified here can be interpreted as conservative measures of the relationships between the key variables, given the restricted ranges of these variables.

Third, although we were able to investigate the role of psychological resources in the attainment process of the second generation, it was not yet possible to determine whether these

psychological resources are implicated in the attainment process of third-generation participants, because the third-generation participants have not yet been followed to adulthood. Historical change may have altered the role of self-concept dimensions in the attainment process. As noted earlier, second-generation participants' self-esteem and economic self-efficacy during adolescence were assessed in pre-recession year 1989, and third-generation participants' self-esteem and economic self-efficacy, also measured in adolescence, were assessed in (post-)recession years 2009-2011. Furthermore, the economic payoff to education increased across the observation period, and, as a result, young people's aspirations for college and graduate degrees increased (Goyette 2008). We also note that a trend of increasing inequality over the last decades led to some, albeit not far-reaching, change in public beliefs about life chances in the United States (McCall 2016). But despite these changes, this analysis shows that self-esteem and economic self-efficacy, two key understudied social-psychological resources, play a role in the attainment process of the second generation over an observation period of more than twenty years. Furthermore, we find evidence that the intergenerational transmission of a key facet of the self-concept—economic self-efficacy—may be implicated in social class reproduction.

Conclusion

Although social scientists have been collectively advancing our understanding of the determinants of status attainment, few studies have focused on how psychological processes play out in status attainment and in intergenerational development. Considering the present evidence of the importance of positive self-appraisals for attainment processes, we conclude that status attainment researchers may have focused too narrowly on the previously identified precursors of attainment, that is, educational aspirations and plans and others' influence on adolescent orientations to the future. We recommend that scholars of attainment attend to a wider array of psychological resources in future studies of status attainment and intergenerational transmission of advantage.

Beyond its theoretical contributions, this research has policy relevance. Adolescents conduct their lives within the bounds of social structure, in part through self-evaluations and the beliefs they hold about their futures (Johnson and Hitlin 2017). Such self-appraisals and beliefs can be understood as psychological resources facilitating individual attainments. These resources are malleable and individuals can be empowered to mobilize them (Burger 2015; Gist and Mitchell 1992; Sewell 1992). Accordingly, educational experiences, extra-curricular interventions, and youth development programs should foster these resources in young people,

by promoting not only educational aspirations, but also more distal predictors of attainment such as economic self-efficacy and self-esteem. Though self-esteem proved to be a weaker component of the intergenerational attainment process than self-efficacy, self-esteem enhancement can foster a range of positive developmental outcomes (Mann et al. 2004; Oshri et al. 2017; Roth and Brooks-Gunn 2003).

Young people's self-evaluations influence what they can achieve and what they can become. These powerful inner forces provide an internal guiding mechanism that steers and nurtures individuals through life, governing their views of their (future) opportunities as well as their behavior. Thus, it is essential to give appropriate weight to these self-evaluations in the implementation of positive youth development programs aimed at promoting competence and healthy development.

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Authors' note

The content of this paper is solely the responsibility of the authors and does not represent the official views of National Institute of Child Health and Human Development or National Institute of Mental Health. Youth Development Study data are available for public use at the Inter-University Consortium for Political and Social Research, University of Michigan.

Conflicts of interest

None.

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