

THE FUNCTION OF JUST WORLD BELIEFS IN PROMOTING STUDENT
LONG-TERM ACADEMIC INVESTMENT AND SUBJECTIVE WELL-BEING:
THE MODERATING EFFECTS OF SOCIAL STATUS

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Haley M. Downing

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Haley M. Downing

Dissertation

Approved:

Accepted:

Advisor
Dr. John E. Queener

Department Chair
Dr. Karin Jordan

Committee Member
Dr. James R. Rogers

Dean of the College
Dr. Mark D. Shermis

Committee Member
Dr. David Tokar

Dean of the Graduate School
Dr. George R. Newkome

Committee Member
Dr. Kuldhir Bhati

Date

Committee Member
Dr. Sandra Coyner

ABSTRACT

The current study sought to test the ability of just world beliefs to explain subjective well-being and long-term academic investment outcomes across social status in a college student sample. Belief in a just world has been posited as a psychological resource that allows individuals to perceive their world as controllable and predictable, which provides not only a basis for moderating emotion, even in the face of obstacles, but also creates a “social contract” of expectation that investments of effort in the short term will pay off in the long term, thus allowing for long-term goal orientation, investment, and planning.

For members of ordinant groups, BJW has been found to be related to higher subjective well-being, lower distress, and increased engagement in long-term academic investments (Jost & Hunyady, 2005; Jost et al., 2003; Tomaka & Blascovich, 1994; Hafer, 2000). In contrast, more recent research with diverse groups has shown evidence that mental health and long-term goal orientation outcomes may not be identical to their majority peers. Just world beliefs among members of marginalized groups have been described as a “double-edged sword,” in which assuming responsibility for one’s social position, as conceptualized as high just world beliefs, has the effect of maintaining motivation to pursue higher education, while at the same time negatively affecting mood, self-esteem, and general well-being. This pattern of negative association between BJW and subjective well-being indicators has been observed in women (Foster & Tsarfati,

2005; Major et al, 2007), ethnic minority students (O'Brien & Major, 2005), and overweight women (Quinn & Crocker, 1999).

The current study extended the literature by examining both outcomes in a single model within the context of subjective social status, using a college student sample. Hypotheses were tested using hierarchical regression and structural equation modeling. Consistent with hypotheses, social status was significantly and positively related to subjective well-being and belief in a just world was positively related to subjective well-being and long-term academic investment.

Limitations of the current study are discussed, including implications for future research. Implications for practice are also discussed.

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CHAPTER I

STATEMENT OF THE PROBLEM

A college education is often promoted as necessary for both long-term financial and occupational security as well as upward social mobility. Higher education is also simultaneously promoted as a meritocratic system, in which individuals succeed based on their intellectual ability and achievement motivation or hard work, rather than their status of origin. These beliefs survive despite evidence that students belonging to higher social status groups are more likely to complete an undergraduate degree and to pursue graduate education, even after controlling for intellectual ability, previous academic performance, and investment in higher education (Walpole, 2003). Belief in a Just World (BJW) has been proposed as a malleable individual difference variable that has implications for both mental health and achievement motivation in university students.

The theory of Belief in a Just World (Lerner, 1980) was developed in order to explain human behavior and motivation, including the illogical but resilient response of victim derogation, as well as maintenance of long-term goal pursuit. BJW, defined as the belief that the world is a fair and predictable system in which hard work is rewarded by success, has been assumed to be both pervasive and fundamentally delusional, albeit an adaptive delusion and that it is a “motivationally induced way of adapting to a world in which one is relatively helpless” (Lerner, 1980, p. 23). In the three decades since its

inception, most empirical research has upheld the contention that BJW is both widely-held and adaptive in terms of maintenance of both mental health and academic achievement motivation (Hafer, 2000; Taylor & Brown, 1988; Tomaka & Blascovich, 1994).

More recent research has complicated the picture by uncovering a pattern of results in which individuals from higher status backgrounds enjoy increased well-being (Jost & Hunyady, 2005; O'Brien & Major, 2005) and long-term university investment (Hafer, 2000) as a result of high BJW, while those from lower status backgrounds experience divergent outcomes, in which believers evidence greater academic investment and achievement at the cost of mental health and well-being (McCoy & Major, 2007). These patterns have been replicated in a number of social groups of lower status, including victims (Dalbert, 1998), African-Americans (Laurin, Fitzsimons, & Kay, 2011; O'Brien & Major, 2005), Latino/as (Laurin et al., 2011; O'Brien & Major, 2005), women (McCoy & Major, 2003; McCoy & Major, 2007), and the obese (Quinn & Croker, 1999). Thus, previous research revealing uniformly positive outcomes may have produced these results as a function of failing to examine meaningful group differences.

Most of the extant research examining between-group variability also shares the weakness of focusing on just one outcome, leading researchers to the potentially erroneous conclusion that *challenging* BJW is adaptive for persons of lower status because it is associated with better mental health and well-being outcomes (Major, Kaiser, O'Brien, & McCoy, 2007), or to the opposite conclusion, that *bolstering* BJW is universally adaptive because it is associated with greater achievement motivation

(Flanagan & Campbell, 2003; Tomaka & Blascovich, 1994). Both are important for academic success and retention, and the field may be at risk of making treatment decisions based on incomplete information, especially in the case of at-risk groups. Furthermore, the bulk of BJW research has examined group differences on the basis of gender and ethnicity, to the exclusion of social class. The current study aims to correct both of these weaknesses by focusing on social class and including both academic and mental health outcomes in a single statistical model.

Belief in a Just World

System-justifying beliefs have been posited as one potential psychological resource for maintaining achievement motivation and mental health in the face of systematic adversity. System-justifying beliefs is an umbrella term for ideologies which validate the inequality of social outcomes by justifying the status-quo and include such beliefs as BJW, the Protestant Work Ethic (PWE), John Henryism, and Meritocracy Ideology. Belief in a Just World is one of the most researched of this collection of beliefs (Furnham, 2003), and is defined as the belief that the world is just and fair, and that people generally get the outcomes they deserve (Lerner, 1980). BJW and other system-justifying beliefs have been generally assumed to serve an adaptive purpose, for members of both powerful and oppressed groups.

Lerner (1980) proposed the theory of “belief in a just world” (BJW) as an adaptive and common cognitive phenomenon. He discussed a number of personal experiences that led him to develop and test the theory, including a discussion with

medical students regarding issues related to serving lower socioeconomic status (SES) Appalachian whites. This population elicited anger from these students, who reportedly characterized the group as lazy, dirty, manipulative, and both deserving and preferring the state of deprivation in which they lived. Lerner's objective and subjective experience of these medical students as reasonable and psychologically healthy individuals led him to believe that educating the students on the overwhelming economic and social forces affecting this particular population would lead to a revision of their beliefs. What he found, however, was that the students firmly held to their belief that this impoverished and unprotected class deserved their low status. Lerner struggled to explain this: "How could rational healthy people maintain such cruel attitudes toward other people who were suffering, and exhibit the most irrational processes in defense of these vicious beliefs?" (1980, p. 5).

Lerner answered this through the theory of BJW, which borrows from and builds on social and cognitive psychological theories, as well as the dominant social narrative of Western societies. This belief is further reinforced by the white Western Judeo-Christian pairing of sin and punishment, and the Protestant Work Ethic, in which success is the result of traditional Western Christian values of hard work and self-sacrifice.

Lerner (1980) concluded that this belief in a just world is both adaptive and widely held, especially by individuals belonging to groups of higher social status. He argued that for those with resources and power, personal experience and reason would lead one to believe the world is generally fair. In addition, he argued that BJW allows individuals to maintain the perception that the world is both manageable and predictable;

to fail to do so would compromise one's ability to engage in long-term planning or goal directed behavior. It is these conclusions that are most salient to the current study.

However, Lerner and others have failed to account for the existence and effects of BJW among those with less capital or resources. That is, is BJW common among those for whom the world does not seem fair or predictable? And does the failure to develop this belief compromise one's ability to engage in long-term goal-directed behavior or to maintain psychological health in the face of systematic discrimination?

Recent research addressing these questions has revealed that Belief in a Just World has been found to be strongly endorsed by American samples in comparison to other nationalities (Flanagan & Campbell, 2003). In addition, research on variability within American samples has found that lower status groups such as lower SES, women, and ethnic minorities report the strongest belief (Hunt, 2000; 2004; Jost, Pelham, Sheldon, & Sullivan, 2003), despite the seeming contradiction that there has been shown to be a weaker and less predictable relationship between ability and outcome for these groups as compared to their high SES, male, and Caucasian peers (Johnson, Brett, & Dreary, 2010).

Still, most research on BJW supports both causal and correlational relationships to seemingly adaptive individual outcomes, including increased perceptions of institutional fairness, and attendant increase in positive affect, decrease in negative affect (Jost & Hunyady, 2005) and increased economic satisfaction (Jost et al., 2003), as well as increased task performance and perseverance (Tomaka & Blascovich, 1994) and increased motivation to achieve long-term educational goals (Hafer, 2000). However,

these results have been found in relatively homogenous and privileged university student samples and have not been examined for group differences or covariation with important individual difference variables. Results from lower status groups reflect a more complicated pattern of outcomes related to BJW.

Divergent Mental Health and Achievement Outcomes for Marginalized Groups

In addition to improving commitment to long term goals, Belief in a Just World has also been hypothesized to provide a protective function for those belonging to lower status social groups. Crocker and Major (1989) argued that members of stigmatized groups are able to protect their positive self-image and mental health by discounting and devaluing those domains in which they expect to encounter prejudice. Thus, stigmatization of one's in-group allows individuals from lower status groups to attribute poor performance to external factors of prejudice of evaluators and systematic injustices (i.e. low belief in a just world), which, in turn, allows for the preservation of self and group esteem (Major, Spencer, Schmader, Wolfe, & Croker, 1998; Schmader, Major, & Gramzow, 2001).

However, rejecting BJW in order to protect members of low status groups' mental health and subjective well-being has also been found to predict low motivation in academia through disengagement with associated goals (Schmader, Major, Eccleston, & McCoy, 2001). This disengagement can be observed behaviorally in both short-term outcomes such as reduced intellectual task performance and persistence (Tomaka &

Blascovich, 1994) as well as reduced motivation toward long-term educational goals (Hafer, 2000; Sutton & Winnard, 2007).

Thus, for members of stigmatized and low status groups (including low SES, ethnic minorities, and women), belief in a just world and associated system-justifying beliefs may not be uniformly adaptive.

Endorsing beliefs about individual responsibility, hard work, and self-discipline may be a double-edged sword. For those who are faring well, these beliefs can lead to feelings of positive self-regard, self-satisfaction, and perceived control over, and responsibility for, one's positive-outcomes. But for those who are faring poorly, who fail to satisfy societal ideals, these beliefs may be a risk factor for distress. (Quinn & Crocker, 1999, p. 413)

This distress has been observed among the stigmatized and oppressed groups of African-Americans, Latino/a-Americans, and American women, such that belief in a just world may have a detrimental effect on mental health and well-being outcomes. For example, among Latino/a students exposed to evidence of systemic discrimination against their ethnic group, *rejection* of system-justifying beliefs has been found to have a buffering effect on psychological outcomes, including increased self-esteem, decreased in-group blame, and decreased personal vulnerability (Major et al., 2007). Similar results have been found among women (Foster & Tsarfati, 2005; Major et al., 2007) and African-American students (O'Brien & Major, 2005). In contrast, BJW has been found to be consistently positively related to mental health and achievement outcomes in undergraduate samples when not assessing for group differences. While this divergent pattern of results has been well-established in a number of social groups defined by

gender or ethnic identity, it has rarely been examined in the context of social class (see Laurin et al., 2011 for an exception using achievement motivation as outcome of interest).

Social Class

Belief in a Just World researchers are not alone in neglecting the effects of social class. While social class and socioeconomic status (SES) have long been an object of study in sociology, psychology as a whole has shown a pattern of ignoring the construct, despite the ability of social class to predict behavior and worldview above and beyond race, nationality, religion, or income (Cokley et al., 2007; Kohn, 1969; Kohn, Schooler, Miller, Miller, Schoenbach, & Schoenberg, 1983). Counseling psychology in particular identifies itself as a specialty by emphasizing multicultural diversity and social justice (Speight & Vera, 2008), but also has a history of relegating SES to a control variable rather than a topic worthy of the focus of study (Frable, 1997; Liu et al., 2004; Speight & Vera, 2008). And, while interest in the topic has surged in the medical literature over the last two decades, the social sciences have not shown a similar increase in productivity on social class (Mutaner, Eaton, & Diala, 2000).

In recent years, a number of psychologists have called for increased theoretical attention to social class issues in human development and psychotherapeutic treatment (Fine & Burns, 2003; Fouad & Brown, 2000; Liu & Ali, 2008; Speight & Vera, 2008). The American Psychological Association has also identified the lack of attention to the variable within the field, and dedicated a task force in order to increase research on the

effects of SES, including disparities in access to resources and the attendant impact on human welfare and strategies to reduce these disparities (American Psychological Association [APA] Task Force on Socioeconomic Status, 2007).

As previously noted, much of the extant literature examining the adaptive qualities of BJW have focused on gender and ethnic group differences. The current study proposes to extend this by examining the theory in the context of social class, a variable that has been deemed both important and neglected within the field of psychology (APA, 2007). In addition, social class has been identified as a particularly rich variable because of the overlap it shares with other status variables such as ethnicity, gender, age, and disability status (APA, 2007).

One of the major challenges of psychological research on issues of social class is the lack of an agreed-upon definition of the concept. Socioeconomic status and social class are largely used interchangeably, although the APA has proposed distinct definitions. According to the Task Force on Socioeconomic Status (APA, 2007), *SES* is best understood in the sociological sense of a combined influence of income, occupational prestige, and education, as well as attendant differentials in access to material goods and resources; since this definition relies on objective measurement, it is commonly referred to as objective social status. *Social class* conceptualizations include attention to resources, but with a greater focus on the use and reproduction of power. Liu and Ali (2008) likewise highlighted the ongoing lack of clarity and distinction between these definitions, as well as their previous use in the psychological literature, and propose

a second definitional paradigm in which “social class” is exclusively used to refer to the psychological aspects of socioeconomic status, such as identity and worldview.

While social science literature as a whole has used these terms interchangeably and without clarification, the current study will use the definitional distinction as proposed by Liu and Ali (2008). Thus, social status as conceptualized by access to tangible resources and measured through objective means (income, education, occupational prestige) will be identified as *objective social status*. Social status as conceptualized as a psychological or identity variable and measured through subjective means will be identified as *subjective social status*.

While the two are conceptually distinct, they do overlap. Research examining both objective and subjective measures of social status has observed moderate correlations between subjective and objective measures of social status (coefficients range from .11 for occupational prestige to .32 for education; Adler, Epel, Castellazzo, & Ickovics, 2000). But despite these correlations, the psychological variable of subjective social status has been shown to predict important physical and mental health outcomes above and beyond objective measures (Adler et al., 2000; Goodman et al., 2001; Kraus, Piff, & Kelter, 2009).

Since objective indicators are the convention in the extant literature, this information will be collected in order to interpret results within this context and to compare the results using both objective and subjective indicators of social status. However, subjective social status will be the identify variable of focus as it outperforms the alternative in ability to predict and account for variance in mental health and

academic outcomes, and is adherent to the goal of developing more psychologically and intrapersonal understandings of social status.

Social Class in an Academic Setting

One of the most popular settings in which to study social class has been academia, due to accessibility of the population and the potential of increased class consciousness. Viewed as a source of social mobility, access to higher education is becoming more common across class (Stewart & Ostrove, 1993; Wentworth & Peterson, 2001). This may create university campuses with increasing socioeconomic diversity and thus, greater exposure to individuals from different class backgrounds. This high level of contact between classes is rare in the rest of American culture (Jones, 2003; Karp, 1986; Langhout, Rosselli, & Feinstein, 2007), and may increase class consciousness among university students (Aries & Seider, 2005; Fouad & Brown, 2000).

Furthermore, several theorists have posited that while this belief in a just world and systemic meritocracy is common in American culture in general, the education system especially serves to perpetuate and strengthen these beliefs among students (Aronson, 2008; Fine & Burns, 2003). Defacto segregation by income clearly exists both within and between schools in the U.S., but is not part of the ideal or “banal meritocracy” attributed to the American educational system (Fine & Burns, 2003). Thus, the system is considered “just” or “meritorious” because even the most disadvantaged are encouraged to keep hope alive until the end of the contest. At the same time relative advantages are denied, ambition, futuristic orientation, conformity with middle class ideals, and sense of

fellowship with elite are identified as mechanisms for success (Aronson, 2008; Lareau, 2003; Ostrove & Cole, 2003; Turner, 1960). This pattern of selective attention and assumption of a meritocracy serves to make the American educational system a tool for perpetuating inequality, while simultaneously being heralded as the most effective means of social mobility (Aronson, 2008; Fine & Burns, 2003). It may also likewise increase the strength of the interaction between status and BJW.

Counseling psychologists in university settings should be especially interested in both the mental health and achievement implications of just world beliefs, as they have been tasked with improving retention through both maintaining the interdependent outcomes of academic success and mental health of the student body (DeBerard, Spielmans, & Julka, 2004; Hysenbegasi, Hass, & Rowland, 2005).

Subjective Well-Being

The modern study of psychological well-being has been traced to Wilson (1967), who made the general and enduring observation that those with the most resources are the happiest. Since his seminal publication, thousands of empirical articles have been published on the topic, the majority of which have utilized Diener's (1984) definition of subjective judgments of one's quality of life and greater prevalence of positive over negative affect.

Most recently, the study of subjective well-being (SWB) has shifted focus from demographic predictors of SWB to that of an emphasis on the processes that underlie SWB and explain the robust relationship between demographic variables and SWB. The

definition of the construct has also evolved and clarifies SWB into affective and cognitive components. The affective component of SWB includes one's predominant mood states (both positive and negative), while the cognitive component is defined as one's evaluations of general life satisfaction (Diener, Suh, Lucas, & Smith, 1999). Many researchers also tend to follow the convention of assuming mental health and well-being from a lack of psychopathology and an adequate level of esteem for the self, and include measures of depression, anxiety, and self-esteem (Diener, Oishi, & Lucas, 2003).

Among university students in the United States, mental health and well-being has been shown to be, on average, lower than estimates drawn from representative adult populations (Eisenberg, Downs, Golberstein, & Zivin, 2009; Roberts et al., 2000). However, variability within this population shows a similar pattern as population-based studies, in which low SES is associated with lower well-being. Closer examination of associated variables has revealed a negative relationship between mental health and external stressors of longer off-campus working hours, as well as increased financial stressors and difficulty paying bills (Roberts et al., 2000). Thus, it seems lower SES students may be exposed to a greater number of stressors, and may be more vulnerable to stress and negative outcomes as compared to their higher SES peers and adult counterparts. Both of these have negative implications not only for goal and degree attainment, but also for lifetime risk of developing a mental health disorder (Eisenberg et al., 2009).

Research has consistently found a significant relationship between BJW and mental health and well-being outcomes. Belief in a Just World for self (BJW-S) has been

found to correlate in the expected (adaptive) direction with intrapersonal outcomes such as life satisfaction (Dalbert, 1999; Dzuka & Dalbert, 2006; Lipkus, Dalbert, & Siegler, 1996; Sutton & Douglas, 2005; Sutton et al., 2008; Sutton & Winnard, 2007), purpose in life (Begue & Bastounis, 2003), Big Five personality traits of neuroticism, extraversion, and openness to experience (Lipkus et al., 1996), and self-esteem (Sutton & Douglas, 2005).

Limited research exists that examines these relationships within the context of social status. Of those that have compared the function of these beliefs in high and low status groups, the majority focus on variables of gender and ethnicity. However, these results reflect that a *rejection* of BJW is more predictive of positive mental health and well-being outcomes among lower status groups, leading many to conclude a logical clinical practice implication that reducing BJW in these populations would be adaptive (Foster, Sloto, & Ruby, 2006; Foster & Tsarfati, 2005; Jost & Hunyady, 2002; Jost & Hunyady, 2005; McCoy & Major, 2007; Quinn & Crocker, 1999; Taylor & Brown, 1988).

Long Term Academic Investment

Counseling psychologists working with lower status students and professionals are concerned not only with mental health, but achievement and motivation outcomes as well. This body of research has considerably more straightforward results and implications. Considering that Lerner has consistently proposed BJW as a “social contract” necessary to engage in long-term goal pursuit and investment (Lerner, 1980), it

is not surprising that across groups, BJW maintains a positive relationship with academic achievement motivation and performance.

Research testing this hypothesis has found supporting evidence, such that across gender and ethnicity, students reporting greater BJW uniformly report and evidence increased academic achievement motivation, commitment to long-term academic goals (Hafer, 2000), investment in educational goals, and academic engagement (Laurin et al., 2011; Schmader et al., 2001). In the current literature review, only one study was identified that examines the effects of SES on this pattern, with results suggesting that for lower SES students in particular, higher BJW was associated with higher academic commitment and effort (Laurin et al., 2011).

One of the weaknesses of the existing research on the topic has been the use of varying unvalidated, often single-item, and idiosyncratic measures and proxies of achievement motivation. Exceptions to this include research operationalizing the long term “social contract” using time perspective questionnaires (Husman & Lens, 1999). Future orientation is defined as the motivation to strive for distant goals, and has a clear theoretical relationship with BJW. Empirical investigations using longitudinal data have found that future orientation predicts academic achievement and investment in learning among university students (Husman & Lens, 1999; Peetsma & van der Veen, 2011). Thus, measures of future orientation in the form of long-term perspectives in academic realms will be used to operationalize long-term academic investment in the current study.

Purpose and Hypotheses

The field of counseling psychology, with its alignment with higher education has an opportunity to help attenuate the effects of social class on issues including well-being and academic success. For example, counseling psychologists in university counseling centers have been charged with the task of enhancing student retention (Bishop & Brenneman, 1996; Sharkin, 2004), which requires goals of both supporting student mental health as well as academic goal pursuit. Considering the importance of higher education in providing opportunity for socioeconomic mobility and the challenges faced by students of lower SES in academic settings, counseling psychology has an opportunity to effect change through improving student outcomes. As the following research will demonstrate, intrapersonal factors such as belief in a just world have the power to predict both mental health and potential educational success, and it is these intrapersonal factors that are most amenable to change, especially by professionals equipped with specialized knowledge.

Research on social class, belief in a just world, and mental health or academic outcomes reveals that students from a lower status background face a dilemma: belief in a meritocracy or just world, despite personal history and experience, provides a stable foundation for achievement striving, but at the potential cost of mental health and well-being. These relationships have been observed in the literature independently and for multiple groups of lower status (i.e. African-Americans, Latino/as, women, lower SES). Therefore, the currently proposed study extends the extant literature by focusing

explicitly on a psychological conceptualization of subjective social status and examining a model with both long-term academic investment and mental health outcomes.

Jost and Hunyady (2005) argue that “members of disadvantaged groups are faced with a potential conflict between needs to justify the status quo and competing motives to enhance their own self-esteem and group status” (p. 262). There appears to be no such conflict for higher status groups, as the status quo is aligned with the esteem and status needs of those in positions of power and higher social class. Thus, it is hypothesized that for those of higher social class, belief in a just world will be positively related to both long-term academic investment and subjective well-being. In contrast, it is expected that for those of lower social class, belief in a just world will differentially predict these outcomes, revealing a positive relationship with long-term academic investment, and a negative relationship with subjective well-being.

The model proposed in Figure 1 will test the moderating effects of social class on the relationship between BJW and the outcomes of long-term academic investment and subjective well-being by examining the following research questions:

1. What is the correlation between social status and long-term academic investment and subjective well-being in a diverse undergraduate sample?
2. Does BJW account for statistically significant variance in long term academic investment and subjective well-being?
3. What is the relative contribution of objective and subjective judgments of social class in explaining these outcomes?

4. Does BJW account for subjective well-being and long-term academic investment across subjective social status?
5. Does subjective social status moderate the relationship between BJW and SWB?
6. Does subjective social status moderate the relationship between BJW and long-term academic investment?
 - a. Does BJW predict uniformly positive outcomes for students reporting higher social class?
 - b. Does BJW predict differential outcomes for students reporting lower social class?
7. Does subjective social status explain variance in these outcomes above and beyond that accounted for by objective variables of race, gender, and SES?

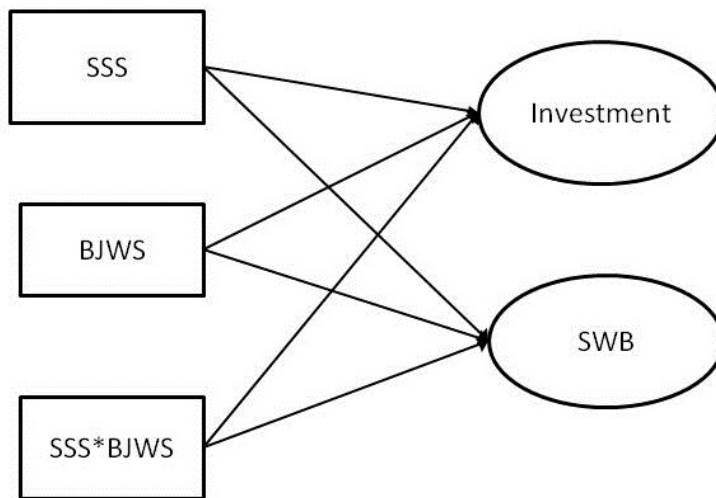


Figure 1. Hypothesized model. SSS = Subjective Social Status; BJWS = Belief in a Just World—Self; Investment = Long-term Academic Investment; SWB = Subjective Well-Being.

Key Terms and Definitions

Socioeconomic status: Objective measure of combined influence of income, occupational prestige, and education, as well as attendant differentials in access to material goods and resources to reflect one's standing in society (APA, 2007).

Subjective social status: "one's relation to levels and types of economic resources, in addition to social valuation and access to societal control and influence" (Fouad & Brown, 2000, p. 382).

Differential Status Identity: "the extent to which a person is (or is perceived) as being different in social standing from others... [and the effects of this on] psychological development and behavior" (Fouad & Brown, 2000, p. 380).

System-justifying beliefs: Widely-held and socially-sanctioned beliefs that "justify and rationalize the way things are, so that existing social arrangements are perceived as fair and legitimate, perhaps even natural and inevitable" (Jost & Hunyady, 2002, p. 113). Includes beliefs such as Protestant Work Ethic, Meritocracy Ideology, Belief in a Just World, and Social Dominance Orientation.

Belief in a just world: Belief that the world is just and fair, and that people generally get the outcomes they deserve (Lerner, 1980). Includes presupposition of a "social contract," in which the agreement to behave according to social mores is undertaken with the "assumption that an appropriately more desirable outcome will accrue to [them] . . . in the future" (Lerner, 1980, p. 135).

Subjective well-being: "People's cognitive and affective evaluations of their lives" (Deiner, 2000, p. 34).

Future Time Perspective: “A psychological construct that describes how one’s perception or weighing of the past, present, and future influences decision making. It is thought to represent a subconscious cognitive structure that one accesses when making decisions about short-term and long-term goals... Although many people adopt or meld different perspectives depending on circumstances, some individuals may preferentially have a past, present, or future orientation” (Guthrie, Butler, & Ward, 2009, p. 2145).

Long-term academic investment: Future time perspective for academic concerns (Stouthard & Peetsma, 1999).

CHAPTER II

REVIEW OF THE LITERATURE

Individuals from lower SES backgrounds have historically been found to exhibit lower achievement motivation and educational performance as compared to their higher SES peers, even after controlling for intellectual ability (Johnson et al., 2010; Schultz, 1993). Both medical and psychological research have also revealed a robust social class gradient in well-being, in which those from lower social classes experience decreased mental and physical health (Adler et al., 2000; Ostrove, Adler, Kupperman, & Washington, 2000). Despite these generalizations, there is also considerable within group variability, in which some members of lower social classes show resilience in the form of continued achievement motivation and maintenance of subjective well-being. One mechanism by which members of marginalized groups can protect their mental health and performance outcomes that has been upheld in empirical studies is that of belief in a just world (Lerner, 1980). This belief, that the world is fair and predictable and that hard work begets positive outcomes, has been found to be motivating for long-term goals regardless of the background of the believer (Hafer, 2000); however, it has also been implicated in poorer mental health outcomes of those from marginalized groups (O'Brien & Major, 2005).

As Major and colleagues (2007) argue, systems justifying beliefs are

a double-edged sword for members of socially devalued groups. It enables them to appraise their world in less threatening ways, but it increases their vulnerability when they encounter evidence that their worldview is false. Rejecting a meritocratic worldview, however, also carries costs as well as benefits. It *may* lessen the sting when discrimination is encountered, but it also may lead to disengagement from domains in which effort really does pay off or to distrust when trust is warranted. (p. 1084)

Knowledge of one's low social status can be protective in terms of self-esteem: unlike individuals from higher status groups, those from socially stigmatized groups (i.e. ethnic minority, women, LGBT, poor) can logically attribute negative feedback or failure to discrimination against their ingroup. However, the same self-protective strategy can lead low status individuals to devalue those domains in which they are discriminated against (Crocker & Major, 1989). Considering the preponderance of middle and upper-middle class whites in higher education, college degree attainment and educational achievement in general may be at risk of being one of these devalued domains for those from lower social statuses. Expectancy theories of motivation also predict that individuals will report greater motivation and persist at tasks at which they expect to be successful, in which they have been successful in the past, and at which they see others like them achieving (Bandura, 1977; Eccleston & Major, 2010). The risk that those from lower social status face in higher education is the vicious cycle of discrimination, disengagement, and poor performance, leading to increased risk of attrition and academic underachievement (Crocker & Major, 1989).

As will be discussed in the following sections, a pattern of divergent outcomes for lower status individuals has been partially supported in the literature, with research revealing poorer mental health outcomes and increased goal persistence or striving among those with high justice or system-justifying beliefs. However, much of this work focused on social groups based on ethnicity or gender rather than social class, and while this relationship is hypothesized in many of the discussion sections of these articles, no study to date has look at both outcomes simultaneously.

The following literature review will address the methodological issues of belief in a just world, social status, achievement motivation, and subjective well-being identified in the literature, as well as extant research about each hypothesized pathway in the model under current investigation. Due to the lack of current research on social class, research on other marginalized groups will also be discussed, as theory would predict an identical process and pattern of outcomes.

Belief in a Just World

As income disparities in the U.S. have increased over the last several decades (U.S. Census Bureau, 2000), a great amount of attention has been paid to the social and psychological phenomena that have served to maintain this inequality. System justifying beliefs, including belief in a just world, were developed as an answer to the question of why people tend to act in ways that support the status quo rather than acting in their best interest (Jost & Banaji, 1994; Jost & Hunyady, 2005). Existing theories of group relations such as social identity (Tajfel, 1982; 2010) and social dominance (Sidanius & Pratto,

2004) have failed to account for this robust phenomenon. These theories deal with motives to maintain ego or group justification, or the need to perceive the self and in-group favorably. Fewer contend with system-level justifications, or the need to perceive the status quo as legitimate, desirable, predictable, and inevitable (Jost & Banaji, 2004).

Belief in a Just World is one of the most researched of these system-justifying beliefs, which also include the Protestant work ethic (PWE), meritocratic ideology, John Henryism, power distance, social dominance orientation, authoritarianism, and political conservatism (see Jost & Hunyady, 2005 for a review). Although each theory is conceptually distinct and concern differing themes of political allegiance, economic beliefs, and social beliefs, they are consistently found to correlate. This convergence supports the contention that each of these ideologies serves a similar purpose of maintaining the status quo (Jost & Hunyady, 2005).

While the costs of such an ideology are clear, especially for those in positions of lower social power or status who have not benefitted from the status quo, what is less intuitive is the benefit of such widespread beliefs. For members of those groups with lower social status, generally identified in the U.S. as women and non-White ethnic or racial minorities, system-justifying beliefs are associated with decreased self-esteem and well-being, and increased out-group and decreased in-group favoritism. Predictably, the opposite pattern is found among advantaged groups, in which system-justifying beliefs are correlated with increased self-esteem, well-being, and in-group favoritism (see Jost & Banaji, 2004 and Jost & Hunyady, 2005 for a review). This pattern suggests that these

ideologies are internalized, leading members of disadvantaged groups to engage in self-devaluation or blame.

The mental health costs seem to be limited to those who belong to lower status groups, but the goal orientation benefits of such beliefs are stable and serve similar adaptive purposes across diverse groups. Endorsement of system-justifying beliefs are associated with increased positive affect and decreased negative affect, and increased perceptions of institutional policies and authority as legitimate, regardless of social group membership (Jost & Hunyady, 2005). System-justifying ideologies have also been found to alleviate emotional distress such as guilt and frustration (Wakslak, Jost, Tyler, & Chen, 2007). Furthermore, beliefs such as PWE, BJW, and individual mobility and meritocracy are descriptive of the dominant American worldview and thus prescriptive for adaptive behavior. That is, the more one believes that hard work is conducive to successful outcomes, the more likely one is to engage in and persist at productive goals (Major & Townsend, 2010), and in turn, embody traits and behaviors valued and reinforced by American culture at large.

Belief in a Just World for Self and Others

Belief in a Just World was originally conceived as a singular construct and socially imparted value. However, Rubin & Peplau's (1975) original BJW measure has been plagued by poor psychometric properties (Furnham, 2003) and unexplained relationships to outcomes (Hafer & Olson, 1993). Over the last fifteen years, the understanding of BJW has evolved to include a bi-dimensional conceptualization, in

which intrapersonal outcomes such as mental health and well-being are theoretically associated with belief in a just world for the self, and interpersonal outcomes such as victim derogation and political affiliation are associated with belief in a just world for others. Support for this conceptualization began with a set of studies by Lipkus and colleagues (1996), in which the leading extant unidimensional BJW scales were compared to a new two-factor model of BJW.

The two-factor model of BJW was found to outperform existing measures in internal reliability and construct validity (Lipkus et al., 1996). Lipkus and colleagues' (1996) scale produced greater alpha reliabilities than those produced by Rubin and Peplau's (1975) original measure (α s = .84 and .68, respectively). BJW-self (BJWS) demonstrated greater correlations than BJW-Others (BJWO) and Rubin and Peplau's (1975) original BJW scale with intrapersonal variables of depression (BJWS $r = -.32, p < .001$; BJWO $r = -.15, p > .01$; Rubin and Peplau $r = -.30, p < .001$), stress (BJWS $r = -.37, p < .001$; BJWO $r = -.15, p > .01$; Rubin and Peplau $r = -.32, p < .001$), and life-satisfaction (BJWS $r = .51, p < .001$; BJWO $r = .29, p < .001$; Rubin and Peplau $r = .39, p < .001$). BJWO correlated more highly with perceived others' life satisfaction (BJWS $r = .15, p > .01$; BJWO $r = .30, p < .001$; Rubin and Peplau $r = .26, p < .001$), while none of the other measures in the study showed a significant relationship with participants' perception of others' functioning. And, while global and BJW-other measures had non-significant relationships with personality traits, BJW-self correlated in the expected direction with neuroticism ($r = -.37$), extraversion ($r = .26$), and openness ($r = .26$). Finally, BJW-self continued to predict life satisfaction ($\beta = .32, p < .001$; $R^2 = .42, p <$

.001) above and beyond the combined predictive ability of Big Five personality (Neuroticism: $\beta = .21, p < .05$; Extraversion $\beta = .29, p < .01$; Conscientiousness = $.14, p < .01$) , Rubin and Peplau's (1975) global measure of BJW ($b = .24, p < .05$), leading the authors to recommend distinguishing between BJW-self and BJW-others or global BJW in future research, especially when considering outcomes related to psychological well-being (Lipkus et al., 1996).

Since this initial investigation, a two-factor model of BJW has been validated and replicated in multiple samples (Dalbert, 1999; Sutton & Douglas, 2005). BJWS has been found to be theoretically distinct from potential confounding variables; in a hierarchical regression, BJWS ($\beta = .301$) was found to predict life satisfaction over and above ($\Delta F(4, 199) = 13.14, p < .001$) socially desirable responding ($\beta = .084$), locus of control ($\beta = .063$), and self-esteem ($\beta = .456$) (Sutton & Douglas, 2005). Although the major focus in this project will be limited to BJW-self due to its primary focus on intra-individual outcomes of subjective well-being and academic investment, it is also notable that BJW-others has been found to predict outcomes related to social judgment above and beyond BJW-self (Begue & Batounis, 2003; Sutton & Douglas, 2005).

Social Status and Belief in a Just World

It has been claimed that belief in a meritocracy is quintessentially American (Major, 1994; Major et al., 2002). Belief in a Just World and associated system-justifying beliefs are necessarily individualistic, and thus, more congruent with Western cultural ideologies. Understandably, then, research has revealed differences both between and

within nationalities. A cross-cultural comparison of meritocracy beliefs in high school students from historically socialist countries (Bulgaria, Czech Republic, Hungary, and Russia) and historically capitalist countries (United States and Australia) revealed a number of significant differences in levels of endorsement (Flanagan & Campbell, 2003). Mean differences revealed that adolescents from capitalistic countries (“working class” $M = 3.76$, $SD = .70$, $N = 579$; “middle class” $M = 3.49$, $SD = .82$, $N = 530$) were more likely to endorse a belief that individual initiative was the main route to success than those from traditionally socialist nations (“working class” $M = 3.41$, $SD = .71$, $N = 2091$; “middle class” $M = 3.40$, $SD = .72$, $N = 1308$). In addition, lower status groups (women and self-identified “working class”) in capitalist countries only were more likely to endorse this view than their male or middle class counterparts; this difference was not observed in the socialist samples.

Further comparison of the two capitalist samples revealed that the group differences were created by the variance in the American sample specifically. That is, American youth, especially those of lower status, report a firmer belief in a meritocracy than youth from another capitalist country and historically socialist countries (Flanagan & Campbell, 2003). So, while beliefs in meritocracy seem to be shared across Western cultures, the United States may show a particularly strong adherence to this myth.

The argument can and has been made that Americans report greater system-justifying beliefs because the system is more merit-based, and therefore, what one may call meritocracy “myths” are in fact reflective of reality. However, economic trends have shown trends toward the opposite—that is, upward mobility and economic equality have

been decreasing over the last several decades (APA, 2007; Malahy, Rubinlicht & Kaiser, 2009; U.S. Census Bureau, 2000). If system-justifying beliefs such as meritocracy, individual mobility, and just world beliefs were accurate reflections of the American economy, it would be expected that these beliefs would predictably covary with economic indices.

Malahy and colleagues (2009) tested this proposition using Just-World Beliefs scores and data from the U.S. Census Bureau from 1973 through 2006. Regression analyses revealed that study year accounted for a significant amount of variance in BJW scores ($R^2 = .21$, $F(1, 29) = 7.88$, $p < .01$; Cohen's $d = 0.65$), with later years producing higher BJW means; this would reflect an increase in BJW over time. Results for income disparities were similar, with the income ratio of the top and bottom 10th percentiles increasing over time ($R^2 = .20$, $F(1, 29) = 7.09$, $p = .01$). A third regression revealed that income disparity predicted increasing BJW over the years covered in the study. Interestingly, income itself did not significantly predict BJW scores ($\beta = -.08$, $t(28) = -.36$, $p = .72$); only disparity was predictive, $\beta = .50$, $t(28) = 2.18$, $p = .04$ (Malahy et al., 2009). This is evidence that the goal-like qualities SJBs (i.e., persistence despite disconfirming evidence) operate at both the individual and societal level (Jost & Hunyady, 2005; Malahy et al., 2009), and that SJBs do not reflect economic reality.

Within American populations, research has shown conflicting results as to who holds greater system-justifying beliefs—those in power or those marginalized. Americans in general have been found to endorse individualist beliefs to explain the attainment of wealth or success and contextual beliefs to account for poverty or failure (Griffin &

Oheneba-Sakyi, 1993; Hunt, 2004; Iatridis & Fousiani, 2009). And while this trend may hold for Americans as a whole, different social groups show varying degrees of belief about individualism and merit as predictors of socioeconomic success.

The Social Class Worldview Model (SCWM; Liu et al., 2004; Liu, 2001) explicitly identifies system-justifying beliefs, such as the Protestant Work Ethic, as central to subjective understandings of social class. PWE and BJW are both cognitive schemas that help to make sense of social stratification. Within the context of SCWM, it would be expected that those who profess the greatest BJW are the same individuals who would seek a lifestyle that conforms to the middle-class norms these beliefs justify, and would also be more likely to judge themselves as part of a middle-class social group.

A correlational study specifically examining the relationship between ethnic and social class identities and Protestant Work Ethic, revealed this pattern among a student sample. The authors hypothesized that lower status individuals would be more likely to face discrimination and unfairness in the workplace and educational settings, and would therefore be more aware of systemic oppression and therefore critical of interpretations that favor individualist over contextual reasons for success or failure. As predicted, white university students endorsed significantly higher PWE ($M = 75.39$, $SD = 10.25$) than their African-American peers ($M = 71.14$, $SD = 12.51$). However, these racial differences again disappeared after controlling for subjective social status (Cokley et al., 2007); ethnicity was significantly related to PWE ($\beta = .18$, $p < .05$), as was social class ($\beta = .46$, $p < .001$). In the model with both ethnicity and social class, the latter decreased to nonsignificance ($\beta = .11$, $p > .05$).

Further exploration of results showed that the group differences were primarily driven by upper- ($M = 77.02, n = 60$) and middle-class ($M = 72.66, n = 175$) whites; there were no differences in endorsement of PWE for African-Americans of upper- ($M = 70.37, n = 8$) or working class ($M = 71.25, n = 82$) or working-class white students. These group differences may also be confounded by the intersection of ethnicity and social class and the attendant restriction of range, especially for the African American sample. While 36% of white students self-labeled as upper- or upper-middle class, only 10% of African-American students did so. Still, the authors conclude that for the related belief of Protestant Work Ethic, subjective social class background is more predictive of endorsement than ethnicity alone (Cokley et al., 2007).

Conservative Political-Economic Values, another closely related belief that opportunity for advancement is equally available to everyone and that talent and motivation therefore determine success and social standing, has been shown to be positively correlated with subjective social status (as measured by self-identification of “working class” through “upper class”), but unrelated to objective indicators of SES among a student population (Malka & Miller, 2007).

Analysis of an ethnically diverse sample revealed that African-Americans ($M = 2.38, SD = .41$) were more likely to attribute wealth and success to individual characteristics such as hard work, perseverance, and intelligence than were whites ($M = 2.54, SD = .40$) (Hunt, 2000), suggesting a counterintuitive pattern of greater BJW among marginalized ethnic groups than whites. However, after controlling for gender and SES, ethnic group differences in a similar sample been found to be attenuated, again

suggesting that differences in socioeconomic status between whites and ethnic minorities were more predictive of beliefs than ethnicity alone (Hunt, 2004). In other words, the confluence of SES and ethnicity may obscure the predictive power of socioeconomic status on worldviews. In either case, the results further suggest that it is lower status groups that endorse greater belief in a just world, leading the author to conjecture that this belief serves an adaptive purpose for those in more challenging circumstances (Hunt, 2000; 2004).

Others have posited that greater belief in the meritocracy of the system among those who stand to gain the least from inequality is evidence of motivated cognition to reduce cognitive dissonance. Jost and colleagues (2003) hypothesized that this is observed most often in cultural contexts similar to the U.S., in which group identification is low in salience, democratic ideals lead individuals to feel at least partially responsible for participating in the status quo, and meritocratic ideals are emphasized despite evidence to the contrary. In a set of four studies examining multiple group differences among a variety of system-justifying beliefs, those groups with the lowest social status were consistently and significantly more likely to uphold and defend the status quo than those in more powerful positions (Jost et al., 2003).

Using a national and representative sample of American adults, African-Americans ($\beta = -1.01, p < .001$), those with lower education ($\beta = -.30, p < .001$) and those with lower income ($\beta = -.22, p < .005$) were more likely to limit criticism of the status quo than were Whites and those with more education and higher income. Social class was found to be inversely related to the belief that income inequality is necessary to motivate

productivity among employees, such that lower SES individuals held stronger beliefs in this system-justifying belief ($\beta = .04, p < .001$). Finally, ethnic group, social class, and geographic regional comparisons revealed that the group most likely to endorse system-justifying beliefs was the group with the greatest number of intersecting oppressed identities: rural poor Southern African-Americans (Jost et al., 2003).

The previously discussed studies have all been correlational in nature, leaving unresolved the argument that causality could be in the opposite direction or that a third variable is causing social status and system-justifying beliefs to reliably covary. However, research using experimental methodologies has produced similar results among student samples (Ledgerwood, Mandisodza, Jost, & Pohl, 2011; Major et al., 2007). In a 2x2 study manipulating level of system threat via presentation of a manufactured newspaper article reporting either increasing stratification in American society (high system threat) or decreasing stratification (low system threat) paired with the presentation of an empirical study with either system-justifying (i.e. hard work leads to success) or system-challenging conclusions demonstrated belief in a meritocracy as a motivated and highly defended cognition. Participants were asked to list five strengths and criticisms of the articles. Qualitative analyses of these responses showed an implicit bias only among those in the high system threat condition (Ledgerwood et al., 2011).

Those students who were provided information that the American social system was not meritocratic (high system threat) were more likely to rate studies with meritocratic results significantly more favorably than those with non-meritocratic results ($M = 8.03$ vs. $M = 6.66, t(56) = 4.31, p < .0001$). There were no differences for those in

the low system threat condition. Thus, when presented with information (via a newspaper article) contrary to the American ideal, participants were motivated to defend meritocracy beliefs by engaging in increased criticism of evidence of non-meritocratic social processes. Rather than responding logically or intuitively to new information, individuals showed increased attempts to defend an erroneous belief. Furthermore, the authors highlighted that even those who explicitly report low belief in meritocracy showed similar levels of bias as those who report high meritocracy beliefs (Ledgerwood et al., 2011). These experimental results demonstrate both that bias is evident in those who espouse system criticizing beliefs, and that strength of belief may be a malleable cognition rather than a static trait.

Social Class as a Psychological Construct

Social cognition research has shown that awareness and valuing of social class has been observed in children as young as five. In a study of kindergartners, most identified physical representations of class and wealth, such as trendy clothing and nice cars as important in improving social standing and self-esteem (Byrne, 1999). American adolescents view higher social class individuals as more intelligent, successful, and hardworking than working class and aspire to a social class higher than working class, regardless of their own social class of origin (Dittmar & Pepper, 1994). Despite seemingly universal agreement that a social and cognitive category of class seems to exist, there is little consensus on how to operationalize, measure, or even define this as a construct in quantitative research.

Historically, social class and SES as a construct in psychological research have been borrowed from sociology. The most popular measures include the Hollingshead Four-Factor Index of Social Status (1975) and Duncan's Socioeconomic Index (1961), which operationalizes social class through demographic variables of education, income, and occupational prestige. These measures are then used to assign an individual to a discrete category. Liu and colleagues (2004) have identified several problems inherent in the Indices themselves and in importing this strategy to a psychological construct. Both were developed on census data and classifications that are now more than 40 years out of date and no attempt has been made to update either. The Hollingshead Index was never published, and therefore, has not been subjected to scientific scrutiny. The validity of these measures has also been called into question. Objective and sociological measures have not been found to significantly predict outcomes beyond the simple subjective question, "what is your social status?" (Liu & Ali, 2008).

Potentially more problematic, the two most popular measures also lack a firm foundation in psychological theory. By default, results from sociological or objective measures of social class must investigate between-group differences—a sociological answer, rather than a psychological answer that would investigate the intrapsychic process of social class. Liu and colleagues (2004) use the parallel example of the evolution of theories of race and ethnicity as psychological constructs. Until Cross's (1991) model of Black racial identity development, much research dedicated to race and ethnicity focused on between-group differences, making the erroneous assumption that

every individual within a given racial or ethnic group shared similar psychological experiences (Ponterotto & Mallinckrodt, 2007).

Currently, within race and ethnicity research, the field increasingly attends to psychological constructs such as multidimensional identity and acculturation, and attendant worldviews. Social class research seems to be several decades behind this movement, and a number of researchers have emphasized the need for psychology to move beyond the study of group differences to the study of psychological or intrapersonal processes (Liu et al., 2004; Fouad & Brown, 2000; Williams, 1990).

Subjective social class provides a tool to correct for the weaknesses of existing conceptualizations and also allows for the combined influence of intersecting identities. Rather than supplanting other identity variables in importance, social class as a conceptualization of relationship to power allows for simultaneous consideration of multiple identities with varying social values and statuses.

Subjective Social Status

The long-held assumption that all Americans consider themselves middle class (Centers, 1949; Jackman & Jackman, 1973), has rarely been challenged, partly because when given the option of class labels, individuals have consistently tended to favor describing themselves as middle class rather than working-, lower-, or even upper-class (Goodman et al., 2001). This has given rise to the assumption that there is little meaningful variability in social class as a construct in American samples. However, more recent research has challenged these assumptions.

As previously discussed, the use of labels to measure subjective social class is problematic. From a purely measurement perspective, the approach oversimplifies data and reduces meaningful variability by forcing a continuous variable into categorical form (Adler, 2009; Fouad & Brown, 2000; Goodman et al., 2001; Sirin, 2005). The use of labels is also more susceptible to social desirability—Americans are socialized to identify with the middle-class and considerable stigma is attached to the terms working class, lower class, or poor (Goodman et al., 2001). Thus, a limited number of measures have been recently developed to assess subjective social status in a continuous manner.

Differential status identity. Considering the complex interplay of multiple identities and their attendant social values, social class is conceptually inextricable from identities such as race and gender. However, most existing measures do not account for these factors together, focusing exclusively on a single identity of gender, ethnicity, or socioeconomic status. Fouad and Brown (2000) have recently advocated for a unified construct that attempts to capture the effects of multiple intersecting identities via Differential Status Identity (DSI). DSI is defined as “the extent to which a person is (or is perceived) as being different in social standing from others... [and the effects of this on] psychological development and behavior” (p. 380). Additionally, social status as defined by the DSI is conceptually similar to Liu et al.’s (2008) and the APA’s (2007) psychologically-based definitions of social class: “‘social status’ reflects one’s relation to levels and types of economic resources, in addition to social valuation and access to societal control and influence” (p. 382).

Although DSI is usually considered a social class construct, Fouad and Brown (2000) extend the concept of social status to include the influence of context. Thus, demographically identical individuals may identify more strongly with parts of their social identity and attendant social values of that identity) based on their social context. Using the example of an African-American woman from a working class background, the identities that she finds salient would likely differ based on her social context (e.g. within her family of origin versus within a graduate engineering program). This process has been demonstrated in qualitative research of university undergraduates, in which students report greater class awareness in college environments in which they find themselves more dissimilar from the perceived normative population (Karp, 1986).

In addition, individuals with similar achieved SES likely have very different conceptualizations of their own social class. This has also been demonstrated most clearly in qualitative studies of psychologists and undergraduates with working class backgrounds and social identities (Granfield, 1991; Nelson, Englar-Carlson, Tierney, Hau, 2006); despite achieved SES similar to their peers, these individuals maintain a sense of “differentness” based on their developmental class and ethnic identities. Traditional SES measures would not capture these meaningful differences.

Differential status identity is a relatively new construct and thus far, empirical investigations have been limited to the field of vocational development. However, it has shown promise as a meaningful variable. It has been found to correlate with career decision-making self-efficacy and perceived barriers and has also been found to outperform ethnicity in explaining student discrepancies between vocational aspirations and

expectations (Metz, Fouad, & Ihle-Helledy, 2009). It has also been found to mediate significant relationships between race and classism, and career indecisiveness and decision-making self-efficacy (Thompson & Subich, 2011).

Social class and subjective well-being. Another well-researched, albeit atheoretical, measure of subjective social status is the MacArthur Scale of Subjective Social Status. This graphic representation of relative status using a 10-rung ladder has been found to predict mental and physical health outcomes above and beyond objective status in a number of samples. In a sample of ethnically diverse pregnant women, objective indicators, such as education, household income, and occupation, were moderately to strongly correlated with subjective social status as assessed by the ladder (Ostrove et al., 2000). However, comparison of these correlations for white and African-American women revealed significantly stronger relationships for white women between ladder ratings and objective variances of education (white $r = .32$, African-American $r = .02$), household income (white $r = .60$, African-American $r = .21$), own occupation (white $r = .41$, African-American $r = .18$), and partner's occupation (white $r = .41$, African-American $r = .13$). This pattern is consistent with Rossides' (1997) multidimensional conceptualization of subjective social status, and suggests that subjective social status as measured by ladder ratings are missing a critical component of social class, such as social power or prestige. From this perspective, it would be expected that even among groups with similar objective socioeconomic resources, felt status would differ based on variables like ethnicity.

In order to investigate the role of relative social standing and other psychological variables such as negative affect, pessimism, perceived control, coping style, subjective stress, and chronic stress, a separate study was conducted with an ethnically homogenous sample of pregnant white women (Adler et al., 2000). Objective SES correlated with only one of seven physiological health indicators, while subjective social class was correlated with four of the seven. Of the seven psychological variables, objective SES was weakly, albeit significantly, correlated with only pessimism ($r = -.20, p < .05$) and passive coping ($r = -.20, p < .05$), while subjective social class was significantly correlated with all seven [negative affect ($r = -.31$), chronic stress ($r = -.36$), subjective stress ($r = -.25$), pessimism ($r = -.37$), control over life ($r = .26$), active coping ($r = .24$), and passive coping ($r = -.33$), all $ps < .01$. In addition, hierarchical regression analyses showed that subjective social class continued to predict the psychological outcomes of chronic stress ($\Delta R^2 = .05, p < .01$), pessimism ($\Delta R^2 = .04, p < .01$), control over life ($\Delta R^2 = .04, p < .01$), active coping ($\Delta R^2 = .03, p < .05$), and passive coping ($\Delta R^2 = .02, p < .05$), even after controlling for both negative affectivity and objective SES (Adler et al., 2000).

It is noteworthy to mention that these results were found even using stringent exclusion criteria to create a “healthy” sample (e.g. prescribed medication, substance use, hypertension, smoking) and a highly educated sample (over two-thirds of the sample had at least a bachelor’s degree); despite restriction of range in both objective SES and physical health behaviors, there was still meaningful variability in physical and psychological health outcomes explained by subjective social class.

A study of middle-aged Swedish adults found similar results. Compared to objective measures of SES (including education and income), subjective social status showed stronger correlations with the psychosocial resources of perceived control (subjective status $r = .25, p < .001$; occupation $r = .20, p < .001$; education $r = .19, p < .001$), sense of coherence (subjective status $r = .28, p < .001$, occupation $r = .09, p > .05$; education $r = .06, p > .05$), trust (subjective status $r = .28, p < .001$, occupation $r = .09, p > .05$; education $r = .03, p > .05$), mastery (subjective status $r = .33, p < .001$, occupation $r = .10, p < .05$; education $r = .07, p > .05$), self-esteem (subjective status $r = .33, p < .001$, occupation $r = .11, p < .05$; education $r = .15, p < .05$), and risk factors of cynicism (subjective status $r = -.17, p < .001$, occupation $r = -.08, p < .05$; education $r = -.16, p < .01$), shame (subjective status $r = -.15, p < .001$, occupation $r = .01, p > .05$; education $r = -.11, p < .05$), depression (subjective status $r = -.30, p < .001$, occupation $r = -.06, p > .05$; education $r = -.07, p > .05$), and hopelessness (subjective status $r = -.32, p < .001$, occupation $r = -.22, p < .001$; education $r = -.16, p < .001$) (Lundberg & Kristenson, 2008).

Fewer studies have examined the role of subjective social class in student populations, but of those that have undertaken the project, results reflect even that among this relatively privileged population, there remains meaningful variability (Abowitz, 2005; Goodman et al., 2001; Kraus et al., 2009). When asked to rank their social status position relative to other students at their public university, means ranged from 5.34 to 6.35 on a 10-point scale (Kraus et al., 2009). Research among younger adolescents has shown that subjective ratings of social status tend to mirror parents' subjective ratings

and decrease in value with increasing age and show increasing reliability with increased age, suggesting that late adolescents share conceptualizations of social class that are stable, realistic, and similar to adults (Goodman et al., 2001).

In a study of high school aged adolescent children of employed and licensed nurses, subjective social status was found to significantly predict symptoms of depression, above and beyond objective indicators of gender, ethnicity, and age ($\beta = .57$, $p < .001$) (Goodman et al., 2001).

This pattern of results, in which subjective measures of social class outperform objective measures in the prediction of ostensibly negative affect states (depression, low sense of control, negative affect) raises the issue that subjective understanding of social status may be confounded with negative affective states. In other words, it may be a third, higher-order variable, such as neuroticism or negative affect that causes both decreased subjective understanding of one's own social status, as well as higher reported symptoms of depression and lowered sense of control.

In order to test this possibility, Kraus and colleagues (2009) experimentally manipulated sense of personal control through writing exercises, in which a control group was directed to compose several paragraphs describing a building while experimental groups were directed to write about a situation in which they felt either a great deal of or felt very little control. Groups differed on reported sense of personal control [high control $M = .15$, $SD = .86$; low control $M = -.15$, $SD = .67$; $F(1, 121) = 4.55$, $p < .05$], but did not significantly differ in ratings of subjective social status (high control $M = 6.06$; low control $M = 6.63$; $t(123) = 1.76$, $p = .09$). If it were the case that the two were

confounded, manipulation of one variable would likely affect the report of the other; in this case, the manipulation of sense of control should have created subsequent changes in subjective social status. The authors go on to point out the added evidence that sense of control and subjective social status differentially predicted individuals' sense of power in two of the four studies.

As for depression, other research has found that subjective measures of social status in adolescents significantly predicts depressive symptoms above and beyond the potential social confounds of self-esteem and perceived popularity (Goodman et al., 2001). Among adults, subjective social status predicts physical health, even after controlling for the effects of negative affect, $\Delta R^2 = .02$, $p < .01$ (Operario, Adler, & Williams, 2004). Negative affect has also failed to account for the significant relationship between subjective social status and chronic stress ($\Delta R^2 = .05$, $p < .01$) pessimism ($\Delta R^2 = .04$, $p < .01$), control over life ($\Delta R^2 = .04$, $p < .01$), and active coping ($\Delta R^2 = .03$, $p < .05$) in a healthy adult sample (Adler et al., 2000). Finally, subjective status has been found to predict health above and beyond objective social status and potentially confounding psychosocial resources and risk factors among Swedish adults (Lundberg & Kristenson, 2008).

These results all support the contention that while subjective social status is related to such potential confounds as negative affect, the relationship between this variable and physical and mental health outcomes is likely not due to a spurious relationship with a third variable. Subjective social status independently predicts

depressive symptoms and health, even after statistically controlling for and experimentally manipulating negative affect and comparable potential confounds.

Subjective Well-Being

Subjective and psychological well-being are a frequently discussed construct within the psychological literature, borne out of counseling, humanistic, and positive psychology traditions of expanding the understanding of psychological health beyond the mere absence of psychopathology (Diener et al., 2003; Lent, 2004). A review of the literature shows considerable variability in measurement of this construct, which Diener (1984) has attempted to correct by clarifying two components of SWB: affective and cognitive. That is, one's predominant mood states (both positive and negative), as well as evaluations of general life satisfaction (Diener et al., 1999). Most recently, the field of subjective well-being has shifted focus from demographic factors that may be predictive to that of an emphasis on the processes that underlie SWB in general, as well as explain the connections between demographics and SWB. The definition of the construct has also evolved and clarifies two components of SWB: affective and cognitive. That is, one's predominant mood states (both positive and negative), as well as evaluations of general life satisfaction (Diener et al., 1999).

As previously reported, studies of psychological correlates and outcomes of subjective social status in adult community populations have found significant correlations with a range of constructs related to subjective well-being, including negative affect, pessimism, perceived control, coping style, subjective stress, chronic

stress, mastery, self-esteem, depression, and hopelessness (Adler et al., 2000; Kiecolt, Hughes, & Keith, 2009; Kraus et al., 2009; Lundberg & Kristenson, 2008). Similar results have also been found in samples of Brazilian adults (Islam, Wills-Herrera, & Hamilton, 2009), American high school students (Goodman et al., 2001) and university students in the U.S. (Roberts et al., 2000) and Lebanon (Ayyash-Abdo & Alamuddin, 2007). This pattern has also been replicated in other groups of lower social status, including women (Kiecolt et al., 2009), Asian-Americans, Latino/a-Americans and African-Americans (Kiecolt et al., 2009; O'Brien & Major, 2005).

While epidemiological and cross-cultural research has suggested a relationship of diminishing returns between happiness or subjective well-being and income (see Diener, 1984 for a review; Howell & Howell, 2008) especially within wealthy economies (McFarlin, 2008), there also exists a body of research demonstrating a linear and inverse relationship between SES and well-being within the United States and other wealthy Western nations, such that lower SES is associated with higher incidence and greater length of depressive episodes (Lorant et al., 2003). A meta-analysis of 60 studies of depression and SES in the U.S. revealed that the odds ratio for lower SES individuals developing depression is 1.81 compared to high SES individuals; lower SES individuals also showed greater length of depressive episode (OR = 2.06). Several socioeconomic indicators showed protective ability. For instance, each year of education reduced the odds of onset of a depressive episode by 3%; thus, individuals with a college education enjoy a 12% reduction in odds of developing a depressive episode compared to their counterparts with only a high school education (Lorant et al., 2003).

Competing theories of stress and social class explain this phenomenon in contradictory and mutually exclusive ways. Social selection theories posit that greater distress and pathology are found in lower SES populations because these are both associated with lower functioning; thus, these theories conclude that it is pathology that is the driving force behind socioeconomic discrepancies. In other words, individuals are selected for different classes or statuses on the basis of their health and functioning. In contrast, social causation theories posit the opposite: that it is the stress of socioeconomic deprivation that causes distress and pathology. Longitudinal research has shown support for the latter assumption. In a 10-year study of the relationship between depression and material and psychosocial resources, resource loss was found to be the most influential variable in predicting depression, above and beyond even the influence of resource gain. A comparison of natural groups created by material and social support gain, maintenance, and loss revealed greater differences in depressive symptoms between the group that maintained material resources and the group which lost resources ($\eta = .025$) than between the group that maintained and the group that gained ($\eta = .008$). An identical pattern was found for change in social support ($\eta = .014$ vs. $\eta = .010$) and subjective sense of mastery ($\eta = .098$ vs. $.027$) (Hobfoll, Johnson, Ennis, & Jackson, 2003). This may help explain the residual effects of social class of origin found in other samples, in which those from lower socioeconomic backgrounds never attain equivalent outcomes to those with higher SES of origin, even when achieved status is equivalent (Emerson, 2009; Gallo & Matthews, 2003; Luo & Waite, 2005).

A second longitudinal study of SES and depression revealed a similar pattern of outcomes, with the additional finding that initial scores of depression were not related to changes in the number of negative events or psychosocial resources (Holahan, Moos, Holahan, & Cronkite, 1999). Thus, rather than initial functioning predicting resource loss or gain (social selection), it was resources that predicted change in depressive symptoms (social causation).

Among American university students, mental health and well-being has been shown to be, on average, lower than estimates drawn from representative adult populations. However, variability within this population shows a similar pattern as previously discussed studies, in which low SES is associated with lower well-being. Closer examination of associated variables showed a negative relationship between mental health and external stressors of longer off-campus working hours, as well as increased financial stressors and difficulty paying bills (Roberts et al., 2000). Thus, it seems lower SES students may be especially vulnerable to stress and negative outcomes as compared to their higher SES peers and adult counterparts, which has negative implications not only for goal and degree attainment, but also for lifetime risk of developing a mental health disorder (Eisenberg et al., 2009).

Following convention in the reviewed literature, and in order to better integrate the findings into extant literature, the current study will expand upon Diener's (1984) conceptualization of SWB to include self-esteem and depression in addition to satisfaction with life and positive and negative affect.

Social Class and Long Term Academic Investment

Working class and lower SES students have generally been found to have positive attitudes toward the utility of higher education. These students have been found more likely to view a college degree as tool for mobility than middle or upper class counterparts (Ostrove, 2003), and more likely to espouse a belief that upward class mobility cannot happen without higher education (Wentworth & Peterson, 2001). However, these beliefs have not been shown to improve lower SES students' persistence and completion; higher SES students are more likely to persist and complete college than their lower SES peers (Baker & Velez, 1996; Robbins et al., 2004; Sirin, 2005; Walpole, 2003). Research examining the contributing factors of SES and ethnicity has revealed that ethnicity does not predict college retention after controlling for a proxy of SES, quality of high school education (in fact, after controlling for quality of preparation, African-American students were least at-risk for attrition; Murtaugh, Burns, & Schuster, 1999).

Even though college enrollment rates are currently the highest for the current generation than ever in American history (Astin & Oseguera, 2004; Fitzgerald & Delaney, 2003) higher education shows lower social class equality than 30 years ago (Baker & Velez, 1996). By the 1990's, 81% of high SES students attended college immediately following high school graduation, while only 41% of their lower SES peers did the same (US Department of Education, as cited in Baker & Velez, 1996). Children of parents with a graduate degree are five times more likely to attend highly selective school compared to first generation students—a discrepancy that has increased steadily over the

last three decades. And, SES significantly predicts selectivity of the institution of enrollment, even after controlling for educational performance through high school GPA and standardized SAT scores (Baker & Velez, 1996).

In terms of quantifiable resources such as time and money, students from lower SES backgrounds, have a distinct disadvantage. For example, a survey of over 12,000 university students from over 200 different schools found that lower SES students are more likely to be employed off-campus, limiting the time spent on-campus in activities and clubs. Comparisons between the content of campus activities show differences between high and low SES groups as well, with students from higher SES backgrounds spending more personal time with professors and visiting professors homes, and lower SES students spending more time working as research or teaching assistants. Despite similar aspirations, the only group for which aspirations for graduate school was predictive of attendance after 10 years was for those in the high SES group (OR for high SES = 1.14, $p < .01$; OR for low SES = 1.09, $p < .05$). The authors conclude that while lower SES students may be at a disadvantage concerning tangible resources such as time and money, they also employ unsuccessful strategies to gain “social profits,” such as personal relationships with individuals with power (Walpole, 2003); it is the latter concept that is theoretically better captured by subjective ratings of social status, such as social power as conceptualized by differential status identity (Rossides, 1997).

As the preceding studies reveal, sociological research has succeeded in demonstrating poor outcomes for lower SES students. However, as a field, it rarely examines the intrapersonal processes that may contribute to this pattern. The field of

counseling psychology, in contrast, is well-equipped to examine these processes, and in turn, may be well-suited to intervention at the individual and systemic levels to help correct it.

One of the defining features of BJW is that the belief allows for long-term planning, as part of what Lerner refers to as a fundamental “social contract” (Rubin & Peplau, 1975; Lerner, 1980). Theoretically, those with a stronger belief that the world is predictable and fair would be more likely to invest resources now with the confidence that their efforts will pay off in the future. Furthermore, several achievement motivation researchers and theorists have called for greater attention to the construct of time perspective in conceptualizing and measuring achievement behavior in the academic realm (Husman & Lens, 1999; Simons, Vansteenkiste, Lens, & Lacante, 2004). Thus, future time perspective as a facet of academic achievement motivation, should be predicted by BJW.

Time perspective is described as “a cognitive bias towards a particular temporal state,” either past, future, or present. While this has implications across several domains, it has been found to be a rich construct in understanding health behavior and academic achievement behavior (Guthrie et al., 2009; Peetsma & van der Veen, 2011; Strathman, Gleicher, Boninger, & Edwards, 1994). Self-report measures of future orientation have consistently found to correlate with behaviors and outcomes, including hours spent studying ($r = .28, p < .001$), sensation seeking ($r = -.31, p < .001$), anxiety ($r = -.14, p < .05$), depression ($r = -.19, p < .01$), GPA ($r = .40, p < .001$), incomplete courses ($r = -.39, p < .05$) (Zimbardo & Boyd, 1999), greater general concern for health ($r = .37, p < .01$),

fewer number of cigarettes smoked ($r = -.35, p < .01$), greater pro-environmental behavior ($r = .38, p < .01$) (Strathman et al., 1994), higher exam scores ($r = .58, p < .005$) (Joireman, 1999), higher GPA ($r = .27, p < .01$), and increased self-control ($r = .24, p < .01$) (Barber, Munz, Bagsby, & Grawitch, 2009). Future time perspective has also been found to predict academic achievement above and beyond SAT scores, sex, and race ($\Delta R^2 = .06, p < .001$) (Barber et al., 2009).

Time perspective has generally been identified as an individual difference measure and a singular construct that applies across settings and situational demands (Barber et al., 2009; Strathman et al., 1994; Zimbardo & Boyd, 1999). However, there is emerging evidence that time perspective may vary by life domains such as school/career, social relations, and leisure time (Stouthard & Peetsma, 1999). For example, in a study examining the relationship between each time perspective and school investment, found significant relationships between achievement behavior (i.e. effort and time expended on school-related tasks) for the school/career domain of future time perspective only ($r = .55$ for investment in schoolwork in general) (Peetsma, 2000). Another examining longitudinal data revealed a similar positive relationship between achievement behavior and growth of school/career domain of future time perspective ($\beta = .74$), as well as a negative relationship between achievement behavior and the growth of long-term perspective in the leisure domain ($\beta = -.58$) (Peetsma & van der Veen, 2011). Thus, time perspective may not be a unitary construct, but rather multidimensional construct based on temporal dimension (past, future, present) and life domain (social, leisure,

school/career) (Simons et al., 2004). It is the future perspective of school/work that is most applicable to BJW and thus, the current study.

Limited research has suggested that social class is related to future time perspective. Results from a community sample of adults produced a positive relationship between objective SES and future time perspective, even after controlling for other demographic variables of age, gender, ethnicity, and marital status (Guthrie et al., 2009). Those with a college degree endorsed greater future time perspective ($M = 3.84$) than those with only a high school education ($M = 3.54$). Within a sample of cadets and officers at a U.S. Air Force Academy, officers and senior cadets were found to have a greater future orientation, although it is impossible to determine whether this was a function of selection or socialization (Samuels, 1997, as cited in Zimbardo & Boyd, 1999).

Limited research within the field of educational psychology has revealed a pattern of lower achievement motivation among students from lower SES backgrounds, which has in turn been found to predict poorer educational outcomes and grade performance. A study of African American adolescents found that within this group, SES was predictive of achievement motivation (as measured by the Achievement Motivation Inventory) and performance, even after controlling for intellectual ability (Schultz, 1993). Among minority and lower SES students, those who reported higher achievement motivation showed levels of academic achievement closer to their measured IQ than those with lower reported achievement motivation.

One explanation for this common discrepancy has been attributed to communicated and internalized expectations within the academic sphere. A qualitative study of college seniors revealed a pattern in which students from lower SES backgrounds reported lower motivation for completion, and discussed that having received a message of lowered expectations from family and faculty led to lower motivation and poorer academic performance (VanEtten, Pressley, McInerney, & Liem, 2008).

Still other research has pointed to the role that BJW and other system-justifying beliefs may play in explaining achievement and motivation discrepancies between individuals from high and low status groups (Dette, Stober, & Dalbert, 2004; Hafer, 2000; Sutton & Winnard, 2007; Tomaka & Blascovich, 1994).

Evidence of Divergent Outcomes in Marginalized Groups

Up to this point, research has inconsistently presented a relationship between social class variables and system-justifying beliefs. Literature has also been presented that demonstrates a complicated relationship between social status or SES and important outcomes of achievement motivation and psychological well-being. The following studies reflect the role that system-justifying beliefs play in moderating the relationship between status variables and outcomes.

As has been previously discussed, the history of just world theory and system-justifying beliefs has focused more on negative outcomes of the construct, such as victim derogation, conservatism, and authoritarianism, even though Lerner (1998) himself

hypothesized that this “fundamental delusion” likely serves adaptive purposes (Furnham, 2003). Insofar as belief in a just world leads one to perceive the world as a controllable, orderly, and predictable place, it would be expected to follow that those with greater BJW are more likely to pursue long-term goals, considering that this “fundamental delusion” would incur the expectation that their investments and effort would pay off in the long run. This relationship would be expected regardless of the resources of the individual. So, while it is currently arguable whether status predicts BJW, BJW should reliably predict achievement motivation or pursuance of long-term goals (Taylor & Brown, 1988).

Just world and other system-justifying beliefs would be expected to have divergent effects on psychological well-being and associated mental health outcomes dependent upon status and social group membership. For example, if one has the experience of high relative social power and resources, the world may likely seem a fair and orderly place, wherein one’s individual efforts are consistently rewarded. This belief would be consistent with their social status and personal history and would also allow them to take credit for their successes, with attendant positive mental health and achievement outcomes. However, if one had a life history of relative deprivation, BJW would lead to different mental health outcomes. For those with a strong belief that resources are fairly distributed due to individual effort, the logical extension would be that those of lower social standing are somehow deserving of their status. If one’s identified social ingroup(s) is of lower status, it would follow that both the individual and group are lacking in ability or effort, with related mental health outcomes of poor self-esteem, negative affect, and lower life satisfaction. However, for those of marginalized

groups with little belief in a just world, the opposite should hold, in which systematic/external factors are emphasized over individual/internal factors; in this case, BJW should have either minimal or positive impact on mental health outcomes and subjective well-being.

In terms of achievement motivation and goal orientation, for those belonging to lower status social groups, strong belief in a just world would logically predict better performance outcomes in an academic environment: those who believe their efforts will be rewarded should have greater motivation to exert prolonged effort. However, those with low or weak BJW should produce poorer outcomes due to the demotivating effects of the belief that effort will not be rewarded in the future. Thus, for students from marginalized groups, BJW would lead to divergent outcomes, with those with high belief experiencing poorer mental health and well-being outcomes, but greater upward striving as evidenced by increased achievement orientation, while those with low belief experiencing better mental health outcomes, but reduced achievement orientation.

While a model considering both mental health and achievement outcomes in marginalized groups has been hypothesized in the extant literature, none have been tested. The following literature examines each the mediating effect of BJW on each of the outcomes separately in the context of social class and other marginalized groups.

Belief in a Just World and Long Term Academic Investment

O'Brien and Major (2005) suggest that members of low status groups have two pathways to build self-esteem: either endorse BJW and disidentify with the group, or

identify with the group and reject BJW. The dilemma becomes more complicated when considering possible outcomes of each pathway. Disidentification with the group is associated with poor mental health outcomes and disengagement from improving the status of the group (Kaiser, Dyrenforth, & Hagiwara, 2006), while rejection of BJW may actually impede one's progress on personal goals such as education through decreasing motivation (Flanagan & Campbell, 2003; Major et al., 2007; O'Brien & Major, 2005). While the former outcome has a relatively large base of support in the psychological literature, the latter is still a matter of conjecture.

There are a number of ways to test the effects of BJW on achievement motivation, from task performance and motivation through educational goals and persistence. At the most proximal level, beliefs in a just world actually have been found to have a number of significant associations with anxiety and performance in a single cognitive task (Tomaka & Blascovich, 1994). Subjects were asked to complete a serial subtraction task as quickly and accurately as possible. Those with greater measured belief anticipated less stress prior to and reported less stress immediately following the task than their lower belief counterparts. Objective physiological markers of stress, such as skin conductance and cardiac reactivity showed the same pattern of results. Those who reported higher belief in a just world also produced more correct answers and judged the task as less challenging (Tomaka & Blascovich, 1994). While this study did not control for factors related to social status, it does support the contention that greater belief in the fairness of the world is positively related to performance and achievement on a cognitive task.

The same pattern may also hold true for larger life tasks and goals. A study of German students enrolled in Realschule (a vocational school generally predominately attended by students from working-class backgrounds) demonstrated that belief in a just world was positively associated with both estimations of the probability that they would meet their vocational goals, as well as an increased number of preparatory behaviors toward their vocational goals (Dette et al., 2004). Thus, BJW may increase students' belief in the probability of their success, which in turn, influences behavioral outcomes.

Results of a three-part study showed support for this hypothesis using two different experimental manipulations as well as correlational data (Hafer, 2000). Participants were subjected to an innocent victim paradigm, in which their responses to an undeserving victim were measured in terms of derogation, blame, and disassociation. Just world theory would predict greater victim blame among those with higher belief, presumably because these participants are more likely to rationalize that the subject somehow deserved his or her fate in order to justify or defend their own worldview. In the first study, participants were primed to focus on long-term goals by listing several life and professional goals they hoped to achieve in the next five years. Those in the control condition were asked to list their current courses and extracurricular activities. Results reflected that those primed to focus on long-term goals were marginally more likely to engage in victim derogation, blame, and disassociation, $F(1, 76) = 2.85, p < .10$ (Hafer, 2000).

The second study in the series added the additional individual difference measure of a delinquency scale designed to measure the degree to which an individual would

engage in antisocial or delinquent behaviors to attain a desired goal. These results showed identical results, with increased victim blame ($r = .35, p < .05$) and dissociation ($r = .38, p < .05$) when the target was portrayed as innocent or undeserving. However, a significant interaction emerged, demonstrating that these results were reversed ($r = -.40, -.56$, respectively) for those who endorsed a willingness to achieve their goals through antisocial or unjust means (Hafer, 2000).

The third in this series of studies demonstrated expected correlations between these constructs. That is, BJW and long-term goal orientation (as an individual difference) were significantly correlated ($r = .22, p < .01$), so that those with greater belief in a just world were also oriented toward long-term goals. Furthermore, delinquency or the tendency to achieve goals through unjust means was negatively related to belief in a just world ($r = -.19, p < .01$) (Hafer, 2000). Taken together, these studies reflect a relationship between strength of belief in a just world and commitment to achieving long-term goals through just and socially sanctioned means, demonstrated across a variety of research methodologies. Again, these results were found in a sample of undergraduate students, and were not examined for group differences.

Results from a cross-sectional sample of British adults revealed a similar pattern. BJW for the self was found to correlate positively with confidence in achieving goals ($r = .35, p < .01$), and negatively with delinquent intentions ($r = -.29, p < .01$). Regression analyses further revealed that BJW-self produced a suppression effect on BJW-others. While BJW-others did not show any zero-order correlations with outcome variables, it was shown to account for significant variance in confidence in achieving one's own goals

($r = -.26, p = .012$) . Thus, just world beliefs may differentially predict outcomes depending on whether one believes the world is just for themselves or for others. The study also evaluated the realistic achievability of participants' goals as assessed by independent raters (i.e. become a successful actress rated 1 on likelihood of achievement, obtain driver's license rated a 3 on a 3-point scale). Achievability did not account for significant variance in confidence in any regression, suggesting that individuals who believe in a just world are not setting less ambitious goals for themselves, but rather, report a greater belief that they will achieve them (Sutton & Winnard, 2007).

To date, only one publication has attempted to identify the effect of BJW on the class-based achievement gap in higher education (Laurin et al., 2011). The first study of 45 undergraduates suggested a trend ($p = .07$) that for individuals reporting low subjective social class only (as measured by the SSS ladder), the relationship between just world beliefs and self-rated commitment to prepare for an exam was positive; for higher social class students, the relationship trended in the negative direction. However, when this study was replicated with a larger sample, using an established measure of BJW and a longer-term measure of interest in investing in training for a desired career, this interaction was significant. Again, for students from lower social classes only, BJW accounted for variance in long-term investment in career objectives ($\beta = .44, t(107) = 2.70, p < .01$); for their counterparts from high class backgrounds, this relationship was not significant ($\beta = -.01, t(107) < 1, p > .05$) (Laurin et al., 2011). A third study found that among an international sample, SES moderated the relationship between BJW and willingness to sacrifice to attain long-term career success ($\beta = -.012, t(53390) = 2.68, p <$

.01). The relationship between BJW and willingness to sacrifice to achieve success was strongest at the lowest level of self-identified social class (“lower class”) ($\beta = .15$, $t(6211) = 11.53$, $p < .0001$) and weakest at the highest level of self-identified social class (“upper class”) ($\beta = -.006$, $t(929) < 1$, $p > .05$). Thus, social class seems to follow the same pattern of outcomes as established for other marginalized groups, in which those from non-normative backgrounds report or evidence greater achievement motivation the greater their belief in a just world.

Belief in a Just World and Subjective Well-Being

Belief in a Just World for self (BJW-S) has been found to be positively correlated with intrapersonal outcomes such as life satisfaction ($r = .39$, $p < .001$) (Dalbert, 1999; Dzuka & Dalbert, 2006; Lipkus et al., 1996; Sutton & Douglas, 2005; Sutton et al., 2008; Sutton & Winnard, 2007), purpose in life ($\beta = .36$, $p < .001$) (Begue & Bastounis, 2003), Big Five personality traits of neuroticism ($r = -.37$, $p < .001$), extraversion ($r = .26$, $p < .001$), and openness to experience ($r = .26$, $p < .001$) (Lipkus et al., 1996), and self-esteem ($\beta = .559$, $p < .001$) (Sutton & Douglas, 2005).

In the face of poor grades, university students with strong BJW have been shown to engage in less self-serving bias. These students are more likely to make internal attributions for their performance and less likely to make external attributions, which in turn predicted a greater belief in the fairness of the negative outcome. However, it is the sense of fairness rather than responsibility that had a greater influence on students’ emotional responses: those with high BJW seemed to take more responsibility (internal

attribution $r = .21$, external attribution $r = -.30, p < .05$), perceive a poor grade as more fair ($r = .26, p < .05$), and experienced less negative emotion of distress ($r = -.39, p < .01$), anger ($r = -.26, p < .05$), and shame ($r = -.29, p < .05$) and greater satisfaction ($r = .24, p < .05$) (Hafer & Correy, 1999). Path analysis revealed that students who felt more in control and that the negative outcome was predictable produced more positive emotional outcomes. This is consistent with research showing similar patterns found in other student samples (Correia & Dalbert, 2007), and “victim” samples, such as mothers of disabled children (Dalbert, 1998; Fatima & Suhail, 2010) and the recently laid-off (Dalbert, 1998). However, this and related research neglects the effects of social class specifically, or social status in general, on these processes.

A study comparing the function of BJW in diverse groups (African-American, Asian, Latino/a, and White samples) found differing outcomes on measures of depression, well-being, and self-esteem as a function of group identity (O’Brien & Major, 2005). Consistent with previous research, the group means differed significantly on measures of group identity and BJW, with those groups with lower social status reporting greater group identity, and those with higher status more strongly endorsing BJW.

More central to the current study, however, was the pattern of interactions for each group. For African-Americans and Latinos, those low in ethnic identity showed a positive relationship between BJW, and self-esteem and depression, while those high in ethnic identity produced a negative relationship between the same variables; thus, for lower status groups, BJW is adaptive only for those with low group identification. For those with high group identification, greater belief that the status quo is fair is associated

with negative psychological outcomes, suggesting that messages of worth via social status are internalized.

Compared to a control group, Latino/a students manipulated to perceive greater discrimination against their ingroup reported lower self-esteem, greater in-group blame, and greater personal vulnerability only to the extent that they endorsed meritocracy beliefs. That is, when faced with discrimination, those members of low status groups who reject the mainstream belief that everyone has an equal chance at success may be buffered against the possible negative outcomes of such discrimination (Major et al., 2007). Similar manipulations have garnered identical outcomes from women (Foster & Tsarfati, 2005; Major et al., 2007). Thus, the authors conclude that for marginalized groups, the belief in a meritocracy is adaptive for well-being until it is directly disconfirmed.

Experimental research on another socially marginalized group, overweight women, has shown different results that serve to uphold the hypothesis of poorer outcomes for those from lower status groups who report strong SJBs (Quinn & Crocker, 1999). A comparison of differential effects of PWE on well-being as measured by self-esteem, depression, and anxiety for normal and overweight women revealed a main effect for weight status only ($\beta = -.16, p < .05$). Examination of the interaction between PWE and weight status ($\beta = -.15, p < .05$) showed that for overweight women only, well-being decreased as PWE increased (simple regression slope $\beta = -1.04, p = .09$). This pattern was reversed for normal weight women (simple slope $\beta = .84, p < .01$). Neither beliefs about controllability of weight and dislike for overweight others mediated these effects,

suggesting that PWE is the most salient and important predictor of mental health outcomes.

Following a prime designed to increase either PWE or inclusive ideology, only overweight women showed significant variations in self-esteem and negative affect, with those in the PWE prime reporting lower self-esteem and increased negative affect as compared to their counterparts primed with inclusive ideological primes, $t(55) = -2.55, p < .02$. No such differences were observed in a sample of normal weight women, $t(59) = -1.51, p > .05$ (Quinn & Croker, 1999). Like SES, weight (especially for women) is often perceived as controllable and is not associated with a source of collective self-esteem as can be found in other groups socially marginalized based on ethnicity or gender. Therefore, these results would likely replicate in a sample of low SES individuals.

Indeed, a longitudinal study of American adults has found a strong inverse relationship between BJW and depression among the employed only. Following initial job loss and prolonged unemployment, there exists a strong positive relationship between BJW and depression ($\beta = .220, p < .01$) (Benson & Ritter, 1990).

A sample of undergraduate students found that the objective indicator of parent education and subjective rating of SES were unrelated to self-esteem, while parent income showed a positive correlation, $r = .14, p < .05$ (Malka & Miller, 2003). Furthermore, the system-justifying belief of Conservative-Economic Values showed no zero-order correlation with self-esteem. However, regression results showed significant interactions between these variables, reflecting that SES was predictive of self-esteem only for those with high belief in SJBs. Among those with high SJB (one standard

deviation above the mean), subjective and objective SES was positively related to self-esteem ($r_s = .18$ and $.14$, respectively); those with higher reported SES also reported higher self-esteem insofar as they endorsed SJBs ($\beta = .29$), while those with lower reported SES showed an opposite effect of belief in a just world, producing lower scores on a measure of self-esteem with increasing belief ($\beta = -.11$). For those professing low belief in SJBs, there was no significant relationship between subjective or objective SES and self-esteem. None of the relationships were moderated by ethnicity, age, or gender (Malka & Miller, 2003). The authors further note that this effect was found in a relatively privileged and isolated sample of students from Stanford University, suggesting that greater variance in other setting may reveal even more robust effects and interactions.

One study stands out as an exception to this pattern of divergent well-being and mental health outcomes dependent upon the interaction of BJW and social class. In this study, German secondary students uniformly demonstrated a positive relationship between BJW and well-being, regardless of social status (Dalbert & Stoeber, 2005). However, this study shows a number of limitations. The population was composed of German secondary students assigned to one of three tracks. In Germany, students are tracked according to academic skill and vocational goal in middle school, with those with the highest aptitude assigned to the relatively privileged Gymnasium, and those with lower aptitude and “blue collar” vocational goals assigned to the less esteemed Hauptschule and Realschule. For all groups, increasing BJW was inversely associated with school distress. No interactive effects of tracks were observed (Dalbert & Stoeber, 2005). In this case, educational track was used as a proxy for status, which succumbs to

the previously discussed methodological issues of limited range and variability. Also, segregated tracks likely limit social comparison with individuals of differing status and likely decrease the salience of status. Finally, the results may not be generalizable to American samples.

Summary and Hypotheses

The previously reviewed research reveals ways in which belief in a just world moderates the relationship between social group status and mental health, academic investment, and achievement outcomes. For more powerful groups such as higher SES, white, and male students, the pattern is identical: those with higher belief in a just world and related worldviews enjoy better outcomes of increased motivation, achievement, and well-being. However, for those members of lower status groups of such as lower SES, ethnic minority, and female students, belief in a just world presents as a “double-edged sword,” in which belief is associated positively with academic motivation and achievement, but negatively with mental health and associated well-being outcomes.

The current proposed research seeks to improve the extant literature by focusing exclusively on the psychological construct of subjective social class as an individual difference variable. While social class has been found to predict worldview and even BJW, achievement and well-being outcomes above and beyond the variables of race or ethnicity, it has rarely been identified as the variable of interest in psychological research. The current study proposed not only to focus on this as a central variable, but to improve

upon other social class research by using a psychological measure of social class rather than a composite variable borrowed from sociology such as SES.

The current model also represents an improvement upon extant literature by combining outcomes into a single model. The majority of research examining outcomes of BJW in diverse groups has focused on a single outcome, whether academic achievement or well-being. Rather than including one variable or the other as future directions or implications of research, both variables will be examined simultaneously in the same student sample. Combining these into a single model will begin to help clarify existing variations in the empirical literature.

Regression analyses and the model proposed in Figure 1 will test the moderating effects of social class on academic achievement motivation, and subjective well-being in the context of Belief in a Just World by testing the following hypotheses:

1. Belief in a just world for self will positively correlate with subjective social status (hypothesis 1a), objective social status (hypothesis 1b), long-term academic investment (hypothesis 1c), and subjective well-being (hypothesis 1d);
2. Subjective social status will correlate with objective social status (hypothesis 2a), long-term academic investment (hypothesis 2b), and subjective well-being (hypothesis 2c);
3. Subjective social status will account for significant variance in subjective well-being (hypothesis 3a), long-term academic investment (hypothesis 3b),

and belief in a just world for self (hypothesis 3c), above and beyond that explained by objective social status;

4. Subjective social status will moderate the relationship between belief in a just world for self and long-term academic investment (hypothesis 4a) and subjective well-being (hypothesis 4b);
5. A model using the independent variable of subjective social status will explain variance in the data better than an identical model using objective social status.

CHAPTER III

METHOD

Participants

Participants were recruited from undergraduate psychology courses at the University of Akron, a large open-enrollment Midwestern University with an ethnically diverse student body, with 14% of students identifying as African-American, 2% as Asian, 2% as Hispanic, and 74% as White (University of Akron Quick Facts, n.d.). The University is also ranked among the top economically diverse national universities, with 45% of undergraduates receiving need-based Pell grants in 2009 (U.S. News and World Report, n.d.).

Two hundred and thirty-three participants (161 F, 64 M, and 8 missing) participated in the study. Participants ranged in age from 18 to 61 years with a mean age of 21.76 ($SD = 5.46$) years. Overall, 32.9% of the students were in their first year, 19.1% were in their second year, 18.7% were in their third year, 20.4% were in their fourth year, and 8.9% were in their fifth year or beyond.

Of the 233 participants, 83.1% identified as European American, 13.8% identified as African American, 1.8% identified as Asian American, 1.8% identified as Native American, 1% identified as Hispanic American, and 4.4% identified as “Other.” When asked to self-identify a social class category, 2.7% identified as belonging to the lower

class, 20.4% to the lower middle class, 51.1% to the middle class, 23.1% to the upper middle class, and 1.8% to the upper class. 40.4 % of participants indicated that they are first generation college students.

Procedure

Prior to data collection, the proposed study was reviewed by University of Akron's Institutional Review Board. Signed and dated notice of approval can be found in appendix A.

Participants were awarded extra credit for their participation. The survey instruments were accessed through the University of Akron's Human Participation in Research portal and hosted by the Department of Psychology's online surveymonkey account. Participants were first provided an informed consent document (Appendix B) to read and digitally accept. Those who did not indicate acceptance were redirected to University of Akron's homepage. Those who indicated acceptance were directed to the survey instruments, which were presented in a counterbalanced order. After completing the instruments, participants were directed to an independent page and asked to provide identifying information in order to receive appropriate course credit while maintaining anonymous data collection. Participants were also provided a debriefing statement and written educational document.

Measures

Objective Social Status

Objective social status was operationalized using the sociological method of a combination of parental income, education, and occupation. All three were collected in a demographic survey (Appendix C). Nakao and Treas's (1994) update to Duncan's socioeconomic index (1961) was utilized to quantify occupational prestige (values range 0-100). Reported household income was reported according to discrete categories of incomes, with values ranging from 1 (less than \$10,000) to 10 (\$90,000 and above). Parental education was measured using highest reported level of education for identified parents; values ranged from 1 (no high school education) to 9 (JD/MD/PhD or other advanced degree).

Differential Status Identity Scale (DSIS; Brown et al., 2002; Appendix D)

The DSIS is a 60-item Likert-type scale designed to measure one's social status using a conceptual framework proposed by Fouad and Brown (2000) and based on Rossides' (1990; 1997) social stratification model that simultaneously accounts for (1) economic resources, (2) social prestige, and (3) social power. Studies of the measure's validity in student samples have generally upheld this structure, with the exception of economic resources. Although this was originally conceived as a single-factor subscale, exploratory factor analyses have revealed two economic factors: (a) amenities and (b) basic needs (Thompson & Subich, 2007). Subsequent research has utilized this measure

as a reflection of general social class using the total DSIS score (Metz et al., 2009; Thompson & Dahling, 2010; Thompson & Subich, 2011). However, the same authors each acknowledge the four-factor structure of the measure (economic resources—amenities, economic resources—basic needs, social prestige, and social power).

Each of the four intercorrelated subscales is comprised of 15 items. Respondents are asked to compare themselves to “what you think the average citizen of the United States is like” and respond on a 5-point scale (-2 = very much below average; +2 = very much above average). The subscale of economic resources—basic needs is comprised items including “ability to afford regular dentist visits” and “ability to hire others for household chores (e.g. cleaning, gardening, childcare, etc.).” The economic resources—amenities scale includes items such as “ability to hire professional money managers,” and “ability to travel recreationally.” Social power is measured by items like “get information and services not available to the general public” and “ability to influence the laws and regulations of your state or city/town.” Finally, social prestige is measured by items including “how much society value or appreciate...” “the neighborhood in which you live” and “your position in society.”

Scores are derived by transforming responses to a 1-5 point scale summing to create a total scale score ranging from 60 to 300, in which higher scores reflect higher subjective social status. Construct validity has been established, with strong positive correlations between the total score and each of the subscales, and self-reported social class ($r = .563$) and household income in childhood and adolescence ($r = .416$)(Thompson & Subich, 2007), as well as between the total score and personal

experience of classism, race, parental education ($r = .16$), and perceived education- and career-related barriers ($r = .29$), (Metz et al., 2009; Thompson & Subich, 2007).

Consistent with theory and the content of the measure, African-American students have produced significantly lower scores than their White peers, $F(4, 200) = 6.05, p < .001$ (Thompson & Subich, 2007). Consistent with theory and previous empirical results, DSI has been found to explain variance in vocational outcomes above and beyond ethnicity, $\Delta R^2 = .037$ (Metz et al. 2009), suggesting that the construct outperforms ethnicity or objective SES in explaining variance in vocational outcomes. Internal consistency reliability has been consistently high, with reported alphas for each of the subscales ranging from .97 (Metz et al., 2009; Thompson & Dahling, 2010; Thompson & Subich, 2006, 2007) to .98 (Thompson & Subich, 2011).

Belief in a Just World (BJW; Lipkus et al., 1996; Appendix E)

Although the original Rubin and Peplau (1975) measure is the most researched measure of belief in a just world, it has shown limited reliability and validity across studies (Begue & Bastounis, 2003). Lipkus and colleagues (1996) hypothesized that the weakness of the measure was its primary focus on how fair and predictable the world was *in general*, and developed a two-dimensional measure that would better capture the dual nature of just world beliefs (i.e., for the self and for others). The two scales are phrased identically, differentiated only by the use of the target word of “people” in the BJW-others scale, and “I” or “me” in the BJW-S scale. Each scale is eight items in length, with possible scores ranging from 6 to 48. Subjects respond based on a 6-point Likert scale (1

= strongly disagree; 6 = strongly agree). Total scores are obtained by summing responses to the items; higher scores indicate greater BJW.

Principal components analysis with oblique rotation revealed two components for each scale with eigenvalues greater than one. However, further examination of the data revealed that for each subscale, the first component accounted for a relatively high proportion of the variance (50.2% vs. 15.4% for BJWS). Authors also did not discern a theoretical difference for the two components and thus constrained the solution for each scale to a single factor in subsequent confirmatory factor analyses, with item loadings ranging from .44 and .49 for the item “I feel that when [people/I] meet with misfortune, [they/I] have brought it upon [themselves/myself]” and .64 to .78 for the remaining seven items (Lipkus et al., 1996). Both BJW-S and BJW-O demonstrated convergent validity with established measures of just world beliefs, including Rubin and Peplau’s (1975) original scale. The full scale will be administered in order to maintain consistency with previous administration protocols, however, only the BJW-S subscale will be used in analyses.

In a study of construct validity, Begue and Bastounis (2003) demonstrated stronger relationships between BJW-S and intrapersonal outcomes than BJW-O, and stronger relationships between BJW-O and interpersonal outcomes or social judgments than BJW-S. These patterns of results would be expected, considering the Self subscale is expected to measure the degree to which one believes the world treats them fairly and should, in turn, show stronger relationships with self-reported psychosocial adjustment and purpose in life than would beliefs regarding the fairness with which the world treats

others. Sutton and Douglas (2005) subjected all 16 items to factor analysis, resulting in the expected two-factor solution of BJW-S and BJW-O. Regression analyses revealed that BJW-S (but not BJW-O) predicted subjective well-being, even after controlling for locus of control, socially desirable responding, and self esteem. A second study (Sutton et al., 2008) replicated these results. As in previous research, only BJW-S accounted for significant variance in psychological adjustment, life satisfaction, and positive and negative affect. Furthermore, neither social group membership nor self-esteem was found to moderate these relationships. Cronbach's alpha coefficients for BJW-S ranged from .82 (Sutton & Douglas, 2005) to .89 (Sutton et al., 2005) in U.S. samples.

Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson, & Griffin, 1985;

Appendix F)

The Satisfaction with Life Scale is a 5-item, 7-point Likert scale (1 = strongly disagree, 7 = strongly agree), resulting in possible scores ranging from 5 to 35, with higher scores reflecting greater life satisfaction. The scale was initially developed in response to an identified hole in the subjective well-being literature for cognitive evaluations of life satisfaction that were psychometrically sound as well as distinct from measured affect (Diener et al., 1985). Forty-eight total items were initially generated that reflected judgment about how satisfying one found one's own life, as well as items reflecting affect. Factor analysis revealed the expected three-factor solution (positive affect, negative affect, and satisfaction). Since the goal was to derive a measure of cognitive evaluation of satisfaction, items measuring positive and negative affect were

eliminated. Items were further trimmed by removing those with factors loadings less than .60 and semantic redundancies, leaving a final scale composed of 5 items.

The scale was initially validated on multiple undergraduate samples (Diener et al., 1985). Factor analysis of the SWLS revealed a single factor, accounting for 66% of the total variance and Cronbach's alpha of .87 and two-week test-retest reliability of .82. The scale has also shown acceptable convergent and divergent validity, revealing weak correlations with measures of socially desirable responding, as well as significant correlations in the expected direction with related measures of self-esteem and depression. More recent literature has found similar evidence of construct and cross-cultural validity and reliability coefficients ranging from .77 to .80 in Lebanese and Brazilian student samples (Ayyash-Abdo & Alamuddin, 2007; Islam et al., 2009).

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; Appendix G)

Although the PANAS (Watson et al., 1988) is not a direct measure of subjective well-being, it is the most widely researched and validated measure of positive and negative affect, two of the three domains, besides cognitive judgments of quality of life, that compose the general construct of subjective well-being (Diener et al., 1999; Sheldon & Elliot, 1999).

The PANAS consists of 20 terms which the participants rank on a 5-point scale (1 = *very slightly or not at all* to 5 = *extremely*) indicating to what extent the adjective describes their feelings. The scale also has 6 possible time instructions, ranging from "at

this very moment” to “during the past year” or a general evaluation of feelings. The current study will use the time instruction “in general” since the inclusion of the PANAS is to account for “long-term moods” (Diener et al., 1999, p. 277).

Construct validity for the PANAS was assessed using other common measures of negative affect such as the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, & Uhlenhuth, 1974), the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961), and the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970). Reliability as measured by Cronbach’s alpha in an adult general population ranged from .89 for the PA scale and .85 for the NA scale (Watson et al., 1988).

Extant research has demonstrated a weak negative correlation between the NA and PA scales, ranging from $-.12$ to $-.23$ (Watson et al., 1988). Previously published methods have dealt with the PA and NA scales by subtracting NA from PA or the combination of PA and SWLS in order to create a unitary construct of SWB (Ayyash-Abdo & Alamuddin, 2007; Elliot, Sheldon, & Church, 1997; Sheldon & Elliot, 1999). The current study will follow the procedure established by Brunstein (1993) and will be discussed in greater detail in planned analyses.

Time Perspective Questionnaire—Long-Term School and Career (TPQ-LSC; Stouthard & Peetsma, 1999; Appendix H)

The TPQ is a 48-item self-report questionnaire designed to measure short- and long-term time perspectives in the life domains of leisure, personal development, social

relations, and study and professional career (Stouthard & Peetsma, 1999). Participants are asked to rate their agreement with each statement on a 5-point Likert scale, producing possible scale scores from 6 to 30, with higher scores indicating greater orientation in that area. Factor analyses have upheld the “facet” dimensionality of the scale (Stouthard & Peetsma, 1999). The scale will be administered in its entirety in order to retain previously reported standard administration. For the purposes of this study, it is the subscale of long-term school and professional career (LSC) that will be included in all analyses.

The TPQ-LSC has been found to predict investment in learning, study habits, and GPA in adolescents and young adults (Peetsma, 2000; Peetsma & van der Veen, 2011). Cronbach’s alpha has been found to range from .66 (Peetsma & van der Veen, 2011) to .86 (Peetsma, 2000).

University Investment Orientation Scale (UIOS; Hafer, 2000; Appendix I)

The UIOS was created to provide a context-specific measure of long-term goal orientation for college students. Seventeen items were originally generated and were piloted; factor analysis revealed a single item with insufficient loading, leaving a total of 16 items. These items include statements such as “I have a pretty clear idea of how my university education will help me reach my goals” and “I believe that I will benefit in the long run from having a university education,” which participants rate on a 5-point Likert scale indicating their level of agreement. Possible scores range from 16 to 80, with higher scores indicating a greater tendency to focus on a college education as an investment toward long-term goals.

This measure has been validated on three samples. Construct validity has been demonstrated in significant correlations in the expected direction with another measure of time perspective, the Consideration of Future Consequences scale (Strathman et al., 1994), BJW, and use of unjust means to pursue goals (Hafer, 2000). Cronbach's alphas have been observed to range from .80 to .87 (Hafer, 2000).

Planned Analyses

The previously stated hypotheses will be tested using multiple regression with SPSS version 20, and path analysis and structural equation modeling (SEM) using MPlus version 6.12.

A composite SWB variable will be constructed using the procedures detailed by Elliot, Sheldon, and Church (1997). Scores for positive affect, negative affect, and SWLS will be summed to obtain total scores for each scale and will be standardized. A composite SWB score will be derived by summing SWLS and positive affect, and subtracting negative affect from this score. Principal components analysis of the results of this procedure have supported the existence of a single component accounting for 63% of the variance (Brunstein, 1993; Sheldon & Elliot, 1999) and have produced alpha reliabilities ranging from .82 (Brunstein, 1993) to .94 (Elliot et al., 1997). Previously published research has also successfully used this composite SWB as a manifest variable in path analyses (Elliot et al., 1997).

Prior to running multivariate analyses, data will be screened for multivariate normality following procedures recommended by Tabachnick & Fidell (2007).

Multivariate outliers will be identified using Mahalanobis distance and Cook's D and again screened using procedures recommended by Tabachnick & Fidell (2007). In the case of severe non-normality, an ML estimator such as MLR will be used, which corrects chi-square and standard errors for non-normality. Model fit will be evaluated according to the criteria listed in Table 1. As model chi square and fit criteria are not produced for models with latent interactions in MPlus version 6.12, nested model comparisons for models with latent interactions will be compared using the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC). The AIC and BIC are parsimony-adjusted and used only to select competing models, in which the model with the smaller value is determined to be most likely to replicate.

Table 1. Evaluation of Model Fit Criteria

Statistic	Recommended Value	Citation
χ^2	$p \geq .05$	Hayduk (1996)
RMSEA	$\leq .06$ = adequate fit $\geq .10$ = poor fit	Kline (2011) Browne & Cudek (1993)
CFI	$\geq .90$	Kenny (2011)
TLI	$\geq .90$	Kenny (2011)
SRMR	$\leq .08$	Hu & Bentler (1999)

Note. RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker-Lewis index; SRMR = standardized root-mean-square residual.

The previously stated research questions will be tested according to the follow hypotheses:

1. Belief in a just world for self will positively correlate with subjective social status (hypothesis 1a), objective social status (hypothesis 1b), long-term

academic investment (hypothesis 1c), and subjective well-being (hypothesis 1d);

2. Subjective social status will correlate with objective social status (hypothesis 2a), long-term academic investment (hypothesis 2b), and subjective well-being (hypothesis 2c);
3. Subjective social status will account for significant variance in subjective well-being (hypothesis 3a), long-term academic investment (hypothesis 3b), and belief in a just world for self (hypothesis 3c), above and beyond that explained by objective social status;
4. Subjective social status will moderate the relationship between belief in a just world for self and long-term academic investment (hypothesis 4a) and subjective well-being (hypothesis 4b), such that:
 - i. for individuals reporting greater subjective social status (one standard deviation above the mean), belief in a just world for self will be positively related to both long-term academic investment and subjective well-being;
 - ii. for individuals reporting greater subjective social status (one standard deviation below the mean), belief in a just world will be positively related to long-term academic investment and negatively related to subjective well-being;
5. A model using the independent variable of subjective social status (figure 2) will explain variance in the data better than an identical model using objective social status (figure 3).

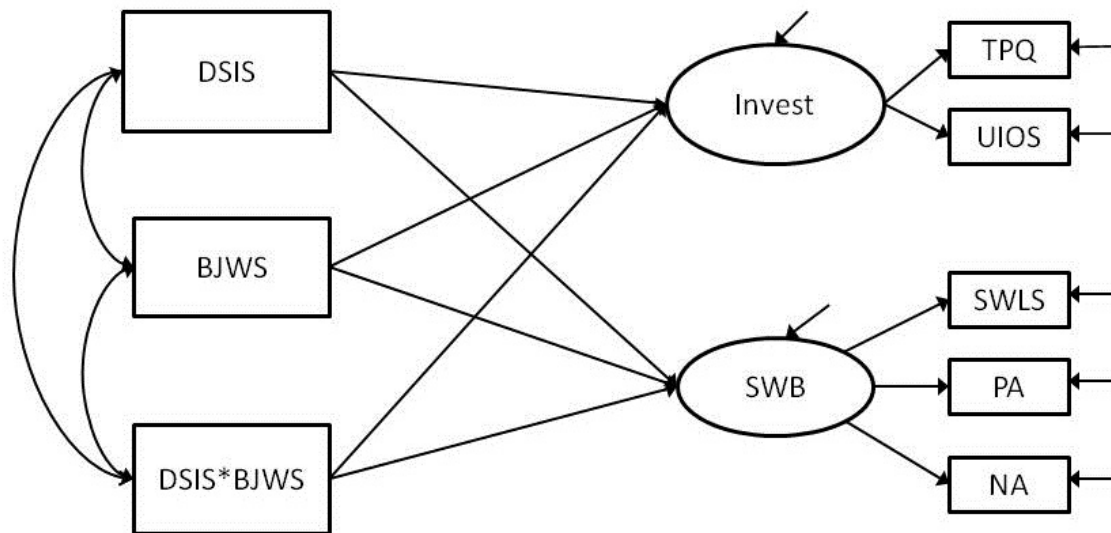


Figure 2. Hypothesized SEM model testing subjective social status as a moderator between BJW and outcomes of long term academic investment and subjective well-being. DSIS = Differential Status Identity Scale; BJWS = Belief in a Just World for Self; DSIS*BJWS = multiplicative interaction term for DSIS and BJWS; TPQ = Time Perspective Questionnaire-Long-term School and Career Subscale; UIOS = University Investment Orientation Scale; SWB = Subjective Well-Being; SWLS = Satisfaction with Life Scale; PA = Positive Affect scale of Positive and Negative Affect Schedule; NA = Negative Affect scale of Positive and Negative Affect Schedule. DSIS, BJWS, and their interaction are manifest variables. Invest and SWB will be specified as latent constructs.

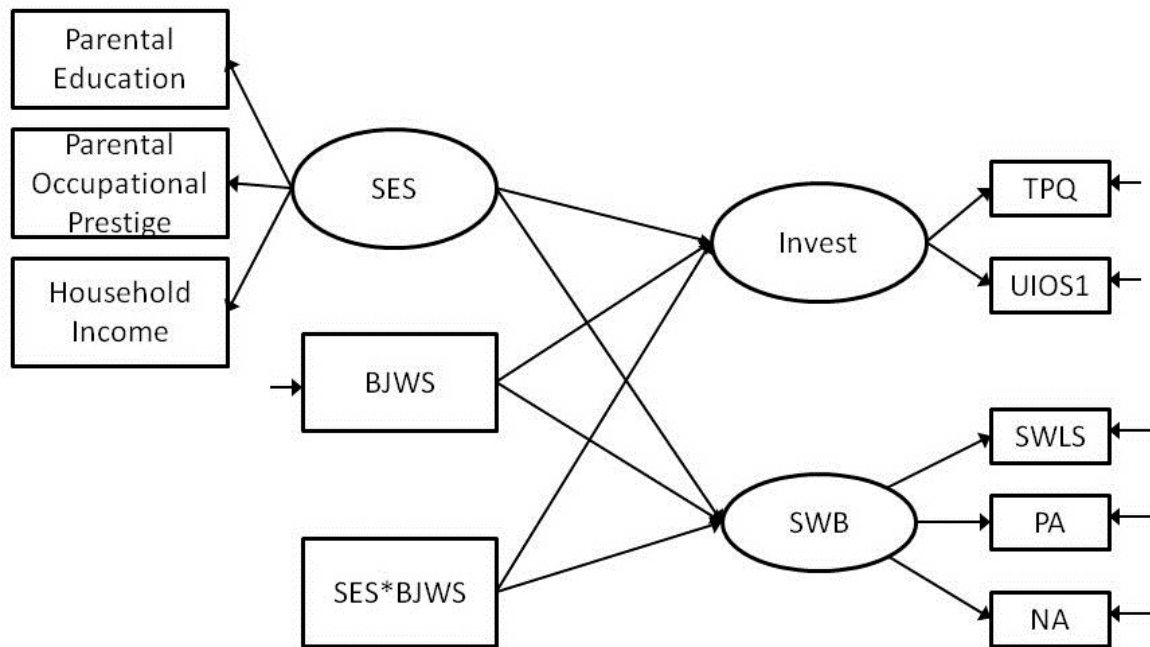


Figure 3. Hypothesized SEM model testing objective social status as a moderator between BJW and outcomes of long term academic investment and subjective well-being. SES = Socioeconomic status; BJW-S = Belief in a Just World for Self; SES*BJWS = multiplicative interaction term for SES and BJWS; TPQ = Time Perspective Questionnaire, Long-term School and Career subscale; UIOS = University Investment Orientation Scale; SWB = Subjective Well-Being; SWLS = Satisfaction with Life Scale; PA = Positive Affect scale of Positive and Negative Affect Schedule; NA = Negative Affect scale of Positive and Negative Affect Schedule. BJWS is a manifest variable. SES, Invest, and SWB will be specified as latent constructs.

CHAPTER IV

RESULTS

Data Cleaning

Kline (2011) identifies the N:q rule (Jackson, 2003) as a useful and empirically-based rule of thumb for determining adequate sample size for path analysis and SEM, based upon model complexity. Jackson (2003) recommends an optimal sample size to parameters ratio of 20:1. The model specified in figure 2 includes 11 parameters, resulting in a recommended sample size of 220. Thus, data collection included 233 cases. Eight were removed due to incomplete data (missing >15% or responses to an entire scale), leaving a sample size of 225. Analysis of missing data in the remaining 225 cases revealed that no items were missing more than 5% of responses to scale items, and across all scale items, less than 1% of data was missing. Little's Missing Completely At Random (MCAR) test was not statistically significant, suggesting that data was missing completely at random. Missing data for scale items was then imputed using an expectation-maximization algorithm.

Investigation of demographic items revealed that 12.5% of household income and 29.9% of parental occupation data was missing completely at random. Examination of individual responses to the latter revealed that participants had difficulty understanding the item, and provided length of parental employment, rather than a description or job

title. Since firm recommendations for allowable missingness for data has not been established (Tabachnick & Fidell, 2007), missing data for parental occupation was not replaced. Due to the centrality of household income to planned analyses, the large size of the data set, relatively small amount of missing data, and randomness missing data, missing household income data was replaced using the expectation-maximization likelihood method, following recommendations of Tabachnick and Fidell (2007) and Kline (2011).

Following Kline's (2011) recommendations for tests of univariate normality in large samples, absolute values of skew and kurtosis indices were examined using cutoffs of $KI < 10.0$ and $SI < 3.0$. All measured variables produced skew and kurtosis values < 1.0 , with the exception of age, which showed evidence of a strong positive skew. This is to be expected given the number of traditional college students in the sample. Since age was included for purposes of sample description rather than hypothesis testing, the skew was not corrected.

Multivariate normality was examined by inspecting of scatterplots for bivariate relationships among the variables, and plots for residuals of each variable. These revealed generally linear relationships. Mahalanobis distance statistic and Cooke's D were used to screen the data for potential outliers. A single case was identified as a multivariate outlier; closer inspection of this case revealed an extreme response set (i.e., selecting all of the response bubbles furthest to the right) across all scale and demographic items. This case was deleted, leaving a total sample size of 224.

In the data collection phase, participants were allowed to select multiple categorical descriptors for race. However, due to the small cell sizes for all non-white races, this was later dummy-coded into white and non-white (white = 1; non-white = 2) in order to increase statistical power.

Inter-Rater Reliability of SEI

The author and a 5th year doctoral student in counseling psychology independently coded parental occupation using Nakao & Treas (1994) Socioeconomic Index of Occupations (SEI). Inter-rater reliability ranged from $r = .924$ ($p < .001$) for father's SEI to $r = .985$ ($p < .001$) for "other" SEI. Raters' scores were averaged to create a single SEI for each of the three possible parental SEI values. The highest reported parental occupational prestige score was used to create the parental occupational prestige variable used in subsequent regression and SEM analyses.

Descriptive Statistics

Means, alphas, standard deviations, and correlations among scaled measures are presented in Table 2. All alphas were within the range of acceptable or better, and consistent with those obtained in previous research.

Table 2. Correlations Among Primary Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	Gender	Race
1. DSIS	(.97)	.30**	.25**	.30**	.25**	.01	.07	.28**	.190**	.09	.20*	-.12	-.03
2. ED		—	.63**	.26**	.02	.11	-.01	.05	.03	.00	.03	-.10	.02
3. SEI			—	.46**	.00	.07	.09	.12	.09	-.06	.12	.02	-.08
4. INC				—	.11	.11	.13*	.19**	-.07	-.03	.07	-.04	-.20**
5. BJWS					(.90)	.29**	.38**	.47**	.42**	-.25**	.51**	-.05	-.14*
6. UIOS						(.88)	.63**	.16*	.29**	-.31**	.34**	.16*	-.11
7. TPQ							(.79)	.26**	.41**	-.31**	.44**	.06	-.17**
8. SWLS								(.85)	.46**	-.28**	.78**	.07	-.08
9. PA									(.90)	-.27**	.78**	.01	-.04
10. NA										(.87)	-.69**	.06	.12
11. SWB											—	.012	-.11
<i>N</i>	224	222	157	224	224	224	224	224	224	224	224	224	224
<i>M</i>	189.78	6.10	61.46	7.20	33.56	64.92	28.29	24.07	36.63	23.81	0.00		
<i>SD</i>	35.09	1.75	19.61	2.77	5.82	9.41	4.93	5.80	7.21	7.61	2.22		

Note. Values on the diagonal are alphas. DSIS = Differential Status Identity Scale; ED = highest educational level of parents; SEI = highest socioeconomic index of parent occupational prestige; INC = household income; BJWS = Belief in a Just World—Self; UIOS = University Investment Orientation Scale; TPQ = Time Perspective Questionnaire—Long Term Academic and Career Scale; SWLS = Satisfaction with Life Scale; PA = Positive Affect; NA = Negative Affect; SWB = subjective well-being composite variable.

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

Tests of Hypotheses

Belief in a Just World

Hypothesis 1: Belief in a just world for self will positively correlate with subjective social status (hypothesis 1a), objective social status (hypothesis 1b), long-term academic investment (hypothesis 1c), and subjective well-being (hypothesis 1d).

Correlations between Belief in a Just World for Self and status, investment, and subjective well-being variables can be found in Table 2. BJWS total scores across the entire sample were significantly higher than the midpoint of the scale, $t(223) = 32.29, p < .001$, suggesting rather high belief in a just world for self. The correlation between DSIS and BJWS was significant and positive, reflecting that higher subjective social status is related to higher belief in a just world for self. Thus, hypothesis 1a was supported.

However, the correlations between objective markers of social status and BJWS were not statistically significant, suggesting that parental education, household income, and parental occupational prestige are not related to perceptions of an individual's belief the world is just for oneself. Thus, hypothesis 1b was not supported. Examination of mean differences in BJWS for race and gender showed a significant effect for race only, $F(1, 222) = 4.70, p = .031$, in which white students produced higher BJWS scores ($M = 33.99, SD = 5.77$) than non-White students ($M = 31.93, SD = 5.79$). As predicted, belief in a just world for self was significantly and positively correlated with all measured

indicators of subjective well-being and long-term academic investment, supporting hypotheses 1c and 1d.

Subjective Social Status

Hypothesis 2: Subjective social status will correlate with objective social status (hypothesis 2a), long-term academic investment (hypothesis 2b), and subjective well-being (hypothesis 2c).

Correlations between DSIS total score and objective social status indicators of parental education, parental occupational prestige, and household income in adolescence were positive and significant, but weak, as shown in Table 3. Race did not show a significant bivariate correlation with total DSIS. However, after controlling for income, there was a significant effect for race on DSIS, Wilks' Lambda = .942, $F(4, 190) = 2.94$, $p = .022$. In addition, examination of subscale correlations with objective variables revealed that only the prestige subscale of the DSIS was significantly correlated with race or gender. Thus, hypothesis 2a was partially supported.

Table 3. Correlations Between Objective Social Status Variables and DSIS Subscales

Variable	1	2	3	4	5	ED	SEI	INC	Class	First Gen	Sex	Race
1. DSIS Total	—	.86**	.92**	.82**	.73**	.30**	.25**	.30**	.40**	.17**	-.12	-.03
2. DSIS EN		—	.81**	.55**	.52**	.23**	.17*	.22**	.27**	.08	-.03	-.02
3. DSIS EA			—	.68**	.54**	.25**	.24**	.31**	.43**	.15*	-.10	.05
4. DSIS Power				—	.46**	.29**	.21**	.15*	.29**	.17	-.11	.01
5. DSIS Prestige					—	.24**	.23**	.34**	.34**	.20**	-.19**	-.19**
<i>N</i>	224	224	224	224	224	222	157	196	222	224	224	224

Note. DSIS = Differential Status Identity Scale; EN = Economic resources—Necessities; EA = Economic resources—Amenities; ED = highest educational level of parents; SEI = highest socioeconomic index of parent occupational prestige; INC = household income; Class = self-reported social class; First Gen = first generation college student status.

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

DSIS was not significantly correlated with academic investment; hypothesis 2b therefore was not supported. It was, however, significantly correlated with measures of subjective well-being (except negative affect), such that higher subjective social status was related to higher subjective well-being, positive affect, and satisfaction with life. All indicators of subjective well-being correlated significantly in the expected direction, as did both indicators of long-term academic goal orientation, supporting hypothesis 2c. Finally, all subjective well-being and long-term academic investment measures correlated significantly and in the predicted direction.

In addition, cumulative grade point average correlated in the expected direction with both measures of long-term academic investment ($r = .253$ for UIOS; $r = .246$ for TPQ, $ps < .001$). A regression using TPQ-LSC and UIOS as independent variables entered in a single step, with GPA as a dependent variable, showed that the two measures accounted for 7.6% of the variance in academic performance as measured by cumulative GPA, $F(2, 221) = 9.147, p < .001$.

Ability of Subjective Social Status to Account for Variance in Outcomes Above and Beyond Objective Social Status Variables

Hypothesis 3: Subjective social status will account for significant variance in subjective well-being (hypothesis 3a), long-term academic investment (hypothesis 3b), and belief in a just world for self (hypothesis 3c), above and beyond that explained by objective social status.

Hierarchical regression was used to test the ability of subjective social status to account for variance in subjective well-being and long-term academic goal orientation above and beyond objective status indicators of gender, race, parental education, household income, and parental occupational prestige. For each of the regression models, gender and race was entered in step 1, objective SES indicators in step 2, and subjective social status as measured by DSIS in step 3.

Subjective well-being. Results for indicators of subjective well-being can be found in Table 4. Neither race nor gender accounted for significant variability in satisfaction with life, a cognitive appraisal measure of subjective well-being, $p = .433$. Objective markers of social status were similarly unable to account for significant variance in SWLS, $p = .110$. In contrast, DSIS was able to account for significant variance in SWLS above and beyond that accounted for by race, gender, and objective markers of SES, $p = .002$. The final model including all IVs, was statistically significant, $p = .008$, and accounted for a total of 10.8% of the variability in SWLS.

Table 4. Regression for Relation of Subjective Well-Being Indicators to Objective and Subjective Indicators of Social Status

Variable	β	R^2	F	Adjusted R^2	ΔR^2	ΔF
Regression for relation of DSIS to SWLS						
Step 1						
Race	.058					
Sex	-.094	.011	0.842	-.002	.011	0.842
Step 2						
Parental education	.092					
Parental occupational prestige	-.021					
Household income	.167	.049	1.57	.018	.039	2.043
Step 3						
DSIS	.266**	.108	3.02**	.072	.058	9.81**
Regression for relation of DSIS to PA						
Step 1						
Race	-.049					
Sex	.007	.002	0.179	-.011	.002	0.179
Step 2						
Parental education	.026					
Parental occupational prestige	.148					
Household income	-.175	.034	1.053	.002	.031	1.635
Step 3						
DSIS	.281**	.099	2.738**	.063	.065	10.821**

(continued)

Table 4. Regression for Relation of Subjective Well-Being Indicators to Objective and Subjective Indicators of Social Status
(continued)

Variable	β	R^2	F	Adjusted R^2	ΔR^2	ΔF
Regression for relation of DSIS to NA						
Step 1						
Race	.070					
Sex	.013	.005	0.414	-.008	.005	0.414
Step 2						
Parental education	-.012					
Parental occupational prestige	-.018					
Household income	-.071	.013	0.385	-.020	.015	0.307
Step 3						
DSIS	.135	.028	0.709	-.011	.015	2.31
Regression for relation of DSIS to SWB						
Step 1						
Race	-.096					
Sex	.024	.009	0.715	-.004	.009	0.715
Step 2						
Parental education	.060					
Parental occupational prestige	.065					
Household income	.030	.025	0.784	-.007	.016	0.831
Step 3						
DSIS	.193*	.056	1.478	.018	.031	4.85*

Note. $N = 156$. DSIS = Differential Status Identity Scale; SWLS = Satisfaction with Life Scale; PA = Positive Affect scale of Positive and Negative Affect Schedule; NA = Negative Affect scale of Positive and Negative Affect Schedule; SWB = subjective well-being composite variable.

* $p \leq .05$, ** $p \leq .01$.

Neither race nor gender accounted for significant variability in positive affect, $p = .837$. Objective markers of social status were similarly unable to account for significant variance in PA, $p = .184$. In contrast, DSIS was able to account for significant variance in PA, $p = .001$. The final model including all IVs was statistically significant and accounted for a total of 9.9% of the variance in PA.

Neither race nor gender accounted for significant variability in negative affect, $p = .662$. Objective markers of social status were similarly unable to account for significant variance in NA above and beyond race and gender, $p = .775$. Subjective social status was also unable to account for significant variance in NA above and beyond race, gender, and objective indicators of social status, $p = .131$. The final model including all IVs, accounted for a total of only 2.8% of the variance in NA.

Neither race nor gender accounted for significant variability in the composite variable of SWB, $p = .491$. Objective markers of social status were unable to account for significant variance in SWB above and beyond that accounted by race and gender, $p = .479$. Subjective social status, as measured by DSIS, was, however, able to account for significant variance in SWB above and beyond the objective variables of race, gender, and markers of SES, $p = .029$. The final model including all IVs, was not statistically significant ($p = .189$), but only accounted for 5.6% of the total of variance in SWB.

Taken together, these results provide partial support for hypothesis 3a, that subjective social status will account for variance in subjective well-being, above and beyond that explained by race, gender, and objective socioeconomic indicators of parental education, parental occupational prestige, and household income.

Long term academic investment. Results for indicators of long-term academic investment can be found in Table 5.

Table 5. Regression for Ability of Objective and Subjective Indicators of Social Status to Account for Variance in Long Term Academic Investment

Variable	β	R^2	F	Adjusted R^2	ΔR^2	ΔF
Regression for relation of DSIS to UIOS						
Step 1						
Race	.183					
Sex	-.133*	.045	3.64*	.033	.045	3.65*
Step 2						
Parental education	.200*					
Parental occupational prestige	-.119					
Household income	.116	.082	2.71*	.052	.037	2.03
Step 3						
DSIS	.009	.082	2.24*	.046	.000	0.010
Regression for relation of DSIS to TPQ						
Step 1						
Race	-.119					
Sex	.097	.021	1.63	.008	.021	1.63
Step 2						
Parental education	-.019					
Parental occupational prestige	.047					
Household income	.091	.033	1.03	.001	.012	0.641
Step 3						
DSIS	.103	.042	1.09	.003	.009	1.36

Note. $N = 156$. DSIS = Differential Status Identity Scale; UIOS = University Investment Orientation Scale; TPQ = Time Perspective Questionnaire, Long-Term School and Career subscale.

* $p \leq .05$.

Both race and gender accounted for significant variability in UIOS, $p = .028$.

Objective markers of social status were not able to account for significant variance in

UIOS, above and beyond race and gender, $p = .112$. Subjective social status, as measured

by DSIS, was also unable to account for significant variance in UIOS above and beyond

race, gender, and objective SES indicators, $p = .919$. The final model including all IVs, was statistically significant ($p = .042$), but only accounted for 8.2% of the total of variance in UIOS.

Neither race nor gender accounted for significant variability in TPQ, $p = .199$. Objective markers of social status were not able to account for significant variance in UIOS, above and beyond race and gender, $p = .590$. Subjective social status, as measured by DSIS, was also unable to account for significant variance in TPQ above and beyond race, gender, and objective SES indicators, $p = .245$. The final model including all IVs, was not statistically significant ($p = .372$), and accounted for 4.2% of the total of variance in TPQ.

Taken together, these results do not provide support for hypothesis 3b, that subjective social status will account for variance in long-term academic investment, above and beyond that explained by race, gender, and objective socioeconomic indicators of parental education, parental occupational prestige, and household income. Overall, long-term academic investment did not show significant relationships with any of the measured status variables.

Belief in a just world for self. Results for BJWS can be found in Table 6. Neither race nor gender accounted for significant variability in BJWS, $p = .343$. Objective markers of social status were not able to account for significant variance in BJWS, above and beyond race and gender, $p = .725$. Subjective social status, as measured by DSIS, however, was able to account for significant variance in BJWS above and beyond race,

gender, and objective SES indicators, $p = .002$. The final model including all IVs, was statistically significant ($p = .045$), and accounted for 8.1% of the total of variance in BJWS. Thus, hypothesis 3c, that subjective social status would account for variance in BJWS above and beyond objective indicators of race, gender, and socioeconomic status, was supported. The positive value of the b-weight of DSIS suggests that a higher subjective evaluation of one's social status is related to higher levels of BJWS.

Table 6. Regression for Ability of Subjective and Objective Social Status to Account for Variance in BJWS

Variable	β	R^2	F	Adjusted R^2	ΔR^2	ΔF
Step 1						
Race	-.117					
Sex	-.004	.014	1.08	.001	.014	1.08
Step 2						
Parental education	.050					
Parental occupational prestige	-.013					
Household income	-.061	.018	0.567	-.014	.005	0.237
Step 3						
DSIS	.277**	.081	2.215*	.045	.063	10.28**

Note. $N = 156$. BJWS = Belief in a Just World—Self; DSIS = Differential Status Identity Scale.

* $p \leq .05$, ** $p \leq .01$.

Tests of Moderation

Hypothesis 4: Subjective social status will moderate the relationship of belief in a just world for self with long-term academic investment (hypothesis 4a) and with subjective well-being (hypothesis 4b).

The ability of subjective social status and belief in a just world for self to account for variance in both subjective well-being and long-term academic investment was testing using structural equation modeling using MPlus version 6.12 (Muthén & Muthén, 2011).

Two structural models were tested. The first analysis tested the fit of the hypothesized model (Figure 2) to the data. The second analysis replaced subjective social status with the latent variable of SES, as measured by the three objective indicators of social status of highest maternal and paternal education, highest maternal and paternal occupational prestige, and household income while growing up (Figure 3). The model with the latent objective SES variable was used as a comparison to the first model, in order to determine the relative ability of objective and subjective indicators of social status to account for variance in the outcomes of long-term academic investment and subjective well-being.

Original scale values for the measured variables and product term for the interaction varied widely in magnitude (from a range of 26 for SWLS to approximately 14,000 for the interaction term). Therefore, observed variables with high variances were rescaled by multiplying by a constant to better approximate the values recommended by Muthén and Muthén (2011) and Kline (2011). This linear transformation changes the mean and variance of each of the rescaled variables, but not the correlations with other measured variables, thus preserving the ability to test hypothesized multivariate relationships (Kline, 2011).

Subjective social status. Following the two-step modeling process described by Kline (2011), a measurement model was first specified and tested. Long-term academic investment was presumed to be measured by two scales, UIOS and TPQ. Three scales are recommended in order to define a just-identified latent variable with one unique solution (Little, Cunningham, Shahar, & Widaman, 2002; Little, Lindenberger, & Nesselroade,

1999). One common solution to this is item parceling, although this practice is controversial. Little and colleagues (2002) have discussed the issue from an empiricist-conservative position, which they describe as “rooted in the stance that all sources of variance must be represented in any multivariate statistical models involving a given scale,” and a pragmatic-liberal position, which assumes that “representing each and every source of variance in each item, particularly on an a priori basis, is impossible” (p. 154). The authors suggest that for research aiming to model the effects of a latent variable at a general level, parceling is warranted. However, for research goals examining the dimensionality of the construct at an item-level, parceling is contraindicated. Thus, for the purposes of the current study, examining the relationship among latent variables, parceling is justified according to Little and colleagues’ (2002) criteria.

Thus, UIOS was divided into two parcels with correlated residuals using the item-to-construct balance method outlined by Little and colleagues (2002). CFA was performed on the measure, and items were assigned to one of two parcels based on their relative loadings. In order to maintain balance, the highest loading item was assigned to parcel one, the second highest to parcel two; this pattern was reversed for each subsequent round of assignments, such that the third-highest loading item was assigned to parcel two and the fourth-highest to parcel one, et cetera. TPQ was maintained as a single indicator in order to limit biased estimates of error. The latent variable of subjective well-being was defined using SWLS, PA, and NA (using a negative start value).

The fit of the measurement model for the two latent outcome constructs was evaluated using model chi-square and approximate fit indices. Overall, the measurement model provided good fit to the data. Although the model chi-square, a “badness of fit” indicator, was significant at the optimal level of $p \geq .05$ (Hayduk, 1996), $\chi^2_{(7)} = 15.80$, $p = .028$, it was not significant at $p \leq .01$. Since this particular statistic is sensitive to very minor model misspecifications when sample sizes are moderate to large (Kline, 2011), and no issues were noted in the covariance matrix, other model fit statistics will be considered to evaluate overall fit.

RMSEA for the measurement model was .075, which falls between Browne and Cudek’s (1993) and Hu and Bentler’s (1999) recommended values of close fit (RMSEA $\leq .06$) and poor fit (RMSEA $\geq .10$), suggesting adequate fit. Furthermore, the lower bound of the 90% CI (.024) was below the recommended value for close fit; therefore, the close-fit hypothesis was not rejected. CFI and TLI (.979 and .955, respectively) were both above the recommended value of .90 (Kenny, 2011), indicating good fit to the data. Finally, the obtained Standardized Root Mean Square Residual was .047, also below the threshold of SRMR $\leq .08$ threshold for acceptable fit.

Following the determination of an acceptable measurement model, the complete structural model in Figure 4 was tested. This model included the two outcome variables as specified in the previously described measurement model, as well as the three proposed predictors (subjective social status, belief in a just world for self, and their multiplicative interaction term). The model chi-square was significant, $\chi^2_{(19)} = 47.08$, $p \leq .001$, indicating that the structural model was significantly different than a perfectly-

fitting model. Approximate fit indices revealed adequate fit according to standards suggested by Kenny (2011). Specifically, the RMSEA = .081 (90% CI = .052 - .111), CFI = .945, TLI = .905, and SRMR = .059. This model indicated that the set of three predictors accounted for a significant proportion of variance in both latent outcome variables, explaining 17.3% of the variance in long-term academic investment and 44.2% of the variance in subjective well-being.

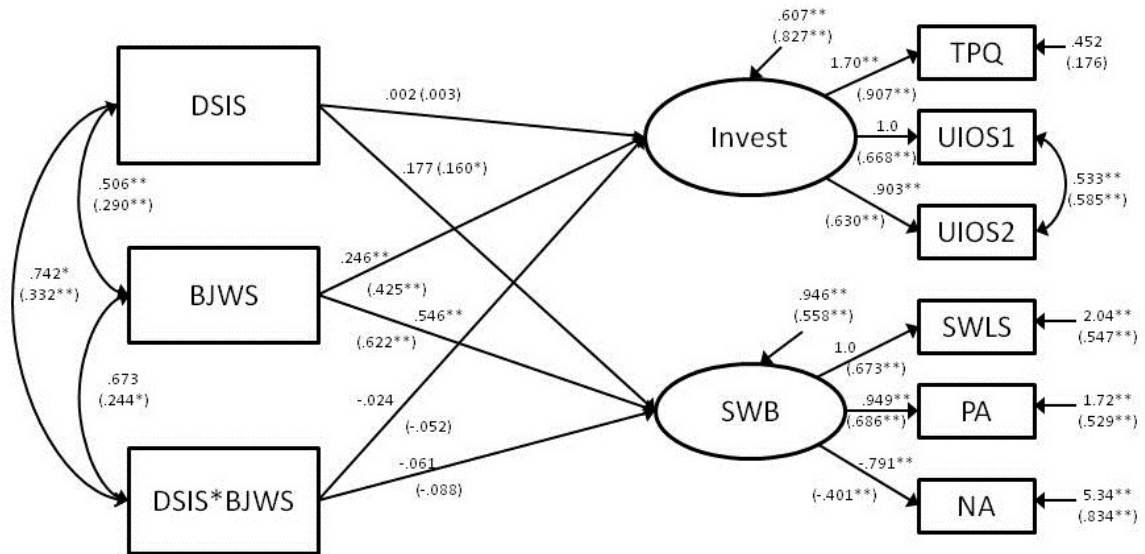


Figure 4. Test of moderating effect of subjective social status on the relationships of belief in a just world for self with long term academic investment and subjective well-being. N = 224. Path coefficients in parentheses are standardized. * $p \leq .05$, ** $p \leq .01$. DSIS = Differential Status Identity Scale; BJWS = Belief in a Just World for Self; DSIS*BJWS = multiplicative interaction term for DSIS and BJWS; TPQ = Time Perspective Questionnaire-Long-term School and Career Subscale; UIOS = University Investment Orientation Scale; SWB = Subjective Well-Being; SWLS = Satisfaction with Life Scale; PA = Positive Affect scale of Positive and Negative Affect Schedule; NA = Negative Affect scale of Positive and Negative Affect Schedule. DSIS, BJWS, and their interaction are manifest variables. Invest and SWB were specified as latent constructs.

Examination of the path coefficients revealed further support for the hypotheses 1c and 1d, which proposed that Belief in a Just World for Self would explain significant variance in subjective well-being and long-term academic investment. The positive values of the estimated path coefficients ($\beta = .622, p < .001$, and $\beta = .425, p < .001$, respectively) indicate higher belief in a just world for self is related to greater long-term academic investment and greater subjective well-being. Subjective social status accounted for significant variance in subjective well-being ($\beta = .160, p < .05$), with the positive sign of the path coefficient indicate that higher subjective evaluations of social status are related to greater levels of subjective well-being, supporting hypothesis 2c. However, subjective social status did not account for significant variance in long-term academic investment orientation ($\beta = .003, ns$), suggesting that long-term investment in education is unrelated to the subjective understanding of social class. Consistent with previously discussed results, hypothesis 3b was therefore not supported.

Moderation, as proposed in hypothesis 4, was tested by examining the path coefficients to the two outcome constructs for the multiplicative interaction of subjective social status and belief in a just world for self in the hypothesized model. In addition, nested models, with these paths either freed or fixed to zero, were compared. Neither freely estimated path from the interaction term to an outcome construct was statistically significant, suggesting that the interaction between subjective social status and belief in a just world was not significant for either measured outcome. Nested model comparison can be found in Table 7. There was a significant improvement in model fit with the addition of freely estimated paths from the interaction term to subjective well-being and

long-term academic investment, reflecting that the proposed moderation did significantly improve the fit of the model to the data. Therefore, hypothesis 4 was only partially supported.

Table 7. Comparison of Nested Models With and Without Moderation for Subjective Social Status Models

Model	χ^2_M	df_M	χ^2_D	df_D	RMSEA (90% CI)	CFI	SRMR
1. Moderator paths fixed to zero	76.54*	23			.102 (.077–.896)	.896	.083
2. Freely estimated moderator paths	47.08*	19	29.483*	4	.081 (.052–.111)	.945	.059

Note. $N = 224$. M = model; D = difference; RMSEA = root mean square error of approximation; CI = confidence interval; CFI = comparative fit index; SRMR = standardized root-mean-square residual.

* $p < .001$.

Objective social status. Hypothesis 5: A model using the independent variable of subjective social status (figure 2) will explain variance in the data better than an identical model using objective social status (figure 3).

To test the ability of subjective social status to account for model variance above and beyond that accounted for by objective status indicators, a second model was specified. A measurement model was first specified, with identical latent dependent variables to those in figure 4, and an additional latent independent variable of SES. A first attempt to specify the objective SES construct, using indicators consisting of the highest parental education, highest parental occupational status, and household income did not converge. Examination of the relationships between the three SES variables revealed low correlations between household income and the educational and

occupational status of parents. This may be due to questionable ability of the sample to estimate their past household income or to the relative importance of wealth rather than income in explaining social status (Braveman et al., 2005). Therefore, a second measurement model was tested, using separate indicator variables for mothers' and fathers' education and highest rated occupational prestige. This model showed adequate fit to the data ($\chi^2_{(23)} = 28.99, p = .181$; RMSEA = .034, 90% CI = .000 - .068; CFI = .989; TLI = .982; SRMR = .043).

Next, a structural model was specified. This model included both outcomes of long-term academic investment and subjective well-being, as well as predictor variables of the observed variable of subjective social status (DSIS), the latent construct of objective social status (SES), belief in a just world for self, and the two multiplicative interaction terms for BJWS and the status variables. Nested models with the paths from either subjective social status (DSIS) or objective social status (SES) and each associated interaction term freed or fixed to zero were compared as reflected in Figures 5-7 (see Table 8 for covariances among exogenous variables).

Table 8. Covariances Among Exogenous Variables in Figures 5–7

Variable	1	2	3	4	5	6
1. DSIS	(1.39)	.50	.64	.66	.49	.62
2. BJWS		(2.17)	.55	-.10	.07	.00
3. DSIS × BJWS			(3.39)	.13	.14	-.15
4. MED				(3.39)	1.93	2.37
5. FED					(4.80)	3.24
6. HiSEI						(7.62)

Note. Values on the diagonal are variances. DSIS = Differential Status Identity Scale; BJWS = Belief in a Just World—Self; MED = mother's level of education; FED = father's level of education; HiSEI = highest reported parental occupation socioeconomic index.

AIC and BIC for the model with all paths freely estimated (Figure 5) were 6182.60 and 6310.05, respectively. A nested model with paths from DSIS and the multiplicative interaction term with BJWS to the outcomes fixed to zero (Figure 6) produced an AIC of 6179.48 and BIC of 6293.85. A comparison of these values suggests that the model retaining only SES as an exogenous social status indicator, without estimated paths from DSIS (Figure 6), is more likely to replicate than a model with all path coefficients estimated (Figure 5). Finally, a nested model with paths from SES and the multiplicative interaction term with BJWS to the outcomes fixed to zero (Figure 7) produced an AIC of 6177.28 and a BIC of 6291.65. In total, the model using only subjective indicators of social status (Figure 6) provided a better fit to the data than a model using only objective indicators of social status (Figure 7) or to a model using both objective and subjective indicators of social status (Figure 5). Thus, hypothesis 5 was supported.

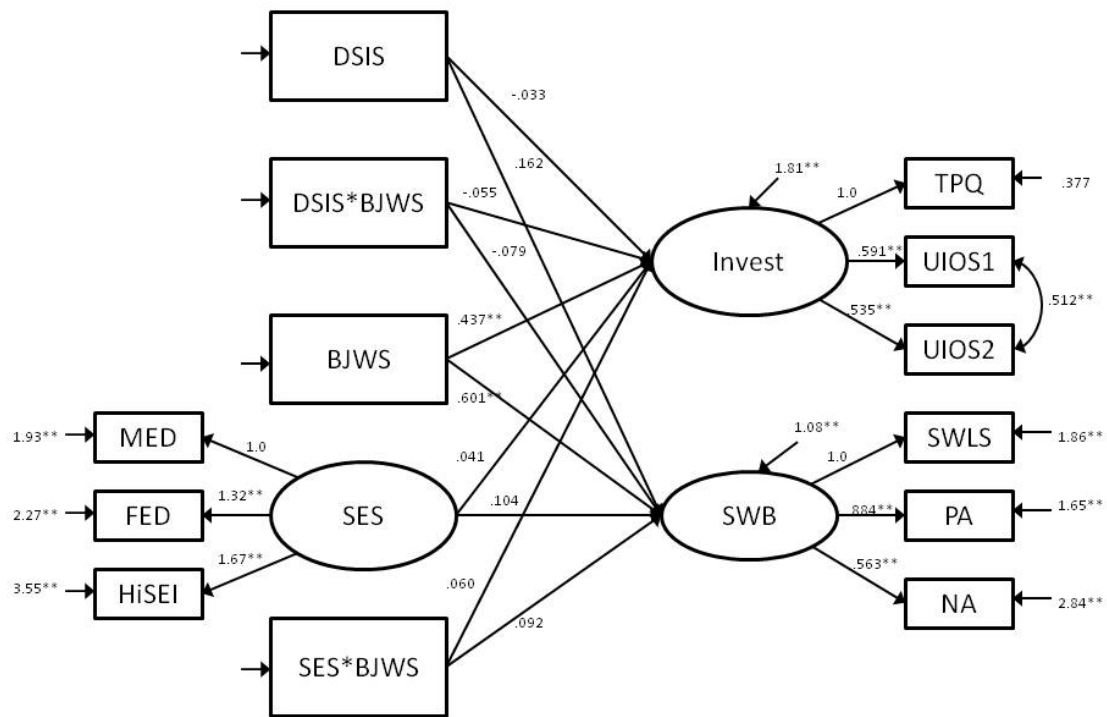


Figure 5. Test of ability of objective and subjective social status to account for variability in the relationships of belief in a just world for self with long term academic investment and subjective well-being. $N = 210$. Path coefficients are unstandardized. DSIS, BJWS, and their multiplicative interaction term are manifest variables. SES, INVEST, and SWB are specified as latent constructs with three indicators each. DSIS = Differential Status Identity Scale; BJWS = Belief in a Just World—Self; MED = Mother's level of education; FED = Father's level of education; HiSEI = Highest reported parental occupation Socioeconomic Index; SES = Socioeconomic Status; TPQ = Time Perspective Questionnaire, Long-term School and Career subscale; UIOS1 = University Investment Orientation Scale item parcel 1; UIOS2 = University Investment Orientation Scale item parcel 2; INVEST = Long-Term Academic Investment; SWLS = Satisfaction with Life Scale; PA = Positive Affect; NA = Negative Affect; SWB = Subjective Well-Being. * $p < .05$, ** $p < .01$.

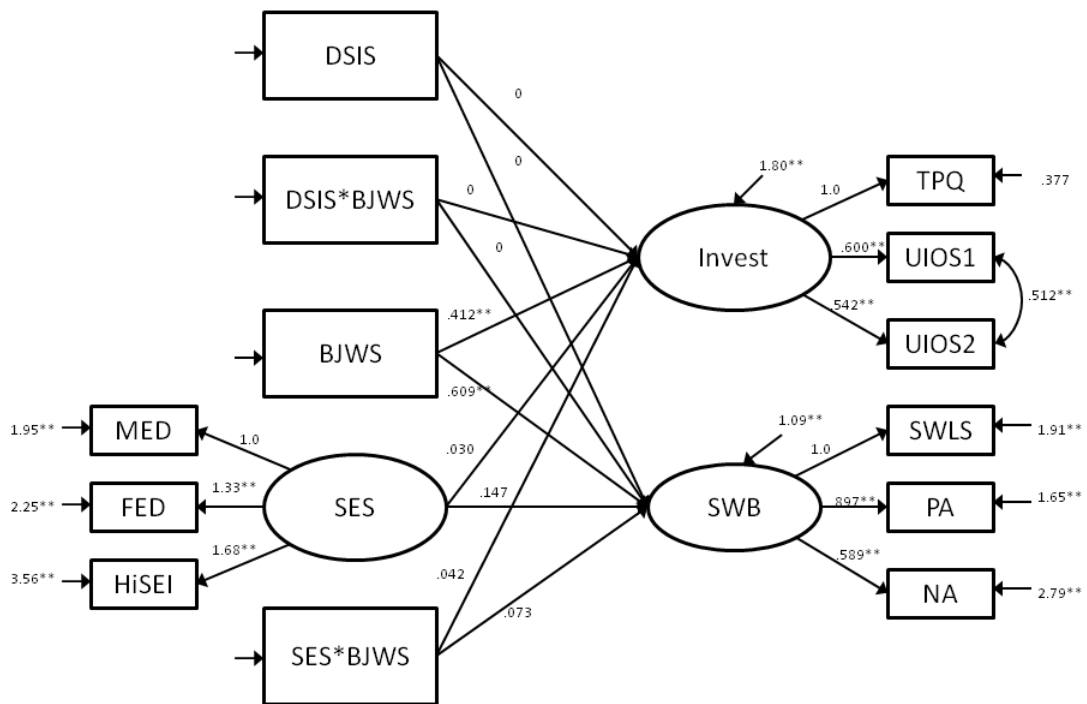


Figure 6. Test of ability of objective social status to account for variability in the relationships of belief in a just world for self with long term academic investment and subjective well-being. $N = 210$. Path coefficients are unstandardized. DSIS, BJWS, and their multiplicative interaction term are manifest variables. SES, INVEST, and SWB are specified as latent constructs with three indicators each. DSIS = Differential Status Identity Scale; BJWS = Belief in a Just World—Self; MED = Mother’s level of education; FED = Father’s level of education; HiSEI = Highest reported parental occupation Socioeconomic Index; SES = Socioeconomic Status; TPQ = Time Perspective Questionnaire, Long-term School and Career subscale; UIOS1 = University Investment Orientation Scale item parcel 1; UIOS2 = University Investment Orientation Scale item parcel 2; INVEST = Long-Term Academic Investment; SWLS = Satisfaction with Life Scale; PA = Positive Affect; NA = Negative Affect; SWB = Subjective Well-Being. * $p < .05$, ** $p < .01$.

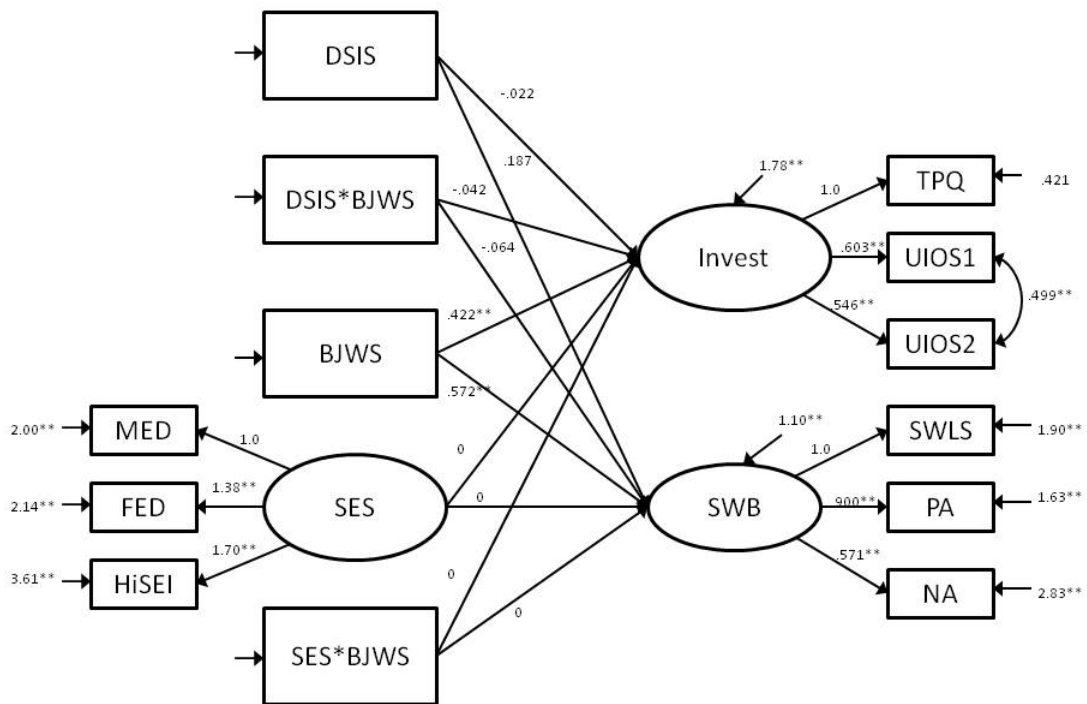


Figure 7. Test of ability of subjective social status to account for variability in the relationships of belief in a just world for self with long term academic investment and subjective well-being. $N = 210$. Path coefficients are unstandardized. DSIS, BJWS, and their multiplicative interaction term are manifest variables. SES, INVEST, and SWB are specified as latent constructs with three indicators each. DSIS = Differential Status Identity Scale; BJWS = Belief in a Just World—Self; MED = Mother’s level of education; FED = Father’s level of education; HiSEI = Highest reported parental occupation Socioeconomic Index; SES = Socioeconomic Status; TPQ = Time Perspective Questionnaire, Long-term School and Career subscale; UIOS1 = University Investment Orientation Scale item parcel 1; UIOS2 = University Investment Orientation Scale item parcel 2; INVEST = Long-Term Academic Investment; SWLS = Satisfaction with Life Scale; PA = Positive Affect; NA = Negative Affect; SWB = Subjective Well-Being. * $p < .05$, ** $p < .01$.

An alternative objective model was also tested since the originally hypothesized model with a latent SES variable would not converge. This model, depicted in Figure 8, included as predictors the three observed objective SES variables, BJWS, and three

product terms for the interaction of BJWS with each of the objective SES variables.

Covariances for exogenous variables can be found in Table 9. Fit criteria for the measurement model are identical to that reported for the original hypothesized model in figure 4, indicating adequate fit. The structural model showed adequate fit to the data ($\chi^2_{(35)} = 63.395, p = .002$; RMSEA = .060, 90% CI = .036 - .084; CFI = .944; TLI = .909; SRMR = .040). Examination of the path coefficients from each of the exogenous variables to subjective well-being and long term academic investment showed a pattern identical to previous model and regressions, in which BJWS was the only variable showing a statistically significant relationship with either outcome. Overall, this model accounted for 17.4% of the variance in long term academic investment and 44.1% of the variance in subjective well-being.

Table 9. Covariances Among Exogenous Variables for Figure 8

Variable	1	2	3	4	5	6	7
1. BJWS	(2.19)	0.16	-0.23	0.07	-0.57	0.08	0.15
2. INC		(9.76)	-1.95	0.97	0.58	4.69	-0.84
3. BJWS $\times$ INC			(21.06)	0.53	2.39	-0.95	12.18
4. ED				(3.03)	-0.02	4.33	1.30
5. BJWS $\times$ ED					(6.57)	1.13	7.22
6. SEI						(15.53)	0.23
7. BJWS $\times$ SEI							(31.35)

Note. Values on the diagonal are variances. BJWS = Belief in a Just World for Self; INC = household income while growing up; ED = highest reported level of parental education; SEI = highest reported parental occupation socioeconomic index.

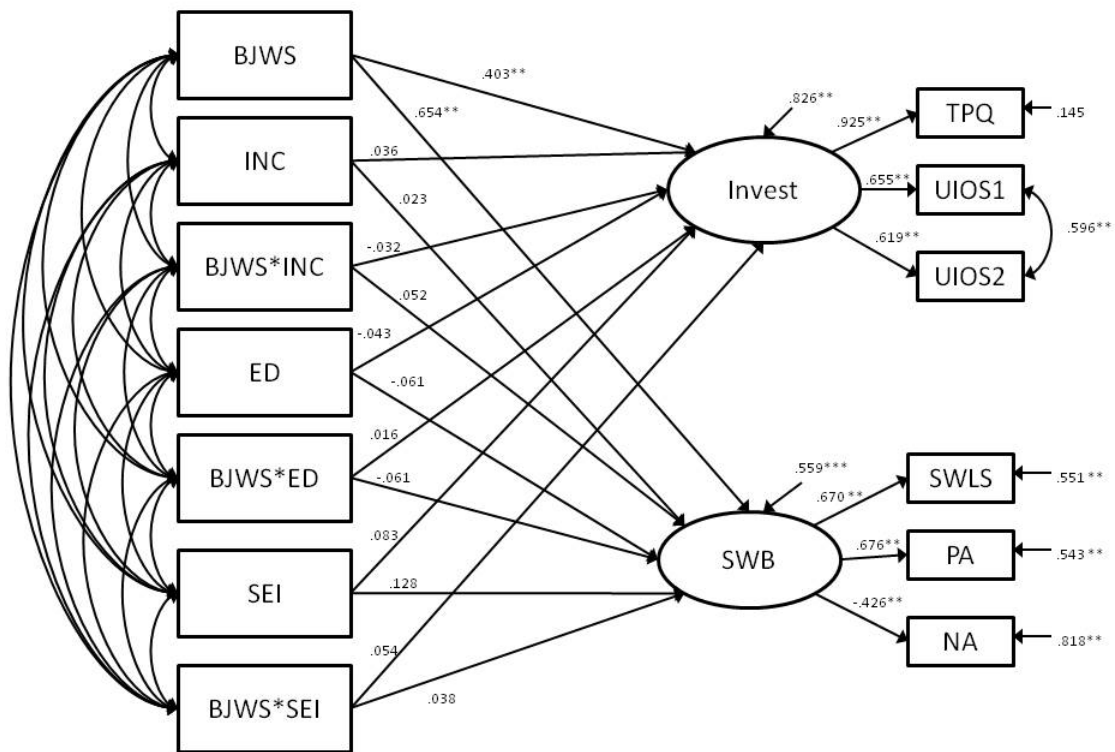


Figure 8. Test of ability of three observed objective social status variables to account for variability in the relationships of belief in a just world for self with long term academic investment and subjective well-being. $N = 210$. Path coefficients are standardized. INC, ED, SEI, BJWS, and their multiplicative interaction term are manifest variables. INVEST, and SWB are specified as latent constructs with three indicators each. BJWS = Belief in a Just World for Self; INC = Household income while growing up; ED = Highest reported level of parental education; SEI = Highest reported parental occupation Socioeconomic Index; TPQ = Time Perspective Questionnaire, Long-term School and Career subscale; UIOS1 = University Investment Orientation Scale item parcel 1; UIOS2 = University Investment Orientation Scale item parcel 2; SWB = Subjective Well-Being; SWLS = Satisfaction with Life Scale; PA = Positive Affect; NA = Negative Affect. ** $p \leq .01$.

CHAPTER V

DISCUSSION

Introduction

The following chapter will review the results of the current study within the context of the extant literature. Conclusions and implications for practice and future research will be reviewed, including strengths and limitations of the current study.

Summary of the Study

The current study sought to test the ability of just world beliefs to explain subjective well-being and long-term academic investment outcomes across social status in a college student sample. Belief in a just world has been posited as a psychological resource that allows individuals to perceive their world as controllable and predictable, which provides not only a basis for moderating emotion, even in the face of obstacles, but also creates a “social contract” of expectation that investments of effort in the short term will pay off in the long term, allowing for long-term goal orientation, investment, and planning. The theory was developed out of observation of a predominantly white, upper-middle class group of medical students. Early research upheld the theory, but similarly focused on generally white and middle class samples, with little regard to group differences. For members of ordinant groups, BJW has been found to be related to higher

subjective well-being, lower distress, and increased engagement in long-term academic investments (Jost & Hunyady, 2005; Jost et al., 2003; Tomaka & Blascovich, 1994; Hafer, 2000).

In contrast, more recent research with diverse groups has shown evidence that mental health and long-term goal orientation outcomes may not be identical to their majority peers. Just world beliefs among members of marginalized groups have been described as a “double-edged sword,” in which assuming responsibility for one’s social position, as conceptualized as high just world beliefs, has the effect of maintaining motivation to pursue higher education, while at the same time negatively affecting mood, self-esteem, and general well-being. This pattern of negative association between BJW and subjective well-being indicators has been observed in women (Foster & Tsarfati, 2005; Major et al., 2007), ethnic minority students (O’Brien & Major, 2005), and overweight women (Quinn & Crocker, 1999).

In contrast, BJW seems to predict long-term goal orientation regardless of the status of the belief-holder (Schmader, Major, & Gramzow, 2001; Sutton & Winnard, 2007). In fact, the lone identified study examining long-term academic and career commitment and BJW in a socioeconomically diverse sample found that for those from lower SES backgrounds only, BJW shared a positive relationship with academic commitment, suggesting that BJW may actually serve a greater adaptive purpose in the realm of academic commitment for marginalized groups than it does for normative groups (Laurin et al., 2011).

Recently, social class has been identified as an important and under-examined multicultural variable, even as it has been found to predict mental health outcomes above and beyond objective diversity variables (APA, 2007; Liu & Ali, 2008; Liu et al., 2004). Thus, the current study addressed a hole in the extant literature by examining the relationship among the current variables of interest within the context of differential status identity—a theoretical and psychologically-based understanding of social status. In addition, the current study attempted to extend the literature by examining both subjective well-being and long-term academic investment outcomes within the context of subjective social class.

Summary of Results

Main Effects

Belief in a just world. Overall, the current sample of university undergraduate students reported relatively high belief in a just world for self. Considering the context of the development of the theory as a way to explain the behavior of middle-class medical students in the U.S. (Lerner, 1980), it is not surprising that a similar sample reported a high belief in the construct. As previously discussed, there is some disagreement in the literature regarding whether ordinant or marginalized groups profess greater just world beliefs. Consistent with previous research demonstrating greater belief in a just world among white Americans (Hunt, 2004; Cokley et al., 2007), the current sample showed

significant correlations between race and BJW, with white students reporting greater average belief than their non-white peers.

Further examination of these group differences, with the inclusion of other status variables of gender, income, parental occupational prestige, parental education, and subjective social status, decreased the ability of race to account for variance in BJW. Regression analyses revealed subjective social status as the only variable able to account for variance in BJWS above and beyond any objective variables, including race. This pattern of results replicates previous research (Cokley et al., 2007) suggesting that subjective social status may be more meaningful in explaining worldviews such as BJWS than objective indicators such as race.

These results are preliminary and merit further examination, especially considering that race was operationalized as a bivariate construct (white/non-white) in order to obtain necessary statistical power. Thus, these results do not preclude the ability of ethnic identity, or even specific racial categories to explain variance in BJWS above and beyond subjective social status. For instance, some research has proposed group differences among ethnic minority samples on the basis of religion and sociopolitical histories, such that observant Catholic Latino/as tend to endorse greater system-justifying beliefs and trust in authority than African-American Protestantism, which is historically more challenging to the status quo and may provide a greater source of ethnic or collective identity (Hunt, 2000). Strength of ethnic identity, rather than a categorical variable such as race, has also been shown to account for variance in BJW (O'Brien & Major, 2005). This collection of results suggests that the relationship between beliefs

about the world is likely more complicated than is traditionally revealed through simplistic measurement of ethnicity.

Across the entire sample, results of structural equation modeling revealed that the hypothesized model, using subjective social status and BJW to explain variance in subjective well-being and long-term academic investment fit the data adequately and explained 17.3% of the variance in long-term academic investment and 44.2% of the variance in subjective well-being. In this model, only the paths representing main effects of BJWS were statistically significant. Overall, belief in a just world emerged as the single variable of interest that was able to account for significant variance in the identified outcomes. A similar pattern was observed in a comparison model using objective indicators of social status. Thus, for the current sample, regardless of covariates such as objective social status, subjective social status, race, or gender, BJW was uniformly adaptive, accounting for significant variance in both outcomes.

The hypothesized interaction of subjective social status and just world beliefs was not significant for either identified outcome, which may suggest that, as Lerner (1980) originally proposed, belief in a just world is both ubiquitous in American culture and is uniformly adaptive.

Subjective social status. Consistent with theory, subjective social status, as conceptualized by differential status identity, shared moderate correlations in the expected direction with socioeconomic indicators of parental education, parental occupational prestige, and household income while growing up, suggesting that students

with greater socioeconomic resources also reported a higher subjective sense of social status or worth. Moderate correlations were also found with self-selected descriptors of social class (e.g., “lower class,” “lower middle class”), and first-generation student status.

However, total scale scores for the DSIS were not correlated with gender or ethnicity. Further exploration of these relationships showed that only the prestige subscale of the DSI was significantly correlated with either, such that being male and of white race was associated with higher perceptions of being valued by society. The remaining three subscales of economic resources-needs, economic resources-amenities, and social power, were not significantly related to gender or ethnicity. It is likely that for the current, relatively privileged sample of university students, there is restricted range in economic resources or sense of social power.

Within the theoretical context of a multidimensional understanding of subjective social status, it would be expected that even among a privileged sample, members of marginalized groups, including women and ethnic minorities, would perceive that their social group is less valued by society, even as they report similar economic resources and social power (Rossides, 1997). This may explain why prestige is the only subscale that shows significant correlations with identified race. This pattern has also been observed using other measures of subjective social status, suggesting that traditional socioeconomic indicators of income, education, and occupational prestige may inadequately reflect the social status of members of other marginalized cultural groups, such as women and ethnic minorities (Ostrove et al., 2000).

In terms of relationships to outcomes, subjective social status was not significantly related to either measure of long-term academic investment. Regardless of subjective or objective social status, ethnicity, or gender, it seems that university students have equal levels of long-term investment in academic goals. This may be explained a number of ways. By nature of the sample, one would expect that by selection (or at least cognitive dissonance), those students who choose to pursue higher education should also report uniformly high expectations that their current efforts will produce desired outcomes. These relationships may also be explained within the greater context of American culture at large, supporting the contention that regardless of one's social background, the cultural values of the United States promote higher education as a tool for social mobility (Aronson, 2008; Fine & Burns, 2003).

Relationships between subjective social status and subjective well-being revealed a significant positive correlation, such that higher rated subjective social status was related to higher subjective well-being. In contrast, objective variables of parental education, parental occupational prestige, and household income in childhood and adolescence were all unrelated to subjective well-being. Previous research examining the mental health gradient in social class has found linear relationships between both objective and subjective social status and mental health outcomes of stress, coping styles, depression, anxiety, affect, and satisfaction with life, although the relationship between subjective status and mental health outcomes has been found to be significantly stronger (Adler et al., 2000; Goodman et al., 2001; Kraus et al., 2009; Lundberg and Kristenson, 2008; Ostrove et al., 2000).

Regression analyses in the current study produced similar outcomes, in which subjective social status accounted for significant variance in satisfaction with life and positive affect, even after controlling for race, sex, and objective social status. Furthermore, the hypothesized model, using subjective social status as an exogenous variable outperformed a comparable model using objective social status indicators. Comparison of path coefficients showed that between the two models, the only statistically significant relationship between social status and dependent variables was between subjective social status and subjective well-being. Thus, it would seem that for worldviews such as just world beliefs and outcomes of long-term academic investment and subjective well-being, subjective understanding of social status is more influential than any commonly utilized objective indicators (Malka & Miller, 2007).

Moderating Effects of Subjective Social Status

Contrary to prediction, across all models testing moderation, no significant interactions between social status and just world beliefs emerged. The lack of empirical support for this hypothesis is surprising, especially given previously demonstrated interactions between BJW and objective and subjective social status in explaining variance in academic investment in both university students in the U.S. and adult international samples (Laurin et al., 2011), as well as between BJW and racial identity in explaining variance in white and African-American samples (O'Brien & Major, 2005), and between related system-justifying beliefs and obesity status in accounting for variance in subjective well-being in American women (Quinn & Crocker, 1999).

The lack of significant results may be explained in a number of ways. First, social class may be low in salience as an identity variable. Just world and related beliefs are identified as central to American myths of meritocracy, both of which are antithetical to class-based social identities or class consciousness (APA, 2007; Aronson, 2008; Fine & Burns, 2003). In contrast, social groups based on race or gender may be more central to social identity than those related to social class (O'Brien & Major, 2005).

Furthermore, the construct of subjective social status used in the current study was developed using the multidimensional theory of differential status identity (Rossides, 1997). Within this conceptualization, the problem of intersecting identities is circumvented by measuring “the extent to which a person is (or is perceived as) being different in social status from others [which] affects psychological development and behavior” (Fouad & Brown, 2000). Within the context of higher education, especially in an access institution like the current sample, in which the goal of the university is primarily to educate a predominantly local student body, it may be that participants did not perceive significant differences between themselves and their peers in terms of social status. Previous comparisons of class consciousness and identity between access and prestige (i.e. Ivy League and Research I) institutions have revealed decreased class consciousness in the former, due to low salience and lack of perceived difference from the ordinal group at the university (Aries & Seider, 2005). Thus, replication of these results at a prestige institution may produce the hypothesized interaction due to increased salience or consciousness related to social status.

Further implication of the role of salience in meaningful identity variance includes results found in experimental studies relying on manipulation of the salience of status variables or explicit measurement the centrality of the demographic variable to the subjects' individual social identity (Major et al., 2007; O'Brien & Major, 2005) . For example, similar research focusing on ethnic identity in a student sample found a significant interaction for ethnicity and BJW on subjective well-being only among African-American and Latino students who reported high commitment to ethnic identity (O'Brien & Major, 2005). Thus, while individuals may identify as lower status or even label themselves as "lower class," this may or may not be salient to their identity, due to the relative invisibility of social class markers or the homogeneity of the campus. In theory, social status as operationalized by differential status identity should have similarly accounted for salience of status or group membership; however, assessment of the importance of these status differences to an individual's identity was indirect, and may have been incomplete.

Secondly, BJW may be a motivated cognition rather than a static trait (Lerner, 2003). Although the vast majority of literature examining the adaptive function of BJW has used survey techniques, more robust results may be found with experimental procedures designed to elicit emotion or social threat (Hafer & Begue, 2005). Research using experimental methodologies has found that, for members of lower status groups only (as defined by non-ordinant ethnic identity and gender), being primed with meritocratic ideologies predicted negative mental health outcomes (McCoy & Major, 2007). Thus, level endorsement of just world beliefs may be irrelevant for outcomes such

as subjective well-being and long-term planning until these beliefs are directly threatened.

Finally, the current sample of college students likely produced a restricted range of results for both BJW and differential status identity. As previously discussed, if just world beliefs are required for engagement in long-term goal pursuit, a sample of students in higher education would, by extension, be expected to report greater levels of belief, resulting in negatively skewed results. In addition, alternate models of social class identity, such as the social class worldview model, propose that group of attainment and group of aspiration are as influential in subjective understanding of social status as is group of origin (Liu et al., 2004). Applying this model to the current study, it would also be expected that regardless of status of origin, the current sample would share a similar attained status as defined by their social identity as college students, and may share similar status aspirations. Although the sample may show some demographic diversity, restriction in current and aspirational status may limit the range of measured subjective social status.

Strengths and Limitations

The current study improved upon existing literature by examining the effect of subjective social status on the relationship between just world beliefs and subjective well-being and long-term academic investment. Previous research has promoted just world beliefs as both widely held and uniformly adaptive (Lerner, 1980). Only recently have researchers begun to examine the function of BJW in diverse groups, revealing a pattern

in which members of marginalized groups experience negative mental health outcomes with increasing levels of just world beliefs; for individuals who belong to lower status social groups, greater belief that the world is just and people generally get what they deserve is related to increased psychological distress and decreased self-esteem (O'Brien & Major, 2005; Major et al., 2007). Before the current study, this pattern had not yet been tested within the context of subjective social status or social class, despite the identification of social class as an important and underutilized individual difference variable (APA, 2007; Mutaner et al., 2000). Although the hypothesized interactions were not observed, subjective social status was found to account for variance in BJW and SWB, above and beyond traditional variables of race, gender, and socioeconomic status.

Limitations include the correlational and cross-sectional nature of the data. The causal relationships in the current model can be assumed only by theory, and can neither definitely rule out that subjective well-being and long-term academic investment affect subjective understanding of social status or just world beliefs, nor the possibility that a third variable accounts for the observed relationships. In addition, assumptions about predicting behavior or outcomes over time would require longitudinal methods.

In addition, the selected sample is likely already different from the population at large in terms of the strength of just world beliefs and level of subjective social status by virtue of participation in higher education. Thus, the current sample is subject to additional effects of selection by virtue of convenience sampling—those who pursue extra credit may arguably espouse greater just world beliefs or long-term academic investment than those who do not. In addition, the current sample showed limited

diversity, with 83% identifying as white, 51% as middle class, and 60% as second-generation college students or greater. Given the objective demographic makeup of the current sample, one would also presuppose limited variability in subjective social status.

The salience of social status to participants was only assumed, and was not directly measured. Considering the nature of the current sample, generalizability of the current results may be limited and may not apply to samples of non-university students, or even to students at universities with different demographic makeup or educational missions (Aries & Seider, 2003). Finally, while the current model accounted for significant variance in each outcome, it still left a majority of the variance unexplained.

Implications for Future Research

Results of the current investigation have added to the emerging recognition of the role of status in just world beliefs, but could be improved in several ways. Explanations were previously provided to reconcile the current results with extant research, including restriction of range, use of a convenience sample, and lack of longitudinal or experimental design. Future research should examine these results within a community or pre-college sample, to both increase the heterogeneity of the measured variables, as well as the ability of the model to predict investment through behaviors such as college attendance. It is likely that college students, by virtue of their status as members of the community of higher education, already espouse greater BJW and perceive greater personal social status than non-college populations. Thus, it would be enlightening to test

this model in a sample of students prior to committing to higher education or among a sample of students at-risk for poor performance or attrition.

Furthermore, the self-serving attributional process of BJW is more likely to be aroused in high threat situations (Hafer & Begue, 2000; Lerner, 1980). Future research can improve on the existing body by using experimental methods to test the function of just world beliefs, such as the presentation of information that would threaten this belief, or manipulation of participants' experience of discrimination. Use of experimental methods may also improve the ability to apply results to clinical settings such as treatment for survivors of psychological trauma (Park, Mills, & Edmonson, 2012).

Relationships among the variables may also vary according to experience or awareness of personal injustice. While the current sample was generally healthy and young, results with an older sample, or with those identifying experience of personal injustice may be more likely to uphold the hypotheses. Older individuals may be more likely to have experienced injustice throughout their lives, increasing the salience of BJW, or may evidence greater developmental cognitive complexity and ability to challenge social mores.

Finally, the theory of differential status identity was utilized in order to account for status differences normally ignored by objective variables of gender, ethnicity, or socioeconomic status, and to reflect status in the context of intersecting identities. While the associated measure did improve upon the ability of objective status variables to explain variance in outcomes, the measure does not assess the centrality or importance of these identities to the subject. Future research could improve by including multiple

measures of social status (ethnicity, gender, social class, first generation college student), including those that quantify the centrality of measured social status to the identity of the individual.

Given each of these limitations, the current study cannot rule out the role of social status as a moderator between belief in a just world and subjective well-being and long-term academic investment. While as a general rule, greater BJW may predict more adaptive outcomes, individual differences may still vary upon the basis of the strength and salience of multiple social identities, including ethnicity, gender, and social status, as well as additional variables such as trauma history. The current study also shares a weakness of research using objective and self-report measures of attitudes. Rather than measuring previously constructed and enduring attitudes, emerging research suggests that responses to scale are constructed on the spot, and may not be related to behavior or to the assumed theoretical construct (Bohner & Dickel, 2011). Thus, it may be that participants' behavior and worldviews are not shaped by just world beliefs, but that the current results are an artificial product of the experimental context.

Implications for Practice

Subjective Social Status

The results of the current study underscore the importance of subjective social status and just world beliefs in relation to important outcomes of long-term academic investment and subjective well-being. Consistent with emerging understanding of ethnic

identity, subjective social status was found to be more important, as reflected by the ability of this subjective variable to account for variability in subjective well-being and long-term academic investment beyond that accounted for by objective variables. Further examination of these variables revealed that among diverse samples, perceived social prestige may be most salient variable to examine in a clinical setting. These results support recent calls to increase attention to social class and subjective social status in clinical settings (APA, 2007; Liu et al., 2004).

Although subjective social status was found to vary as predicted with objective variables of race, household income, parental education, parental occupational prestige, and first generation college student status, these relationships were relatively weak and sometimes inconsistent. Given the ability of subjective social status to explain variance in SWB and long term academic achievement above and beyond objective variables most often addressed in multicultural approaches to therapy, the current results reaffirm the importance of examining the clients' understanding of how valued by society they perceive themselves and their salient social group memberships to be. While the current research established the relative importance of subjective social status in explaining important outcomes, previous research has suggested that the salience of multiple intersecting identities may be more meaningful. This suggests that practitioners should explore both clients' understanding of their status in society, the role of identity variables in constructing this, as well as the salience of these identities, in order to more fully understand the complexity of their worldview and sense of self.

Theoretical models such as the social class worldview model, provide a foundation from which to explore and understand these in clinical settings (Liu, 2001). This theory proposes that it is an individuals' perception of their social status, rather than objective standing that defines their social class identity and shapes their goals and behaviors. Some of the central interventions for treatment within this model are the identification of the clients' subjective understanding of "economic culture" and associated social beliefs (such as BJW and implications for their identified status). Treatment could also focus on identification of "adaptive, realistic, and healthy expectations about him- or herself" (Liu & Ali, 2008, p. 169).

This ability to identify and reframe the social self within a cultural narrative in a manner that promotes adaptive coping is consistent with cognitive approaches to survivors of trauma, in which processes of both assimilation (changing newly presented information to fit existing schemas) and over-accommodation (extreme and generalized changes to cognitive schemas) have been shown to interfere with recovery through increasing inappropriate self-blame or severely impeding an internalized locus of control (Sobel, Resick, & Rabalais, 2009). Thus, identification of adaptive schemas, or strength of belief in a just world may be a highly individualistic process, resulting in neither full acceptance nor rejection of BJW. The current results, taken in context of extant research support the adaptive function of BJW; however, the previously identified limitations of the current study cannot rule out status as a potential mediator between BJW and SWB.

Belief in a Just World

Furthermore, research examining group processes has shown that, for members of marginalized groups, high BJW may be adaptive for the individual, but inhibit behaviors intended to challenge the status quo (Hafer & Olson, 1993). Again, consistent with cognitive processing theory and research, clients may benefit most from examination of systemic influences on social and personally-experienced inequality (Diemer & Blustein, 2006; Laurin et al., 2011) in order to achieve accommodation of personal experiences within powerful social narratives such as BJW. Thus, within the context of cognitive processing theory, it would be expected that those who are able to accommodate both cultural beliefs and personally discrepant experiences would also be able to maintain their well-being *and* long-term goal orientation.

Within the current sample, however, BJW has emerged as a potential coping mechanism, regardless of the objective or subjective/perceived status of the holder. If considered an individual difference variable, this is inconsistent with related research. Nevertheless, within the context of motivated cognition, relationships may be more complicated than assessed by the current study. Overall, for a relatively privileged sample such as the current participants, just world beliefs may be generally adaptive. As Lerner (1980) reflected in his seminal publication, “for people like us, it really is a just world” (p. 26). Thus, for the current sample, BJW may be more akin to an accurate reflection of life experiences rather than a more “fundamental delusion.”

However, for those students who have experienced injustice on the basis of their cultural group, it may still be likely that interventions designed to raise critical

consciousness may offset the possible negative effects of either maintenance or rejection of just world beliefs. Developing critical consciousness has been proposed as a tool to circumvent oppression by preventing internalization of negative stereotypes or experience of microaggressions and has been found to promote vocational identity development, commitment to future careers, and increased vocational aspiration among urban and lower SES high school students (Diemer & Blustein, 2005; Watts, Griffith, & Abdul-Adil, 1999).

Subjective Well-Being and Long Term Academic Investment

An additional and unhypothesized, although predictable finding in the current results is the significant correlation between subjective wellbeing and both measures of long-term academic investment. Deiner's (1984) model of SWB has been conceptualized as a hedonic reflection of psychological health, focused on pleasure or happiness. A contrasting model of well-being is that of a eudiamonic conceptualization, with a broader focus on psychological health, including values and behavior (Lent, 2004). Within the latter conceptualization, investment in goals, such as that reflected by high university investment, would be a facet of psychological health; for college students especially, this could be interpreted as high alignment between values and behavior. Within the context of psychological practice in a university counseling setting, this may suggest that investment in long-term academic goals may be as important as affect and satisfaction in thinking about psychological health of university students.

Summary and Conclusions

Overall, the current research highlighted the importance of both social status and just world beliefs in understanding the mental health, achievement, and long-term academic investment among diverse samples of undergraduate students. Consistent with theory regarding subjective social status, this variable was able to account for greater variance in both outcomes relative to traditional status variables, reaffirming emerging conceptualizations of both social class and ethnicity as complex psychological variables worthy of examination within the context of individual identity in both clinical and research contexts (Liu et al., 2004; Liu & Ali, 2008). Furthermore, the robust main effects found for BJW suggests that this may serve an adaptive function for college students' individual well-being and long term academic investment, regardless of social status. Thus, the current results do not directly support the notion of BJW as a “double-edged sword” for those reporting lower subjective social status. Within the current sample, just world beliefs accounted for significant variance in both SWB and long term academic investment, suggesting that this cognitive schema may improve mental health, while simultaneously providing a basis for the “personal contract” with society, in which hard work pays off in the long-term through predictable and socially sanctioned means, such as a college degree.

Thus, it may be that within specific social contexts, such as the relatively homogenous and privileged world of higher education, BJW is uniformly adaptive. However, caution should be taken in overgeneralizing the current results, given the negative influence of BJW on mental health outcomes in marginalized groups with more

clearly defined social identities (Foster et al., 2006; McCoy & Major, 2007; Quinn & Crocker, 1999). The current results do not disconfirm that increased examination of the adaptive function of these beliefs, or the development of critical consciousness, would be damaging to either well-being or motivation to pursue long-term goals.

Given this collection of results, practitioners are advised to develop an understanding of clients' social status and worldview from a subjective perspective, and to help those with decreased or low BJW develop a schema that is both adaptive and consistent with their experiences by promoting accommodation. Future research should also continue to include both objective and subjective social status measures when examining the effects of social identity in psychological phenomena, as both have been shown to outperform demographic variables of race and gender in accounting for variance in important outcomes. Finally, future research should continue to investigate social class or subjective social status as a potential moderator of BJW, whether through closer examination of the salience of this construct as an identity variable, or within lower-status groups.

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APPENDICES

APPENDIX A

INFORMED CONSENT

University of Akron Institutional Review Board

Informed Consent

Title of the Study:
Well-being and long-term achievement orientation

Introduction:
You are being invited to participate in a research project conducted by Haley M. Downing, M.S., a doctoral student in the Department of Counseling at the University of Akron in conjunction with Dr. John Queener, faculty in the Department of Counseling.

Purpose of the Study:
To examine factors associated with students' well being and academic achievement. Approximately 250 students will be participating in this study.

Procedures:
You have been recruited through an undergraduate course at the University of Akron and should receive extra credit in that course for completion of this online survey. This is a one-session study that will take less than 45 minutes to complete. We will ask you to answer questions about yourself, including your thoughts about higher education and your social status, as well as your emotions. After completion of the survey, you will be directed to another website which will ask for information necessary to receive credit for your participation.

Exclusion:
Please do not complete these questionnaires unless you are a student at the University of Akron and are at least 18 years of age.

Risks and Discomforts:
a) When filling out this questionnaires, it is possible (but unlikely) that you might find an item unpleasant, upsetting, or otherwise objectionable. However, you are free to skip any items and/or discontinue your participation at any time.
b) You will be asked to provide information about yourself, but your responses will be collected independently from identifying information, making it impossible to trace responses to any particular participant. Results will be reported based on the entire group of participants.

Benefits:
a) You will earn extra course credit.
b) As you complete the questionnaires, you may reflect on your well being and academic functioning and learn more about yourself.

Right to Refuse or Withdraw:
If you decide now or at any point to withdraw this consent or stop participating, you are free to do so at no penalty. You are free to skip specific questions. However, our study depends on participants' complete answers, so please make a good faith effort to complete the survey in its entirety unless the experience is causing you distress.

Anonymous and Confidential Data Collection:
Data collection will be anonymous; your registration for the study will be kept separate from your data and nobody will be able to link your responses to you. Please complete the survey at a time you have privacy and adequate time to complete the survey. After you have completed the survey, you will be directed to another webpage where you will be asked to enter identifying information so that you will receive course credit. Researchers will not be able to link this to any particular set of survey responses so that data collection will remain completely anonymous. Only aggregate data will be used for research purposes.

Confidentiality of Records:
All data will be kept in a secure location. Any identifying information will be collected and stored separate from your responses. Therefore, it will not be possible for anyone to know which questionnaire responses were yours. Finally, we are not interested in any individual's responses; we are studying the responses of groups of people only. Data will be stored and destroyed in accordance with federal regulations and the standards established by the American Psychological Association. All data will be stored on a password-protected computer.

Who to Contact with Questions:

APPROVED
IRB
Date 3/5/14
The University of Akron

If you have any questions about this study, you may contact Haley Downing at hmd12@zips.uakron.edu or John Queener, PhD at (330)972-6149. This project has been reviewed and approved by the University of Akron Institutional Review Board. If you have any questions about your rights as a research participant, you may call the IRB at (330)972-7666.

Acceptance: I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. Selecting "I agree" from the response options below will serve as my consent. I may print a copy of this consent statement for future reference.

APPROVED
IRB
Date 3/14/13
The University of Akron

APPENDIX B

IRB APPROVAL



NOTICE OF APPROVAL

March 14, 2012

Haley Downing
5718 Penrose Avenue, Apt. C
Dallas, Texas 75206

From: Sharon McWhorter, IRB Administrator 

Re: IRB Number 20120318 "Well-Being and Long-Term Achievement Orientation"

Thank you for submitting your Exemption Request for the referenced study. Your request was approved on March 14, 2012. The protocol represents minimal risk to subjects and matches the following federal category for exemption:

- ☐ **Exemption 1** – Research conducted in established or commonly accepted educational settings, involving normal educational practices.
- ☒ **Exemption 2** – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.
- ☐ **Exemption 3** – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior not exempt under category 2, but subjects are elected or appointed public officials or candidates for public office.
- ☐ **Exemption 4** – Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.
- ☐ **Exemption 5** – Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.
- ☐ **Exemption 6** – Taste and food quality evaluation and consumer acceptance studies.

Annual continuation applications are not required for exempt projects. If you make changes to the study's design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact me to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. This office will hold your exemption application for a period of three years from the approval date. If you wish to continue this protocol beyond this period, you will need to submit another Exemption Request. If the research is being conducted for a master's thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

☒ Approved consent form/s enclosed

Cc: John Queener - Advisor
Cc: Stephanie Woods - IRB Chair

Office of Research Services and Sponsored Programs
Akron, OH 44325-2102
330-972-7666 • 330-972-6281 Fax

The University of Akron is an Equal Education and Employment Institution

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

1. Age _____
2. Gender (circle one) Male Female Transgender
3. Race/ethnicity (circle all that apply)
Black/African American Native/First American Hispanic American
Asian American White/Caucasian/European American
International Student Other (Please Specify): _____
4. Student Standing (circle one)

First Year Fourth Year
Second Year Fifth Year
Third Year Sixth Year & Beyond
5. Cumulative GPA: _____
6. Relationship Status (circle one)
Single Widowed
Married Partnered
Divorced
7. Highest Education received by persons who raised you (circle one)

Mother/person #1

No high school education Associates Degree
Some high school Bachelor's degree
GED Masters Degree
High School Diploma JD/MD/PhD or other advanced degree
Technical Certificate

Father/person #2

No high school education	Associates Degree
Some high school	Bachelor's degree
GED	Masters Degree
High School Diploma	JD/MD/PhD or other advanced degree
Technical Certificate	

Other/Person # 3

No high school education	Associates Degree
Some high school	Bachelor's degree
GED	Masters Degree
High School Diploma	JD/MD/PhD or other advanced degree
Technical Certificate	

8. Longest-held occupation of persons who raised you

Mother/Person 1: _____

Father/Person 2: _____

Other/Person 3: _____

11. What is the combined annual income of the persons who raised you in your home
(circle one)

Less than \$10,000	\$50,000-59,999
\$10,000- 19,999	\$60,000-69,999
\$20,000-\$29,999	\$70,000-79,999
\$30,000-\$39,999	\$80,000-89,999
\$40,000-\$49,999	\$90,000 and above

12. In thinking about your past and present experiences, which label best describes
your perceived social class (circle one)

Lower Class	Upper Middle Class
Lower Middle Class	Upper Class
Middle Class	

13. How do you pay for your college education? (please circle the MAIN source of money used to pay for college)

My parents pay for it

Another family member pays for it

A friend pays for it

My partner and I pay for it

I have scholarships

I pay for it

I am taking out loans to pay for it

Other (please describe): _____

14. Are you a first generation college student (have parents who did not attend college)?

Yes

No

APPENDIX D

DIFFERENTIAL STATUS IDENTITY SCALE

Compare yourself to what you think the average citizen of the United States is like. Please indicate how you compare to the average citizen in terms of the items below using the following scale:

Very Much Below Average Average	Below Average	Equal	Above Average	Very Much Above
-2	-1	0	+1	+2

For example, if you believe you are equal to the average U.S. citizen in terms of the financial resources needed to pursue a high-quality university education, you would mark “0” to item 1 below.

1. Ability to give your children (now or in the future) additional educational experiences like ballet, tap, art/music classes, science camp, etc.

-2	-1	0	+1	+2
----	----	---	----	----
2. Ability to afford to go to the movies, restaurants, and/or the theater on a regular basis

-2	-1	0	+1	+2
----	----	---	----	----
3. Ability to join a health club/fitness center

-2	-1	0	+1	+2
----	----	---	----	----
4. Ability to afford regular dental visits

-2	-1	0	+1	+2
----	----	---	----	----
5. Ability to afford dry cleaning services on a regular basis

-2	-1	0	+1	+2
----	----	---	----	----
6. Ability to travel recreationally

-2	-1	0	+1	+2
----	----	---	----	----
7. Ability to travel overseas for business and/or pleasure

-2	-1	0	+1	+2
----	----	---	----	----
8. Ability to shop comfortably in upscale department stores, such as Saks Fifth Avenue

-2	-1	0	+1	+2
----	----	---	----	----

9. Potential for receiving a large inheritance
-2 -1 0 +1 +2
10. Ability to secure loans with low interest rates
-2 -1 0 +1 +2
11. Ability to hire professional money managers
-2 -1 0 +1 +2
12. Ability to go to a doctor or hospital of your own choosing
-2 -1 0 +1 +2
13. Ability to hire others for domestic chores (e.g. cleaning, gardening, child care, etc.)
-2 -1 0 +1 +2
14. Ability to afford prescription medicine
-2 -1 0 +1 +2
15. Ability to afford elective surgeries and/or high-cost medical examinations,
such as MRIs or CAT scans
-2 -1 0 +1 +2

Compare what is available to you in terms of type and/or amount of resources to what you believe is available to the average citizen of the United States. Please indicate how you compare to the average citizen in terms of the type and amount of resources listed below using the following scale:

Very Much Below Average	Below Average	Equal	Above Average	Very Much Above Average
-2	-1	0	+1	+2

For example, if you believe you are equal to the average U.S. citizen in home(s), you would mark "0" for item 1 below.

- | | | | | | | |
|----|------------------|----|----|---|----|----|
| 1. | Home(s) | -2 | -1 | 0 | +1 | +2 |
| 2. | Land | -2 | -1 | 0 | +1 | +2 |
| 3. | Stocks and Bonds | -2 | -1 | 0 | +1 | +2 |
| 4. | Money | -2 | -1 | 0 | +1 | +2 |
| 5. | Cars | -2 | -1 | 0 | +1 | +2 |
| 6. | Computers | -2 | -1 | 0 | +1 | +2 |

7.	New Appliances (Washers, Dryers, Refrigerators, etc.)	-2	-1	0	+1	+2
8.	Amount of Education	-2	-1	0	+1	+2
9.	Quality of High School(s) Attended	-2	-1	0	+1	+2
10.	Life Insurance	-2	-1	0	+1	+2
11.	Quality of Health Insurance	-2	-1	0	+1	+2
12.	Savings	-2	-1	0	+1	+2
13.	Maids or Cooks	-2	-1	0	+1	+2
14.	Close Connections to the Rich and Powerful	-2	-1	0	+1	+2
15.	Quality of Health Care	-2	-1	0	+1	+2

Compare yourself to what you think the average citizen of the United States is like. Please indicate how you compare to the average citizen in your ability to do the things below using the following scale:

Very Much Below Average	Below Average	Equal	Above Average	Very Much Above
-2	-1	0	+1	+2

For example, if you believe you are equal to the average U.S. citizen in your ability to be respected and heard by others in your community, you would mark “0” to item 1.

- | | | | | | | |
|----|--|----|----|---|----|----|
| 1. | Contact people in high places for a job or position. | -2 | -1 | 0 | +1 | +2 |
| 2. | Contact people who can help you get out of legal problems. | -2 | -1 | 0 | +1 | +2 |
| 3. | Start in a high-profile position of responsibility. | -2 | -1 | 0 | +1 | +2 |

4. Get information and services not available to the general public.
-2 -1 0 +1 +2
5. Control how your group is represented in history, media, and the public.
-2 -1 0 +1 +2
6. Receive a fair trial.
-2 -1 0 +1 +2
7. Become a millionaire by legal means.
-2 -1 0 +1 +2
8. Control the type and amount of work of others.
-2 -1 0 +1 +2
9. Control the salary and compensation of others.
-2 -1 0 +1 +2
10. Influence the laws and regulations of the your state or city/town.
-2 -1 0 +1 +2
11. Influence state or federal educational policies.
-2 -1 0 +1 +2
12. Influence the policies of a corporation.
-2 -1 0 +1 +2
13. Influence where and when stores are built and operated.
-2 -1 0 +1 +2
14. Influence where and when waste treatment facilities are built and operated.
-2 -1 0 +1 +2
15. Influence the decision-making of foundations, charities, hospitals, museums, etc.
-2 -1 0 +1 +2

Compared to how society values or appreciates the average U.S. citizen, how does society value or appreciate your . . . ?

	Much Less	Less	Equal	More	Much More		
	-2	-1	0	+1	+2		
1.	Ethnic/racial group		-2	-1	0	+1	+2
2.	Socioeconomic group		-2	-1	0	+1	+2
3.	Nationality		-2	-1	0	+1	+2

Compared to how society values or appreciates the average U.S. citizen, how does society value or appreciate the . . . ?

	Much Less -2	Less -1	Equal 0	More +1	Much More +2
1. Neighborhood in which you live			-2	-1	0 +1 +2
2. Type of home you live in			-2	-1	0 +1 +2
3. Places where you shop			-2	-1	0 +1 +2
4. Places where you relax and have fun			-2	-1	0 +1 +2
5. Type and amount of education you have			-2	-1	0 +1 +2
6. Type of car you drive			-2	-1	0 +1 +2
7. Position you hold in society			-2	-1	0 +1 +2

Compared to how society values or appreciates the average U.S. citizen, how does society value or appreciate your . . . ?

	Much Less -2	Less -1	Equal 0	More +1	Much More +2
1. Physical appearance			-2	-1	0 +1 +2
2. Occupational success			-2	-1	0 +1 +2
3. Financial success			-2	-1	0 +1 +2
4. Physical abilities			-2	-1	0 +1 +2
5. Economic background			-2	-1	0 +1 +2

APPENDIX E

BELIEF IN A JUST WORLD

Read each item and indicate to what degree it reflects you own thoughts and feelings. Indicate your answer by choosing one of the following responses:

Strongly disagree	Moderately disagree	Disagree	Agree	Moderately agree	Strongly agree
1	2	3	4	5	6

1. I feel that the world treats me fairly.
2. I feel that I get what I deserve.
3. I feel that people treat me fairly in life.
4. I feel that I earn the rewards and punishments I get.
5. I feel that people treat me with the respect I deserve.
6. I feel that I get what I am entitled to have.
7. I feel that my efforts are noticed and rewarded.
8. I feel that when I meet with misfortune, I have brought it upon myself.
9. I feel that the world treats people fairly
10. I feel that people get what they deserve
11. I feel that people treat each other fairly in life
12. I feel that people earn the rewards and punishments they get
13. I feel that people treat each other with the respect they deserve
14. I feel that people get what they are entitled to have
15. I feel that a person's efforts are noticed and rewarded
16. I feel that when people meet with misfortune, they have brought it on themselves

APPENDIX F

SATISFACTION WITH LIFE SCALE

Below are statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. People be open in your responding.

Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. In most ways my life is close to ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

APPENDIX G

POSITIVE AND NEGATIVE AFFECT SCHEDULE

This scale consists of a number of words and phrases that describe feelings and emotions. Read each item and then mark the appropriate answer. Indicate *to what extent you generally feel this way*.

Use the following scale to record your answers:

Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
1	2	3	4	5
1. interested				
2. distressed				
3. excited				
4. upset				
5. strong				
6. guilty				
7. scared				
8. hostile				
9. enthusiastic				
10. proud				
11. irritable				
12. alert				
13. ashamed				
14. inspired				
15. nervous				
16. determined				
17. attentive				
18. jittery				
19. active				
20. afraid				

APPENDIX H

TIME PERSPECTIVE QUESTIONNAIRE

Please indicate the extent to which you agree or disagree with each statement by selecting the appropriate number on the corresponding scale.

Not at all Agree				Completely Agree
1	2	3	4	5

1. I like thinking about going to college or what job I might have when I leave school.
2. I expect some of my school subjects will help me a lot when I get a job.
3. I have a good chance of going to college or university or getting a good job when I leave school.
4. I love dreaming about going to college or university or getting a good job when I leave school.
5. I don't have much chance of getting a job when I leave school.
6. I'm not bothered about going to college or what job I can do when I leave school
7. The subjects I am learning at school won't be much use to me when I get a job.
8. I want to get on well with other people when I leave school.
9. I hope to spend a lot of time with my friends when I leave school.
10. I hope I'll get on well with my family when I'm older.
11. I expect to stay good friends with my school friends when we leave school.
12. I don't expect to spend a lot of time socializing with other people when I'm older.
13. When I think about after I leave school, I'm not really bothered by how I'll get on with my family.
14. My free time will be a very important part of my life when I'm older
15. Free time will be very important to me when I leave school
16. I love dreaming about what I'll be able to do in my free time when I'm older.
17. When I think about when I leave school, free time won't play a very important part in my life.
18. I don't think free time and holidays are very important when you're older.
19. I don't expect free time to be very important when I leave school
20. I can find plenty of things to do in my free time at the moment
21. I don't do much in my free time
22. I often don't really know what to do in my free time
23. I've been quite bored in the holidays and in my free time this year.
24. I have plenty of things to do in my free time at the moment
25. I'm really enjoying my holidays and free time this year.

APPENDIX I

UNIVERSITY INVESTMENT ORIENTATION SCALE

Please indicate the extent to which you agree or disagree with each statement by selecting the appropriate number on the corresponding scale.

Strongly Disagree					Strongly Agree
1	2	3	4		5

1. I have a pretty clear idea of how my university education will help me reach my goals
2. One of my primary motivations for being in university is that getting a university degree will hopefully pay off for me later.
3. I try to choose my courses and other university activities according to how useful the experience will be for my future.
4. What I am doing now in university will be rewarded in the future.
5. I am pretty confident that my current efforts and activities at university will pay off for me in the future.
6. My university experience is a means to fulfilling my goals for the future.
7. I would rather take courses because I enjoy them now than take courses because they will help me obtain some future goal.
8. One of my primary reasons for being in university is that the career I have chosen for myself requires a university education
9. Whether my university experience benefits me in the future is not that important to me.
10. I rarely think about my university life as a means to some future goal.
11. I am willing to put up with university courses or activities I don't really enjoy now because they will help me fulfill more long-term goals.
12. I spend a great deal of time thinking about how my university education will get me what I want in the future.
13. I believe that I will benefit in the long run from having a university education.
14. I am not very concerned about what I will do with my degree once I have finished my university education.
15. When thinking about my university life, I tend to focus on the present rather than on what my education means for my future.
16. I don't really have plans for what I will do with my university degree.