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# University students' causal conceptions about social mobility: Diverging pathways for believers in personal merit and luck

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## ABSTRACT

Many college students hold ambitious goals for upward social mobility via post-college careers. However, in the current economic recession such optimistic expectations are not a given. The present study examines how college students' current social status and beliefs in causal factors for socioeconomic status (SES) attainment lead to diverging goal-engagement and goal-disengagement promoting pathways that influence expectations for future SES attainment. Data from an ethnically and socioeconomically diverse sample of 419 university students are analyzed. Most study participants expected to attain a significantly higher level of SES than their parents. Moreover, we identified two pathways of SES-related beliefs, goal engagement or disengagement, and goal attainment. An engagement-promoting pathway consisting of meritocratic-oriented causal beliefs and increased goal engagement tendencies was associated with higher expected personal SES. Conversely, a disengagement tendencies along with decreased expected personal SES. College students' current social status, causal conceptions about SES and goal engagement/disengagement tendencies fully mediate the relationship between perceptions of one's own family of origin's SES and one's expected personal SES.

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#### 1. Introduction

Americans' faith in a prosperous future and their endorsement of the American dream is being increasingly challenged by a social system restricting this dream to a select few. Rising inequality (CBO, 2011) has all but muted any prospects of individuals from impoverished backgrounds attaining a higher status regardless of their merit (Silvia, Quinlan, & Seydl, 2011). Perhaps no other age group reflects this growing conflict better than young adults, who stand on the bridge between the socioeconomic status (SES) of their family of origin and the SES that they will attain as adults. Indeed, the majority of Americans believe that the current economic recession has effected youth the hardest (Pew Research Center: Social & Demographic Trends, 2012). Youth are left facing an unstable and low-paying labor market (Danziger & Ratner, 2010), and are carrying an average student loan debt that dwarves the debt carried by previous cohorts (Project on Student Debt, 2011). As key tenants of the American dream are being increasingly challenged, today's youth must choose between extending or withdrawing their efforts toward achieving the American dream (Heckhausen, 2010). The present paper provides an important extension to prior research regarding social mobility and motivation in young adulthood by examining the extent to which university students still believe in the American dream, and how these beliefs lead to diverging goal engagement or disengagement promoting pathways toward socioeconomic status (SES) attainment.

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#### 1.1. Meritocracy and causal beliefs about social mobility

The meritocratic view of American society consists of three discernable yet interrelated belief systems: *Independence*, the *Protestant Ethic*, and the *American dream* (Plaut, Markus, & Lachman, 2002). *Independence* has its roots in the Declaration of Independence and the statement that "all men are created equal" and have the right to the "pursuit of happiness" (National Archives, 2011), leading to the belief that all Americans have a personal opportunity for success. The *Protestant Ethic* refers to a personal responsibility to pursue one's calling to the limits of one's ability through hard work (Weber, 1958). The *American dream* reinforces the ideology of SES attainment being dependent upon one's ability and effort, and implies a progressive improvement in status from generation to generation (Kluegel & Smith, 1986; McNamee & Miller, 2009). Together, these interrelated belief systems form the dominant meritocratic ideology of American society, wherein individuals are viewed as morally obligated to use their personal opportunity to pursue SES, that ones' SES will be higher than ones' parents, and one's SES can be attributed to his or her merit (effort and ability).

The endorsement of individual attributes as causes for SES becomes increasingly ingrained as children develop into adulthood. Indeed, a developmental socialization can be seen in that younger children's explanations for class differences focus on how rich and poor people look different, whereas adolescents' focus on how rich and poor people think differently (Leahy, 1990). Specifically, by young adulthood, wealth is generally attributed to hard work, self-discipline, and intelligence, while individuals who are poor are viewed as being so because they lack these characteristics (Christopher & Schlenker, 2000; Cozzarelli, Wilkinson, & Tagler, 2001). Once formed, causal conceptions about being wealthy and poor are relatively stable across adulthood and provide an individual with an interpretative framework for understanding his or her own and others' social status (Smith & Stone, 1989). In turn, causal conceptions shape individuals' goals for, and direct their motivational pursuit of, their personal social status aspirations. For instance, believing that ones' merit is the determining cause of SES attainment may lead an individual to extend effort toward achieving a higher education that in turn increases his or her expectations for SES. Conversely, believing that uncontrollable factors, such as luck or social and economic changes in society, are responsible for SES attainment may lead an individual to disengage from pursuing SES-related goals.

Attribution theory has developed elaborate models of causal dimensions that can be applied to future-oriented causal conceptions as well. Attribution theory posits that causal factors can be classified along a *control* dimension, which refers to the extent that an individual can manipulate a causal factor (Weiner, 1985). Effort is generally viewed as a controllable causal factor, as is ability, at least for those who adopt a more incremental view of intelligence (Dweck & Leggett, 1988). By applying oneself through the pursuit of learning, it is possible for an individual to gain new skills that in turn increase his or her ability. Additionally, effort is most effective when directed in an applied, organized and skillful manner. The mere act of trying does not generally confer benefits unless an individual understands the task at hand. Thus, when considering SES attainment, meritocratic-oriented causal factors of effort and ability are inherently dependent upon one another to produce maximum benefit.

Research by Skinner and colleagues shows how children's and adolescent's level of perceived control over attaining an outcome influences their engagement and disengagement tendencies toward that outcome (for review see Skinner, Zimmer-Gembeck, & Connell, 1998). This research indicates that high beliefs in one's ability and effort (i.e., merit) as the determining causal factors in attaining a pursued goal promotes goal engagement, whereas high beliefs in one's luck as a determining causal factor leads to goal disengagement. Translating these findings into our sample of college students, we can expect those individuals who endorse meritocratic-oriented causal factors to be highly goal engaged toward attaining a high status in the future. Conversely, as luck is the least controllable causal conception, individual's who endorse luck are likely to employ goal disengagement strategies and downwardly adjust their status goal.

#### 1.2. Status-related goal engagement and goal disengagement

According to the *Motivational Theory of Life-Span Development* goal engagement and goal disengagement are not adaptive in and of themselves (Heckhausen, Wrosch, & Schulz, 2010). Instead, their adaptiveness is dependent upon their congruence with an individual's potential to control the attainment of a given goal. This means that goal engagement becomes adaptive when an individual has opportunities to attain their goal, and goal disengagement becomes adaptive when an individual's opportunities are constrained to a point where goal attainment is all but impossible. Several studies provide empirical support for the congruency principle across the lifespan (see review in Heckhausen et al., 2010). Particularly relevant empirical work regarding the timing of childbearing goals shows beneficial consequences of on-time goal engagement before age 40 and detrimental consequences of off-time goal engagement after age 40 (Heckhausen, Wrosch, & Fleeson, 2001). A related study addresses similar on-time versus off-time goal engagement regarding partnership goals in early versus late middle adulthood, providing further support to the proposition that engagement with goals that are controllable at a given age is beneficial, but becomes detrimental beyond the age these goals are close to unattainable (Wrosch & Heckhausen, 1999).

University students are experiencing a rapidly increasing capacity to control their environment to facilitate goal attainment, and should benefit most by capitalizing on this developing control capacity through increased and sustained commitment to life-stage appropriate goals (Heckhausen et al., 2010). Across cultural groups, young adulthood represents a time when social status-related developmental tasks of finishing education and entering a career are most salient in the society (Havighurst, 1976), and are widely reflected in the developmental goals of young adults (Chang, Chen, Greenberger, Dooley, & Heckhausen, 2006; Nurmi, 1992). This indicates that status-related goal engagement is a life-stage consistent goal for young adults. Despite youth's normative investment of motivational resources toward status-related goals, there remains inter-individual variation in both the

strength of commitment, as well as the strategies enacted toward these goals (Haase, Heckhausen, & Köller, 2008; Heckhausen & Chang, 2009). Youth who adopt a defined career-related goal early and select high career-related goals, are likely to invest sustained goal engagement strategies toward attaining that goal, and are much more likely to actually attain the goal as adults (Schoon, 2001; Schoon & Parsons, 2002; Vuolo, Staff, & Mortimer, 2012).

Based on motivational research, a major detriment of goal setting and goal striving, or engagement, is the degree to which an individual believes that he or she has control over the outcome (see review in Heckhausen & Heckhausen, 2010). Therefore, one way in which diverging goal engagement and disengagement trajectories toward career-attainment may develop, are individual's beliefs about which controllable and uncontrollable factors influence their attainment of status-related goals in American society. As meritocratic-oriented causal factors are controllable, we can expect their endorsement to increase both an individual's expected SES and their goal engagement strategies directed toward attaining this status goal.

#### 1.3. Study aims and hypotheses

The present study examines whether college students in general still endorse beliefs and expectations associated with the American dream. More specifically, this study investigates whether endorsement of meritocratic-oriented or luck-oriented causal conceptions for social status attainment lead to diverging goal engagement and disengagement pathways toward expected future social status attainment. We expect to see two diverging pathways, one SES engagement-promoting, and the other disengagement-promoting. Using our hypothesized relationships, we construct and assess a multi-step structural equation model leading from perceived family of origin through current social status, causal conceptions, goal engagement and disengagement, and then to expected future social status.

#### 1.3.1. American dream

In order to assess whether university students in our sample endorse the American dream we test the degree to which upward intergenerational mobility and meritocratic-oriented causal conceptions for SES are endorsed. We expect that: 1a) individuals will endorse significantly higher views of their expected personal SES than views of their family of origin SES; and 1b) individuals will endorse meritocratic-oriented (effort and ability) causal conceptions about SES significantly more strongly than luck-oriented causal conceptions about SES.

#### 1.3.2. Goal engagement-promoting pathway

We expect to find a goal engagement-promoting pathway consisting of the following relationships: 2a) college student's university-related subjective social status will be significantly positively associated with their endorsement of meritocratic-oriented causal conceptions about SES; 2b) college student's endorsement of meritocratic-oriented causal conceptions about SES will be significantly positively associated with their goal engagement, and significantly negatively associated with their goal disengagement; and 2c) college student's goal engagement will be significantly positively associated with their expected personal SES.

## 1.3.3. Goal disengagement-promoting pathway

We expect to find a goal disengagement-promoting pathway consisting of the following relationships: 3a) college student's university-related subjective social status will be significantly negatively associated with their endorsement of luck-oriented causal conceptions about SES; 3b) college student's endorsement of luck-oriented causal conceptions about SES will be significantly negatively associated with their goal engagement, and significantly positively associated with their goal disengagement; and 3c) college student's goal disengagement will be significantly negatively associated with expected personal SES.

## 1.3.4. Mediation and indirect pathways

In order to assess the fit of our data to our hypothesized model, we test the significance of the proposed mediated and indirect pathways. We expect that: 4a) collectively, college student's university-related subjective social status, causal conceptions about SES, goal engagement and goal disengagement will mediate the relationship between their family of origin SES and their expected personal SES; 4b) collectively, college student's causal conceptions about SES, goal engagement and goal disengagement will mediate the relationship between their university-related subjective social status and their expected personal SES; 4c) college student's goal engagement and goal disengagement will mediate the relationship between their causal conceptions about SES and their expected personal SES.

## 2. Methods

#### 2.1. Participants and procedure

Our sample is composed of 433 participants, recruited through the University of California, Irvine School of Social Sciences Research Participation Pool. Of the 433 participants enrolled in the study, 419 (97%) participants had complete data on the variables of interest and comprise the study sample. Participants (n=419) had a mean age of 20.48 years, SD=2.15, including 282 (67.3%) females. The sample is ethnically diverse with 214 (51.1%) Asian participants, 71 (16.9%) White participants, 68 (16.2%) Hispanic participants, 25 (6.0%) Middle Eastern participants, 4 (1.0%) African American participants, 36 (8.6%) mixed ethnicity participants, and 1 (0.2%) participant who identified as 'human'. In addition, 87 (20.8%) are born in a foreign country,

245 (58.5%) had at least one parent born in a foreign country, and 87 (20.8%) had both parents born in the United States. The sample comes from a diverse socioeconomic background, with participants' reported parental income ranging from less than \$25,000 to greater than \$150,000, and reported parental education level ranging from less than High School education to a Doctorate level education.

#### 2.2. Measures

## 2.2.1. Subjective SES

Both subjective *family of origin SES*, and subjective *expected personal SES* are assessed using modified versions of the MacArthur Scale of Subjective Social Status (Adler, Epel, Castellazzo, & Ickovics, 2000). Both single-item measures consist of a picture of a 10-rung ladder representing the social hierarchy in America, wherein participants are asked to place their family of origin (in the *family of origin SES* ladder) and themselves in 10-years (in the *expected personal SES* ladder) on the ladder with the following frame of reference. "At the top of the ladder are the people who are the best off... they have the most money, the highest amount of schooling, and the jobs that bring the most respect. At the bottom of the ladder are the people who are the worst off... they have the least money, little or no education, no jobs or jobs that no one wants or respects." Although these are subjective, and single item measures, previous versions of these measures have been widely used within the health inequalities field where they have proven to be a stronger predictor of health outcomes then objective and multiple indicator measures of social status (Singh-Manoux, Marmot & Adler, 2005). In addition, the *family of origin SES* ladder was assessed for validity by correlating it with the sum of parental education level and total yearly family income. The significant positive association, r = .671, p < .001, indicates that the subjective family of origin SES measure is a valid representation of participant's family of origin SES.

## 2.2.2. University-related subjective social status

University-related subjective social status is measured using a modified version of the MacArthur Scale of Subjective Social Status-Youth Version (Goodman et al., 2001). The single-item measure consists of a picture of a 10-rung ladder representing the social hierarchy in the university, wherein participants are asked to place themselves on the ladder with the following frame of reference. "At the top of the ladder are the people in your University with the most respect, the highest grades, and the highest standing. At the bottom of the ladder are the people who no one respects, no one wants to hang around with, and have the worst grades." This measure has been validated with high school students (Goodman et al., 2001), and we consider its focus on peer respect, peer popularity, and grades a valid measure of university-related subjective social status.

#### 2.2.3. Causal conceptions about SES

The causal conceptions about SES scale contains 6 items assessing participants' beliefs in the importance of causal factors for status attainment in general, and how influential they feel these causal factors are for them personally. Each item in the scale uses the subjective SES ladder as a reference and asks participants to indicate how much they agree or disagree with each item using a 5-point Likert scale with  $1=strongly\ disagree$  and  $5=strongly\ agree$ . The 4 items involving the causal factor ability and effort produce the *meritocratic* causal conceptions about SES subscale (alpha=.72), however note that these items are treated as indicators of the latent variable *meritocratic* in the structural equation models. An example item is "Where I end up on the 'ladder' will be largely because of the causal conceptions about SES scale is composed of one item representing personal influence, and one-item representing general causal conceptions about SES. An example item is, "Where I end up on the 'ladder' will be largely because of how lucky I am." The *luck* subscale has an inter-item correlation of r=.67, however note that these items are treated as indicators of the latent variable *luck* in the structural equation models.

## 2.2.4. Goal engagement and goal disengagement

Both goal engagement and goal disengagement are 5-item subscales from the Primary and Secondary Control Scale (Wrosch, Heckhausen, & Lachman, 2000). Participants responded to each item using a 5-point Likert scale with 1 = strongly disagree and 5 = strongly agree. The 5-item subscale, Primary Control Striving represents goal engagement and includes the item, "When I encounter problems, I don't give up until I solve them." These 5 items produce goal engagement (alpha = .71); however note that these items are treated as indicators of the latent variable goal engagement in the structural equation models. The 5-item subscale, Secondary Control, Lowering Aspirations represents goal disengagement and includes the item, "To avoid disappointments, I don't set my goals too high." These 5 items subscale produce goal disengagement (alpha = .64); however note that they are treated as indicators of the latent variable goal disengagement in the structural equation models.

#### 2.2.5. Moderators

Due to our ethnically diverse sample representing many different generational statuses, *ethnicity* and *generational status* are examined as potential moderators. The five ethnic groups containing enough members to allow analyses were: *Asian*, *Hispanic-Latino/a*, *White*, *Middle-Eastern*, and *Mixed ethnicity*. The three generational status groups were; *1st generation* (participant was not born in the United States); *2nd generation* (at least one parent was not born in the United States); and *3rd or more generation* (both parents were born in the United States).

#### 3. Results

## 3.1. Data analyses plan

Data analyses proceeded as follows. In step 1, means, standard deviation and inter-item correlations for the study variables are compiled. In step 2, paired sample *t*-tests are used to examine the extent to which university students endorse aspects of the American dream, and one-way ANOVAs are used to assess whether there are ethnic or generational status group differences in these endorsements. In step 3, a theory-guided systematic approach to model building begins with the creation of individual measurement models for the multi-item measures used. In step 4, the measurement models are combined into a structural model, with the ordering of variables following our theory-guided causal ordering of causal beliefs to engagement to expectations. In step 5, mediation is assessed through nested-model comparisons and bootstrapping results of indirect pathways. In step 6, ethnicity and generational status are assessed as potential path-model moderators through multiple group nested-model comparisons.

## 3.2. Descriptive statistics

Means, standard deviations and inter-item correlations for the independent and dependent variables are presented in Table 1. Note that the indicators for luck and merit, as well and engagement and disengagement, are combined as latent constructs in the structural equation modeling analyses, but are summed to represent their respective constructs for the purposes of the correlational and mean-difference analyses.

#### 3.3. American dream

Paired sample t-tests are used to assess mean differences. Note that for the purposes of these analyses, the items representing the latent constructs used in the model testing analyses were instead summed to represent their respective constructs. Supporting Hypothesis 1a, expected personal SES (mean = 7.08) is significantly higher than subjective family SES (mean = 5.75), mean difference = 1.32, SEM = .09; t (418) = 14.03, p<.001. Supporting Hypothesis 1b, meritocratic-oriented causal conceptions about SES (mean = 4.49) is endorsed significantly more strongly than luck-oriented causal conceptions about SES (mean = 3.06), mean difference = 1.42, SEM = .06; t (418) = 25.47, p<.001.

One-way ANOVAs are used to assess for ethnic and generational status group differences on perceptions of social status and meritocratic and luck-oriented causal conceptions for SES. For ethnicity, group contrast tests revealed that individuals of Asian ethnicity reported significantly higher endorsement of luck-oriented causal conceptions for SES then all other groups, t (409) = 3.80, p<.001. For generational status, group contrast tests revealed that 1st generation participants reported significantly less endorsement of meritocratic-oriented causal conceptions for SES then all other groups, t (133.68) = -2.11, p = .037, and 2nd generation participants reported significantly stronger endorsement of meritocratic-oriented causal conceptions for SES then all other groups, t (314.08) = 3.14, p = .002.

## 3.4. Structural equation model

## 3.4.1. Measurement models

To control for measurement error, model building began with the construction of individual measurement models for meritocratic-oriented causal conceptions for SES, luck-oriented causal conceptions for SES, goal engagement strategies, and goal disengagement strategies. All models are examined with maximum likelihood estimation structural equation modeling (SEM) in AMOS 19 (Arbuckle, 2010).

The four items representing meritocratic-oriented causal conceptions for SES were used to construct the meritocratic-oriented causal conceptions for SES latent factor. The meritocratic-oriented causal conceptions for SES measurement model had poor

**Table 1**Means, standard deviations, and inter-item correlations.

	M (SD)	1	2	3	4	5	6	7
(1) Family SES	5.75 (1.65)	1						
(2) Expected personal SES	7.08 (1.25)	.14**	1					
(3) University SES	6.32 (1.40)	.19**	.31***	1				
(4) Goal Engagement	3.85 (0.57)	.01	.22***	.24***	1			
(5) Goal Disengagement	2.69 (0.69)	.01	20***	26***	$40^{**}$	1		
(6) Meritocratic CC-SES	4.49 (0.50)	.08	.15**	.17**	.21***	06	1	
(7) Luck CC-SES	3.06 (0.97)	.10*	01	05	17 <sup>**</sup>	.16**	11*	1

Note: Subjective Socioeconomic Status (SES); Causal Conceptions about SES (CC-SES).

<sup>\*\*</sup> *p*<.01.

<sup>\*\*\*</sup> p<.001.

<sup>\*</sup> *p*<.05.

overall fit,  $[\chi^2]$  (2) = 65.257, p<.001; CFI=.835; TLI=.506; RMSEA=.271; 90% CI: .217, .330]. The two items representing luck-oriented causal conceptions for SES were used to construct the luck-oriented causal conceptions for SES latent factor. Due to only containing two indicators, both paths from the latent factor to the indicator were set to 1 in order for the model to be identified. There are no model fit statistics to report for the luck-oriented causal conceptions for SES measurement model as it was just identified. The five items representing goal engagement were used to construct the goal engagement latent factor. The goal engagement measurement model had excellent overall fit,  $[\chi^2]$  (5) = 6.155,  $[\mu]$  = .291; CFI=.997; TLI=.993; RMSEA=.023; 90% CI: .000, .074]. The five items representing goal disengagement were used to construct the goal disengagement latent factor. The goal disengagement measurement model had good overall fit,  $[\chi^2]$  (5) = 22.012,  $[\mu]$  = .001; CFI=.938; TLI=.813; RMSEA=.089; 90% CI: .053, .128].

## 3.4.2. Structural model

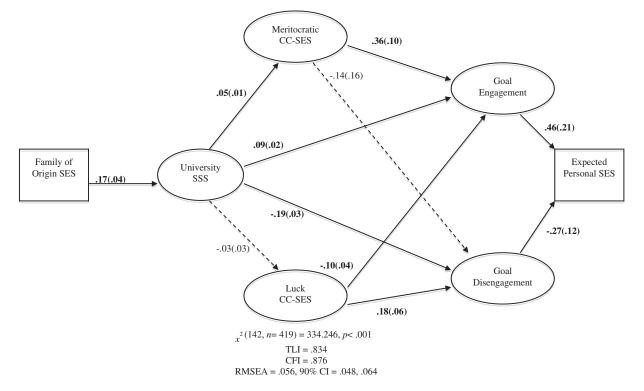
Following construction of the individual measurement models, the structural model is constructed according to the hypothesized ordering of indicators: perceived past status (family of origin), to perceived current status (university-related), then to causal conceptions for SES (meritocratic and luck), then to goal engagement and disengagement, and finally to perceived future status. Causal conceptions about SES variables are covaried in the model, as are goal engagement and goal disengagement. The full model is presented in Fig. 1, and had good fit,  $\chi^2$  (142) = 334.246, p<.001; TLI = .834, CFI = .876, RMSEA = .056, 90% CI: .048, .064. The path coefficients for the full model are presented in Table 2 and are further discussed below.

## 3.4.3. Engagement-promoting pathway

Supporting Hypothesis 2a, university-related social status is significantly positively associated with meritocratic-oriented causal conceptions about SES,  $\beta$  (.013) = .045, C.R. = 3.377, p < .001. Providing mixed support for Hypothesis 2b, meritocratic-oriented causal conceptions about SES are significantly positively associated with goal engagement,  $\beta$  (.103) = .358, C.R. = 3.489, p < .001; but are not significantly associated with goal disengagement,  $\beta$  (.158) = -.137, C.R. = -0.866, p = .387. Goal engagement is significantly positively associated with expected personal SES,  $\beta$  (.208) = .463, C.R. = 2.221, p = .026, supporting Hypothesis 2c.

#### 3.4.4. Disengagement-promoting pathway

University-related subjective social status is not significantly associated with luck-oriented causal conceptions about SES,  $\beta$  (.029) = - .025, CR = - 0.878, p = .380, not supporting Hypothesis 3a. Supporting Hypothesis 3b, luck-oriented causal conceptions



**Fig. 1.** Results for path model, with unstandardized coefficients and standard errors presented for each pathway. Solid lines and bolded coefficients represent significant pathways at *p*<.05. Dashed lines and un-bolded coefficients represent non-significant pathways. Covariances between causal conceptions about SES, and between goal engagement/disengagement are not presented. Note: SES = socioeconomic status; CC-SES = causal conceptions about SES; SSS = subjective social status.

**Table 2**Unstandardized path model coefficients and (standard errors) from the mediated Structural Equation Model.

	University social status	Meritocratic CC-SES	Luck CC-SES	Goal engagement	Goal disengagement	Expected personal SES
Family of origin SES University SES Meritocratic CC-SES Luck CC-SES Goal engagement Goal disengagement	.167 (.041)***	.045 (.013)***	025 (.029)	.086 (.020)*** .358 (.103)*** 100 (.037)**	185 (.032)*** 137 (.158) .177 (.062)**	.463 (.208)* 266 (.122)*

Note: Subjective Socioeconomic Status (SES); Causal Conceptions about SES (CC-SES).

about SES are significantly positively associated with goal disengagement,  $\beta$  (.062) = .177, C.R. = 2.876, p = .004; and are significantly negatively associated with goal engagement,  $\beta$  (.037) = -.100, C.R. = -2.706, p = .007. Goal disengagement is significantly negatively associated with expected personal SES,  $\beta$  (.122) = -.266, C.R. = -2.187, p = .029, supporting Hypothesis 3c.

## 3.5. Mediation analyses

Mediation is assessed through nested model comparisons between the mediated and direct-path models, and through bootstrapping analyses of the indirect pathways. The mediated model contains only the hypothesized pathways, while the direct-path model contains direct paths from subjective family of origin SES, subjective university-related social status, and meritocratic and luck-oriented causal conceptions to the outcome variable of expected personal SES. The nested model comparison between the direct-path and mediated models is significant,  $\Delta \chi^2$  (4) = 31.163, p<.001, indicating that the direct-path model represents a better fit to the data then the mediated model. However, it is important to note that due to the size of our sample, the likelihood of having a significant  $\chi^2$  difference test is high, and as such it is important to examine the difference in relative fit indices as well. The change in relative fit indices between the direct-path and mediated is minimal, indicating that the mediated model does not result in a compromising lack of fit when compared to the direct-path model,  $\Delta$ CFI = .017;  $\Delta$ TLI = .019;  $\Delta$ RMSEA = .003. As the mediated model is in line with our theory-guided hypotheses, represents a more parsimonious fit to the data, and does not result in a compromising lack of fit to the data, the mediated model is kept as the final model and presented in Fig. 1, providing partial support for the mediation hypotheses presented in Hypothesis 3.

Further tests of mediation are performed through the use of Bias-Corrected and accelerated (BCa) bootstrapping (Efron, 1987). This method allows for the simultaneous assessment of multiple mediators and indirect pathways, and for moderate sized, multi-mediator models, the bootstrapping technique is considered to have better power and have lower Type 1 error rates than either the causal steps or product-of-coefficient techniques (Preacher & Hayes, 2008; Shrout & Bolger, 2002). The tests were run in SPSS using the macros provided by Preacher and Hayes (2008). For each test of mediation, 5000 bootstraps were run, resulting in a range of point estimates of the indirect pathways based on samples randomly taken from within the total sample. The resulting point estimates are ordered in magnitude to construct a range for the confidence interval, and then this range is corrected using the Bias Corrected and Accelerated technique described by Efron (1987). A 95% confidence interval is used to test for the significance, and the tested pathway is considered significant if the confidence interval does not contain 0.

Collectively, university-related subjective social status, causal conceptions about SES, goal engagement and goal disengagement fully mediated the relationship between subjective family of origin SES and expected personal SES, 95% bootstrap corrected and accelerated (BCa) CI = .010, .076, supporting Hypothesis 4a. Of note is the influence of university-related subjective social status, as this is the only significant individual indirect pathway, 95% BCa CI = .012, .062.

Collectively, causal conceptions about SES, goal engagement and goal disengagement partially mediated the relationship between university-related subjective social status and expected personal SES, 95% BCa CI = .027, .100, supporting Hypothesis 4b. Of note are the significant individual indirect pathways of meritocratic-oriented causal conceptions, 95% BCa CI = .002, .039, goal engagement, 95% BCa CI = .000, .050; and goal disengagement, 95% BCa CI = .003, .053.

Collectively, goal engagement and disengagement partially mediated the relationship between meritocratic-oriented causal conceptions and expected personal SES, 95% BCa CI = .019, .191, supporting Hypothesis 4c. Of note is the significant indirect pathway through goal engagement, 95% BCa CI = .012, .153. Supporting Hypothesis 4c, goal engagement and disengagement fully mediated the relationship between luck-oriented causal conceptions and expected personal SES, 95% BCa CI = -.122, -.028. Of note are the significant indirect pathways through goal engagement, SES, 95% BCa CI = -.080, -.009, and goal disengagement, SES, 95% BCa CI = -.070, -.008.

## 3.6. Moderator analyses

Due to the ethnically diverse sample, representing a substantial amount of 1st and 2nd generation United States residents, both ethnicity and generational status are examined as potential moderators of the full path model. The five ethnic groups containing enough members to allow analyses are: Asian, Hispanic-Latino/a, White, Middle-Eastern, and Mixed ethnicity. Allowing

<sup>\*\*\*</sup> p<.001.

<sup>\*\*</sup> *p*<.01.

<sup>\*</sup> p<.05.

the path estimates to vary across the ethnic groups did not result in a significant change in model fit,  $\Delta \chi^2$  (22) = 26.78, p = .22. This indicates that ethnicity does not moderate the path model relationships presented in Fig. 1. Next, the full model path coefficients were assessed for moderation by generational status: 1st generation, 2nd generation, and 3rd and greater generation. Allowing the path estimates to vary across the generational status groups did not result in a significant change in model fit,  $\Delta \chi^2$  (22) = 26.85, p = .22. This indicates that generational status does not moderate the path model relationships presented in Fig. 1.

#### 4. Discussion

For university students, the American dream is still very much alive and influences goal setting for social mobility in the transition to adulthood. University students in our sample expect to attain a significantly higher socioeconomic status (SES) than the SES of their parents, and the most strongly endorsed causal conceptions about SES are meritocratic-oriented (effort and ability). In addition, beliefs in the American dream drive goal engagement. More specifically, the results show an engagement-promoting pathway leading from perceptions of high current social status to meritocratic-oriented causal conceptions about SES to increased goal engagement and expected personal SES. However, not all participants reported beliefs and control strivings reflecting a SES-enhancing pathway. We find that individuals who endorse luck-oriented causal conceptions fell into a disengaged pathway. Indeed, an expected disengagement-promoting pathway was found, leading from luck-oriented causal conceptions about SES to increased goal disengagement, decreased goal engagement and decreased expected personal SES. Neither the engagement-promoting pathway, nor the disengagement-promoting pathway was moderated by an individual's ethnicity or generational status.

#### 4.1. American dream

By and large, our sample seemed unshaken by the current recession in their endorsement of the American dream. We find that meritocratic-oriented causal conceptions about SES, and perceptions that they will attain a higher status then their parents, predominate among the students in our sample. These findings are in line with both university students' socialization of meritocratic ideology in American society and their integration into the socially sanctioned route toward status attainment through attending a 4-year postsecondary educational institution. We find no ethnic group differences in the endorsement of meritocratic-oriented causal conceptions. However, there are generational status differences, with 2nd generation reporting the strongest and 1st generation reporting the weakest endorsement of meritocratic-oriented causal conceptions. This is consistent with prior research that indicates 2nd generation individuals are the most likely group to hold a Bachelor's degree and to hold jobs with the highest prestige, while 1st generation individuals are the most likely to have less than a high school education and to be employed in a low-prestige job (Rumbaut, 2008).

## 4.2. Pathways to personal SES

## 4.2.1. Engagement-promoting

The engagement-promoting pathway begins with one's sense of control, or current social status. University students represent a unique group in regards to social status, as they are largely not financially independent, have by definition not completed their education, and by and large have not established their career. Due to this, we localized the reference group and focused our measure of university students' current social status onto sociometric and educational status aspects, which has been shown to be a stronger predictor of subjective well-being than larger and more socioeconomic status-framed measures of social status (Anderson, Kraus, Galinsky, & Keltner, 2012).

Our results indicate that the status an individual perceives him or herself to be, influences the extent to which he or she buys into the American dream by endorsing meritocratic routes to status attainment. An individual's endorsement of meritocratic-oriented causal conceptions for SES indicates the extent to which he or she believes that effort and ability are needed to attain social status in the United States, and that he or she will attain social status in the United States through his or her own efforts and ability. In line with past research on causal attributions and engagement (Skinner et al., 1998), we find that individuals who endorse meritocratic-oriented causal conceptions are likely to be highly goal engaged. Our final step in the engagement-promoting pathway extends goal engagement to expectations for personal SES. Extending previous research on mindset and illusion of control (Gollwitzer & Kinney, 1989), we find that individuals who are goal engaged expect to attain a higher level of SES in the future than those individuals who are not goal engaged. We also find that goal engagement significantly mediates the relationship between one's endorsement of meritocratic-oriented causal conceptions and expected personal SES.

#### 4.2.2. Disengagement-promoting pathway

We hypothesized that the disengagement-promoting pathway would begin with individuals who felt they currently had a low university-related social status. However, we find instead that our disengagement-promoting pathway begins with an individual's belief that luck is a central route to status attainment. Individuals with this belief have a disengaged mindset and expect to attain a low SES in the future. Together these relations illustrate a passive or disengaged pathway to future SES attainment, wherein luck-oriented causal conceptions about SES lead to disengagement and decreased expected personal SES. While the disengagement-promoting pathway was not significantly moderated by ethnicity or generational status, we did find that individuals of Asian ethnicity endorse luck-oriented causal conceptions more strongly than all other ethnic groups.

## 4.2.3. Limitations and directions for future research

The present research is limited by its use of a cross-sectional design. A longitudinal approach, watching as individuals experience successes and failures toward status attainment, particularly as they transition out of university and into adulthood, would provide insight into the psychological mechanisms that channel individuals into diverging adaptations to the social structure. Another limitation of the present research is the use of domain-general, trait-like measures of goal engagement and goal disengagement. This may have attenuated the strength of relationship between the goal engagement and goal disengagement measures and the social status specific measures in the model, as well as reduced the data's fit to the proposed model. Future research employing domain-specific measures of goal engagement/disengagement directed specifically at SES attainment (e.g., education, career) would likely strengthen the current findings. The present research's reliance on university students is a further limitation, and future research including a broader range of young adults would help extend our findings.

#### 5. Conclusion

In an ethnically and economically diverse sample of university students, we find that despite recent challenges to the American dream, university students by and large still endorse an optimistic view for their future, and believe in intergenerational upward mobility based on meritocratic causal factors. Despite the normative endorsement of the American dream, we find inter-individual variation in the strength of this endorsement, or its competing causal factor, luck. These differences produce engagement-promoting and disengagement-promoting pathways toward expected socioeconomic status (SES) attainment. Although beliefs in SES-related causal factors that challenge the meritocratic ideology inherent in American society may have some validity, their endorsement may be counter-productive to vigorous engagement with ambitious goals for future SES attainment. Instead, regardless of their objective validity, beliefs in internal and controllable causes of SES attainment are goal engagement promoting and lead to enhanced expectations for personal SES. This is not to say that people should ignore the societal constraints and social injustice that contribute to social inequality in the United States. Instead it is suggested that when an individual has access to the socially sanctioned means for status attainment, believing societal constraints and injustice do not restrict one's personal potential for upward mobility may lead toward a path of ambitious and sustained striving that will make the most of one's opportunities.

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