TOWARD A CULTURAL PSYCHOLOGICAL PERSPECTIVE ON SOCIAL CLASS IN THE UNITED STATES

by

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Table of Contents

List of Tables

List of Figures

Abstract

Recent research has illustrated how culture can profoundly shape psychological processes and social interactions. However, relatively little is known about how these processes vary across social class groups in the United States. These dynamics are particularly important for colleges and universities, which both serve as the gateway to middle-class life and foster certain norms and values among their students.

In Chapter 2, I propose that middle-class American (MC) contexts emphasize personal control and choice, whereas working-class American (WC) contexts emphasize self-reliance and hard work. Moreover, MC social networks, which are large and mostly voluntary, require a relatively greater attention to social others than do small, mostly involuntary WC networks. In two samples, MC were more likely than WC to attend to situational factors in drawing causal attributions, even when controlling for cognitive ability. Moreover, MC performed better than WC on a task requiring broad visual attention, whereas no social class difference occurred on a focused attention task.

In Chapter 3, I argue that WC display well-being primarily through physical health, whereas MC display well-being primarily psychologically. First, these forms of well-being are most coherent in their respective socio-cultural contexts: Correlations among various physical health measures were higher for WC than MC, whereas the reverse was true for psychological well-being measures. Second, correlations between health measures and psychological measures were higher for WC than MC, suggesting that WC are more likely to use their physical health to inform their perceptions of

psychological well-being. Third, psychosocial factors were better predictors of physical health for WC than MC, whereas the reverse was true for predicting psychological well-being.

Chapter 4 explores the development of psychological well-being (PWB; Ryff, 1989) among first-generation and non-first-generation college freshmen. At the beginning of college, social class differences occurred for only two of the six PWB dimensions, whereas first-generation students scored lower on all dimensions at the end of the first year. The most consistent predictors of change in PWB were forming quality relationships with other students, being challenged in classroom settings, and having hostile interactions with diverse peers. The effects of some college experiences varied across social class.

Chapter 1:

Introduction

In the past 15-20 years, a large body of research has examined cultural differences in psychological states and processes that were once thought to be universal (for reviews, see Fiske, Kitayama, Markus, & Nisbett, 1998; Kitayama & Cohen, 2007; Nisbett, 2003). In general, it seems that Americans are much more independent than people in other countries (e.g., Kitayama, Park, Sevincer, Karasawa, & Uskul, 2008). According to the seminal work of Markus & Kitayama (1991), independence refers to "a faith in the inherent separateness of distinct persons. The normative imperative of this culture is to become independent from others and to discover and express one's unique attributes" (p. 226). However, even early in the study of cultural psychology, it was clear that this definition of independence may not be universal: "The prototypical American view of the self, for example, may prove to be most characteristic of White, middle-class men with a Western European ethnic background" (Markus & Kitayama, 1991, p. 225).

As I will argue, middle-class American independence is somewhat specific to middle-class contexts. In other words, both working-class and middle-class Americans are quite "independent," but they are independent in different ways. Based on intensive ethnographic research, Kusserow (1999, 2004) shows that working-class Americans display a form of independence that emphasizes self-reliance, hard work, and resisting

influence, whereas middle-class independence is characterized by a sense of uniqueness, self-actualization, and personal choice. This analysis and others (Lamont, 2000; Snibbe & Markus, 2005) suggest that the types of American independence that are most prevalent may vary across social class backgrounds, and an attempt to understand relevant psychological processes must distinguish among these various forms of independence and social relationships. However, very little work has been done analyzing social class from a cultural psychological perspective. Therefore, my dissertation, which utilizes the three-article format, is designed to explore psychological aspects of independence, attention, and well-being across social class groups in the United States.

This research has significant implications not only for the generalizability of cross-cultural evidence, but also for a broader understanding of human behavior as socio-culturally afforded and constrained. Social class has a powerful and pervasive impact on physical health, well-being, and life opportunities (e.g., Beeghley, 2004; Kerbo, 2005; Markus, Ryff, Curhan, & Palmersheim, 2004). Class differences are evident in a multitude of meanings and behaviors, ranging from people's day-to-day activities and interactions (Rubin, 1992) to their responses to natural disasters (Hamedani, Stephens, Bergsieker, & Markus, 2007). Thus, social class constitutes a crucial dimension of diversity and culture in American society that is often ignored in psychological research (Lott, 2002).

Furthermore, issues of social class are quite important within American higher education, especially given the key role of college in facilitating social mobility. Up through the beginning of the 20th century, college was reserved primarily for the upper

classes (Rudolph, 1962/1990), but by the end of the 20th century, 75% of high school graduates attended some form of postsecondary education within two years of graduation (The Education Trust, 2002, as cited in Association of American Colleges and Universities, 2002). However, there are myriad cultural issues that can adversely affect the well-being and success of college students from working-class backgrounds (Zwerling & London, 1992). While these experiences are compellingly documented in autobiographical accounts (Lara, 1992; Oldfield, 2007; Rendon, 1992; Rodriguez, 1982), there has been little attempt to document these experiences systematically (Pike & Kuh, 2005). As such, an understanding of the cultural and psychological differences across social class groups would help college administrators foster the academic success and retention of working-class students, which in turn would facilitate the social mobility of these students and their families.

In the remainder of this chapter, I will attempt to provide an overview of the current literature that pertains to the psychology of working-class and middle-class Americans. By necessity, this review will draw upon literature from various disciplines (particularly psychology, sociology and anthropology) and from the United States and other countries (particularly Great Britain). First, I will discuss some general environmental differences across social class, including workplace and living conditions. Then, I will explore some behavioral patterns that shape and/or reflect psychological tendencies, including social relationships and child-rearing practices. Next, I will discuss some purported psychological consequences of these environmental and social phenomena, with a focus on the commonalities among these concepts. In addition, I will provide a conceptual framework of these processes. Finally, I will outline the articles that

will appear in the subsequent three chapters (for a brief overview of these studies, see Table 1.1).

Work and Living Conditions

Many of the findings for work are consistent with lay conceptions of working-class and middle-class occupations. Relative to middle-class employees, working-class employees have less decision-making ability, receive closer supervision, and have less freedom to choose which tasks they will perform and when (Earle & Heymann, 2004; Kohn & Schooler, 1983). In general, within their respective jobs, working-class employees tend to work more with "things" (e.g., tools and equipment), whereas middle-class employees tend to work with data (Kohn, 1969). Moreover, working-class individuals (particularly men) report feeling quite tired after work, often as a result of the boring or monotonous nature of their job (Rubin, 1992). In contrast, middle-class employees have greater affiliative satisfaction at work than do manual laborers (Veroff, Douvan, & Kulka, 1981) and are more likely to spend time with co-workers outside of work (Goldthorpe, 1987) than are working-class employees.

Not surprisingly, higher levels of educational attainment are associated with greater income (e.g., Markus, Curhan, & Ryff, 2007). However, if one wants to gauge financial or economic status, simply examining annual income can be misleading. Instead, a better measure of financial status is wealth, which is transmitted from generation to generation (Darity & Nicholson, 2005; Spilerman, 2000). As such, social class differences may be larger than they might otherwise appear, since middle-class families are able to (and actually do) pass on this wealth by helping their children buy houses, providing loans, and assisting with expenses (e.g., school tuition) for their

grandchildren (Firth, Hubert, & Forge, 1969). Since financial and work-related problems constitute two major causes of divorce (Berscheid & Reis, 1998), these patterns likely account for higher rates of divorce among working-class couples (U.S. Census, 2000; Williams & Collins, 1995).

Finally, relative to their middle-class counterparts, working-class people have worse physical health (whether using subjective or objective measures), shorter life expectancies, greater perceived constraint and powerlessness, and greater levels of stress (Adler, Boyce, Chesney, Cohen, Folkman, Kahn, et al., 1994; Evans, 1988; Lachman & Weaver, 1998; Markus et al., 2004). In addition, working-class individuals tend to experience more familial violence (Emery & Laumann-Billings, 1998); more neighborhood crime (Hsieh & Pugh, 1993; Sampson, Raudenbush, & Earls, 1997); poorer quality schools (Ingersoll, 1999; Kozol, 1991); and a variety of environmental hazards, including more air pollution, lead exposure, noise pollution, and substandard housing conditions (for a review, see Evans, 2004). In sum, it seems clear that working-class Americans, on average, face more challenges and potential stressors in their everyday lives.

Interpersonal Relationships

There is a great deal of research on interpersonal relationships among the working class and middle class. However, much of this literature is fairly old and/or is taken from British samples, so the generalizations in this section should be treated with some degree of caution. Fortunately, findings from British and American surveys on social relationships tend to converge (Argyle, 1994), so the research from Britain (i.e., Goldthorpe, 1987; Market Opinion and Research International [MORI], 1982; Oakley &

Rajan, 1991; Stacey, 1960; Willmott, 1987; Willmott & Young, 1960) may be useful in understanding American social class differences and similarities. Below, a multitude of disparate findings are organized into several conclusions that can be drawn from the data.

First, working-class individuals have more interrelated friendship groups, whereas middle-class individuals are more selective about their friends. Specifically, friends within working-class social networks were more likely to know one another than were friends from middle-class social networks (Fischer, 1977; Goldthorpe, 1987; Willmott, 1987). Furthermore, there is greater overlap for working-class individuals between "friends," "neighbors," and "family," since their friends are often also their neighbors (Willmott, 1987), their family members live close by (Willmott & Young, 1960), and they are likely to socialize with their family (Komarovsky, 1964; Lareau, 2003; Rubin, 1992). On the other hand, middle-class people define neighbors over a broader geographic area and tend to define their neighbors as those people within the area whom they like (Stacey, 1960; Willmott, 1987). Middle-class friends tend to live further away and were more similar in attitudes and interests than working-class friends (Argyle, 1994). Middle-class people are more likely than working-class people to join voluntary clubs and organizations and to make friends with people through these groups (MORI, 1982; Putnam, 2000). Middle-class people also tend to have more total friends than do working-class people, but the frequency of seeing friends does not vary (Willmott, 1987).

Second, the middle class tends to have closer emotional ties to various social others (particularly friends) than does the working class. Middle-class people are more likely than working-class people to seek friends' emotional support when they are worried (Veroff et al., 1981). More pointedly, Turner (1981) argues that social support is

an ongoing part of middle-class friendships, but it is only present among working-class friendships during times of stress. In addition, compared with working-class married couples, middle-class couples tend to talk to each other more (Argyle, 1994), and husbands tend to have greater understanding and empathy for their wives (Komarovsky, 1964). In a study of pregnant women in England, Oakley and Rajan (1991) found that middle-class women had greater contact than did working-class women with their mothers, fathers, and close friends (but not their sisters), and middle-class women received considerably more help overall than did working-class women. Furthermore, some studies suggest that familial social support is lower among working-class than middle-class families (Conger & Elder, 1994; Wright, Treiber, Davis, Bunch, & Strong, 1998). Finally, likely as a result of this lack of emotional connection, working-class people are much more likely to feel lonely often than are middle-class people (MORI, 1982).

Third, compared with the middle class, working-class Americans are relatively closer with their family than their friends. As noted above, compared with middle-class individuals, working-class individuals tend to socialize and interact more with family (Goldthorpe, 1987; Komarovsky, 1964; Lareau, 2003; Rubin, 1992). Furthermore, working-class people are more likely to rely on family (versus friends) for advice on personal matters, for providing a financial loan, and for helping with a child's illness (Willmott, 1987). They are also more likely than the middle class to seek out their family members when they are worried (Veroff et al., 1981).

Fourth, the evidence for self-reliance across social class groups is somewhat mixed. A traditional view would suggest that working-class people need more help

(broadly defined) than do middle-class people (Argyle, 1994), and there is some evidence to support this view. Working-class British are more likely than their middle-class counterparts to define a friend as "someone you can always turn to for help" (Willmott, 1987), implying that this is a highly necessary function within their lives. In addition, working-class parents are more likely to receive help with child care from extended family members than are middle-class parents (Lareau, 2003; Rubin, 1992). However, a great deal of evidence contradicts this seemingly logical hypothesis. Middle-class neighbors are actually more likely than working-class neighbors to provide a variety of forms of help, including lending food, providing advice, helping with household maintenance, and shopping (MORI, 1982; Willmott, 1987). In addition, working-class parents were less likely than middle-class parents to feel they can rely on family, friends, or neighbors for help (Earle & Heymann, 2004). Within interview studies, working-class men emphasized the importance of self-reliance for themselves (Lamont, 2000), and working-class mothers note the importance of fostering self-reliance and "toughness" among their children (Kusserow, 2004).

Child-Rearing Practices

A variety of sources of data (interview, ethnography, and survey) converge upon the same basic conclusion: Relative to working-class parents, middle-class parents display—and attempt to foster within their children—greater attentiveness to interpersonal situations and concerns. For instance, working-class parents are much more likely than middle-class parents to be unresponsive to their children, and these patterns can begin as early as infancy (Bradley, Corwyn, McAdoo, & Coll, 2001; Conger & Elder, 1994; for a meta-analysis, see Grant, Compas, Stuhlmacher, Thurm, McMahon, &

Halpert, 2003). Compared with middle-class parents, working-class parents are generally less likely to provide social support and warmth and are more likely to provide harsh punishment (Dodge, Pettit, & Bates, 1994).

In general, working-class children tend to spend more time with their peers (particularly extended family and neighbors) than do middle-class children, who tend to spend more time with adults and in structured activities (Lareau, 2003). Lareau argues that this tendency reflects parents' conceptions of child development. Specifically, middle-class parents hold a model of *concerted cultivation*; that is, they need to engage their children—in a very intentional manner—in activities that facilitate their cognitive and social development. Conversely, working-class parents follow a model of the *accomplishment of natural growth*, in which children primarily interact with their peers and have the opportunity for unstructured play. These models are also reflected in parent-child interactions; middle-class parents are more likely than working-class parents to speak to their children to initiate and sustain conversation (Hart & Risley, 1995; Hoff, Laursen, & Tardiff, 2002). Furthermore, within these interactions, middle-class parents teach their children how to interact successfully with adults so that they can adjust situations to fit their preferences. On the other hand, primarily through modeling their parents' behavior, working-class children develop a sense of constraint, which prevents them from dealing effectively with authority figures and social institutions (Lareau, 2003).

In other research on parental values and social class, Bronfenbrenner's (1958) review of early studies on child-rearing practices is highly consistent with Kohn's (1969) studies of parental values.[1] That is, middle-class parents are concerned with fostering

internal values of achievement, responsibility, and respect for others within their children, whereas working-class parents emphasize the importance of obedience, respectability, and conformity to *external* authority. Importantly, though, this attention to external cues among the working-class is not necessarily grounded in or driven by close interpersonal relationships. As Kohn describes, "[c]onformity does not imply sensitivity to one's peers, but rather obedience to the dictates of authority….Moreover, it suggests, not imitating but obeying authorities—which can be very different indeed" (1969, pp. 35-36). Similarly, Kohn notes that a focus on internal responsibility for guiding behavior, known as self-direction, "does not imply rigidity, isolation, or insensitivity to others; on the contrary, it implies that one is attuned to internal dynamics—one's own, and other people's" (p. 35). This crucial point is illustrated through certain contrasts among closely related values (Kohn & Schooler, 1983). For example, "manners"—endorsed more highly by working-class parents—emphasizes adhering to proper standards of behavior, whereas "consideration of others"—endorsed more highly by middle-class parents—emphasizes an empathetic concern for and attention to others' needs and desires.

Social class differences in punishment style reflect this distinction between attention to external authority and internal dynamics. Whereas the normative verbal scolding among working-class parents is a verbal directive from an authority figure ("Don't do that!"), the normative technique among middle-class parents is to lead the child to his or her "own" internal conclusion that s/he has misbehaved ("Do you think it was a good idea to do that?") (Kusserow, 2004; also see Grant et al., 2003). Furthermore, not only the style, but also the severity of punishment varies upon this same internal-external dimension. Specifically, middle-class parents are more likely to determine the

level of punishment based upon their children's intent (i.e., their internal state), while working-class parents are more likely to punish rule-breaking (i.e., deviance from the dictates of external authority), regardless of intent (Kohn, 1969).

Finally, this relative attunement to social others among the middle-class seems to be passed on to children. Social competence or interpersonal perception may be associated with intelligence, which makes this construct difficult to measure. However, several studies are informative. Gottman and colleagues (Gottman, Gonso, & Rasmussen, 1975) found that eight- to nine-year-old children from middle-class backgrounds performed better than children from working-class backgrounds at role-playing, perspective-taking, and even decoding facial expressions of emotion. Middle-class children (ages 9-11) also performed better than working-class children on an interpersonal understanding task (Pelligrini, 1985). Although middle-class children in this sample had a higher average IQ, performance on this interpersonal task was virtually uncorrelated with intelligence. Furthermore, even when controlling for IQ, Gollin (1958) found that middle-class teenagers were better than working-class teenagers at ascribing motives and accounting for behavior that was presented in short films.

In conclusion, it appears that middle-class children receive more interpersonal attention and receive more guidance on how to interact with and attend to social others (especially adults) than do working-class children. This interpersonal emphasis, coupled with a focus on taking internal responsibility for one's actions, seems to result in greater social attunement and empathy among middle-class children. Moreover, given that middle-class children have a much broader pool of potential friends than do working-class children (Lareau, 2003), this social attunement likely plays a key role in selecting—

and being selected by—one's peers for friendship. The next section will explore the development of intrapersonal and interpersonal proclivities among American adults.

Psychological Independence and Attention to Social Others

Interestingly, research on child-rearing practices, occupational self-direction, and college student development converges upon a remarkable similarity: A "properly" developed middle-class adult has an internal responsibility or basis for making her/his own decisions. This dynamic was evident in the previous discussion of Kohn's studies of child-rearing practices and self-direction. In addition, adults whose jobs provide opportunities for self-direction show gains in endorsement of self-directed values, such as personal standards for morality, a greater internal locus of control, greater self-confidence, and decreased authoritarianism (Kohn & Schooler, 1983). Their analysis also shows that most jobs that provide substantial opportunities for self-direction require a college education, and educational attainment is also a strong predictor of self-directed orientation early in life. As noted earlier, self-direction is seemingly linked to a greater interpersonal attunement that influences individual decision-making. In the workplace, this attention to others may be especially relevant, since successful employment depends upon how one is viewed by one's superiors. For example, when crafting a presentation for one's colleagues, one should ideally consider how others might perceive the presentation. This is not to suggest that the employee should blindly adhere to her boss' expectations, but she should instead present her own ideas and interpretations while still considering how others might receive those ideas. In sum, successful self-direction within the middle-class workplace requires considerable individual initiative and thought, along with careful attention to social others.

An internal ability and responsibility for making decisions and forming attitudes is also evident in a number of theories on college student (and subsequent life) development (e.g., Baxter Magolda, 1992; Baxter Magolda & King, 2004; Belenky, Clinchy, Goldberger, & Tarule, 1986; Kegan, 1994). Moreover, similar to self-direction, these theories do not suggest that people should be entirely preoccupied with their own perspectives and ideas. Instead, all of these theories emphasize the critical role of social others not only in facilitating movement through the respective developmental stages, but also as a key component of decision-making and knowledge construction. For example, Belenky et al. (1986) developed their model of women's ways of knowing by interviewing a diverse sample of adult women. They argue that a lack of social interaction and engagement constrains women to the lowest stage of development (silence), whereas women who exemplified the highest stage of knowing (constructed knowing) tended to pay particular attention to and care about the lives of people around them. These women were quite socially skilled: Their conversations, which Belenky et al. referred to as "real talk" (p. 144), were characterized by careful reflection and cooperation. Similarly, in Kegan's (1994) orders of consciousness, the highest order is that in which the self is defined contextually and relationships help "the *many* forms or systems that *each self is*" to emerge (p. 313, original emphasis). Moreover, in a synthesis of these and other theories of cognitive development, Love and Guthrie (1999) suggest "that as we develop cognitively to the more advanced positions, we become more 'Eastern' in our outlook and sense making" (p. 85).[2]

The relationship between autonomy and connectedness is explicated in a broader conception of development known as self-authorship. Self-authorship can be defined as

the "capacity to internally define a coherent belief system and identity that coordinates mutual relations with others" (Baxter Magolda, 2004, p. 8). In some ways, this framework is quite similar to Kohn's conception of self-direction (Kohn, 1969; Kohn & Schooler, 1983). Both theories emphasize the degree to which people act and make choices on the basis of internal desires and goals (vis-à-vis the expectations and desires of others). However, one of the three dimensions of self-authorship explicitly addresses interpersonal aspects; that is, someone who is self-authored not only is internally defined and internally motivated, but s/he also engages in mature, interdependent relationships. Specifically, when making decisions and judgments, self-authored individuals carefully consider others' perspectives and needs, but they ultimately make decisions for themselves without being consumed by concerns of social approval. Recently, there is a growing movement toward examining college student development in terms of self-authorship (e.g., Baxter Magolda, 2006; Baxter Magolda & King, 2004; Creamer & Laughlin, 2005; Meszaros, 2007; Pizzoloto, 2003; Torres & Hernandez, 2007).

In sum, it seems that middle-class Americans may be more likely than working-class Americans to exhibit interpersonal relationships in which others' opinions are sought and valued, but decisions in middle-class contexts are often ultimately made on one's own.

Conceptual Framework

These studies suggest important interconnections between social and material resources, conceptions of self, social networks, and attention strategies. A conceptual model that illustrates some of these relationships is shown in Figure 1.1. This figure is loosely adapted from Nisbett's (2003) model that describes various influences on

cognitive processes. In general, the current model proposes that available resources have important influences on conceptions of self (in this case, whether independence is conveyed primarily through control and choice or through self-reliance). In cultural comparisons of East and West, conceptions of the self vary in the degree to which people define themselves in terms of relevant social others (e.g., Markus & Kitayama, 1991). In contrast, this model is designed to describe social class differences in a European-American context. Thus, it is taken for granted that the self and social relationships are distinct, as indicated by the distinct categories for social networks and the self. The general level of resources also affects the nature of one's social networks directly, since working-class Americans are less able to engage in long-distance relationships as a product of limited geographic mobility, have less free time for social endeavors, and have less available income for vacations and trips. As I will argue in more detail in Chapter 2, having larger and more voluntary social networks results in heightened attention paid to social others. Moreover, it seems likely that the processes associated with self-reliance contribute to a narrowing of one's field of attention. These attention tendencies in the social domain likely affect attention in the cognitive domain as well. Finally, well-being is shaped by available resources, which can be drawn upon to provide social, emotional, and financial support, and by conceptions of self.

Several important caveats should be noted here. First, the arrows in this diagram represent the primary direction of influence. It is quite possible that there are some reciprocal effects; for example, having a broad social network could result in increased access to various resources (Nisbett [2003] diagrams this possibility by adding relatively smaller arrows in the opposite directions). Second, the arrows represent *proposed* causal

relationships; to my knowledge, there is no evidence that conclusively demonstrates the causal links among some of these variables. Third, more constructs could be added to this diagram to make it more comprehensive (e.g., there are many factors that affect well-being). However, I have chosen to highlight the particular factors that are most relevant to social class and to Chapters 2-4. Fourth, I am proposing that these processes operate at the cultural or between-group level, and these may or may not operate at the individual level. For example, working-class Americans, who generally have limited resources, are likely to have smaller, tight-knit social networks as a whole. However, an individual who happens to have limited available resources—regardless of social class group—may not necessarily have a small social network, and the correlations between these constructs among individuals may, in fact, be close to zero. Some recent illustrations of the relative independence between phenomena at the cultural level and the individual level have highlighted this point quite nicely (Kitayama et al., 2008; Na, Grossmann, Varnum, Kitayama, & Nisbett, 2008).

Current Research

Below, I will describe my attempt to gain a greater understanding of social class variations in independence, interdependence, and well-being among European Americans. To provide a more comprehensive exploration of these features, I am using the three-article format of dissertation, which contains each article as a separate chapter (i.e., Chapters 2-4). Table 1.1 contains an overview of these three chapters. In all three papers, I use educational attainment as the indicator of social class; for the studies involving college students, mother's education serves as the pertinent indicator (see

Bradley & Corwyn, 2002; Mercy & Steelman, 1982). Finally, Chapter 5 provides a review and synthesis of these findings, along with the major implications of this research.

Chapter 2, which is a paper co-authored with Shinobu Kitayama and Richard E. Nisbett, examines differences in self, attribution, and cognition among working-class and middle-class Americans. Study 1 uses the Midlife Development in the United States (MIDUS) dataset to examine possible social class differences in self-reliance; giving and receiving advice; preference for receiving advice; personal mastery and perceived constraint; social support from family, friends, and spouse/partner; and frequency of contact with family and friends. The remaining studies explore whether patterns in interdependence and independence might be reflected in interpersonal attribution and visual attention, since priming research has established a causal relationship (at least in the short-term) between self-construal and cognition (for a meta-analysis, see Oyserman & Lee, 2007). Specifically, Studies 2a and 2b examine potential social class differences in causal attribution (i.e., dispositional vs. situational) among students at a community college and a prestigious research university. In Study 2b, these same patterns are examined when controlling for general cognitive ability. Finally, Study 3 examines performance on a visual attention task (focused vs. diffused attention) among students from a community college, regional university, and research university.

Chapter 3, which is a paper co-authored with Shinobu Kitayama, examines whether the definition of "being well" differs across social class groups. The general argument is that working-class European Americans may emphasize physical aspects of well-being, whereas middle-class European Americans may emphasize psychological well-being. This hypothesis is tested with the MIDUS dataset in three ways. First,

correlations among psychological well-being measures and among physical well-being measures are examined for middle-class and working-class participants separately to determine whether these constructs are more coherent in certain socio-cultural contexts. Next, the correlations between psychological well-being and physical health are examined separately by social class, since working-class participants may use their physical health to inform their psychological well-being judgments. In addition, the relationships between psychosocial variables and well-being are compared across social class groups, since these links should be stronger for groups that value particular forms of well-being.

Chapter 4 explores the development of psychological well-being over the first year of college among students from working-class and middle-class backgrounds. Although no previous studies have examined psychological well-being among representative groups of college students, middle-class adults tend to have higher levels of well-being than working-class adults on almost all of Ryff's dimensions, with the noteworthy exception of autonomy (Keyes, Shmotkin, & Ryff, 2002; Ryff, Keyes, & Hughes, 2003). In the current study, a 54-item well-being questionnaire was administered longitudinally—once at the beginning of students' freshman year and again at the end of the academic year—to over 3,000 students at 19 colleges and universities. This study examines social class differences in well-being at both time points and explores whether or how various college experiences are associated with changes in well-being. The impact of experiences that involve substantial interpersonal interaction with faculty and other students receives special attention. Finally, this study investigates

whether the relationships between these experiences and the development of well-being vary across social class groups.

Finally, Chapter 5 summarizes the primary findings from Chapters 2, 3, and 4 and illustrates how these studies fit into the conceptual framework described earlier in the chapter. Then, it provides implications for future research in cultural psychology. Importantly, it also describes the long-standing link between social class and higher education and discusses how psychological findings and methods can be incorporated into the effective research and practice of higher education.

Footnotes

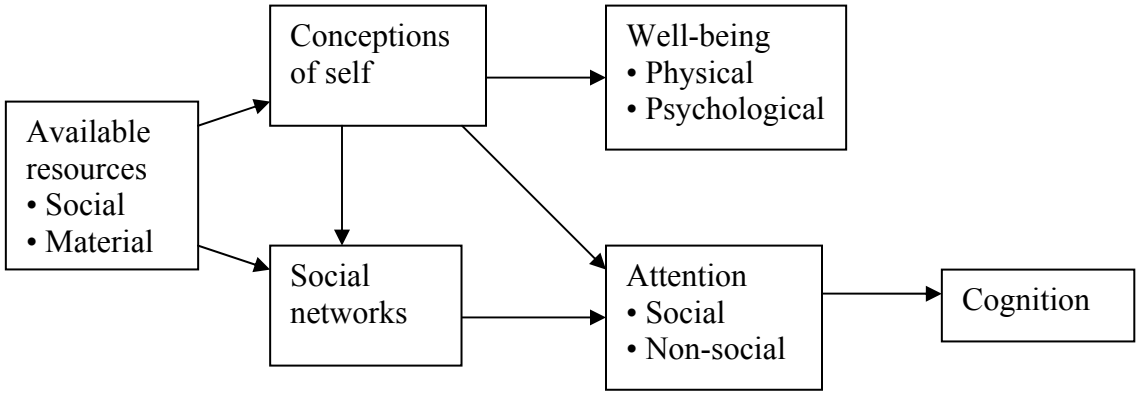
[1] The assertions in these seminal works have been supported by more recent research; see Kohn (2006), Kohn & Schooler (1983), and Kusserow (2004).

[2] Clearly, this assertion has its limits. In this context, Love and Guthrie are referring primarily to contextual judgments of knowledge, not conceptions of self. As described in this section, the "ideal" middle-class American self is distinct and differentiated from her environment, while still attending to interpersonal relationships. In addition, it is worth noting that while Kegan's (1994) highest order of consciousness represents an interdependent conception of self, a very small number of American adults ever reach this level.

Table 1.1 Overview of research from the three articles presented in Chapters 2, 3, and 4

	Topic of inquiry	Data source
Chapter 2	**Study 1** – Cultural and psychological practices (e.g., self-reliance, interpersonal interdependence, advice-giving, etc.)	Midlife Development in the United States (MIDUS)
	Study 2a – Causal attribution	Washtenaw Community College (WCC)
	Study 2b – Replication of Study 2a, controlling for general cognitive ability	University of Michigan (U-M)
	Study 3 – Visual attention	Rutgers University-Camden, U-M, and WCC
Chapter 3	Psychological well-being, physical well-being, and psychosocial factors	MIDUS
Chapter 4	Demographic variables and experiences associated with the development of psychological well-being among college students	Wabash National Study of Liberal Arts Education (WNSLAE)

Figure 1.1 Conceptual framework illustrating psychological processes across American social class groups



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Chapter 2:

Social Class Differences in Self, Attribution, and Attention: Is the Middle-Class More Socially Attuned than the Working-Class?

Formative influences of culture's practices and public meanings have been extensively discussed in the literature of socio-cultural psychology (Kitayama, Duffy, & Uchida, 2007; Markus & Hamedani, 2007; Nisbett, 2003). In this literature, a number of important cultural variations have been uncovered by drawing global comparisons between North Americans and East Asians. Thus, as compared to East Asians, North Americans are conceptualized as more independent or individualistic and at the same time less interdependent or collectivistic (Markus & Kitayama, 1991; Nisbett, Peng, Choi, & Norenzayan, 2001). Although researchers emphasize individual and subgroup differences within each of these global areas, it is only recently that such within-culture variations have begun to be systematically examined. One important source of within-culture variation that has received increasing research attention is social class. Social class is typically defined in terms of educational attainment, income, occupational prestige, or some combination of these (Argyle, 1994; Centers, 1949). In this paper, we refer to working-class Americans (WC) and middle-class Americans (MC) as groups that are relatively higher or lower on at least one of these three dimensions. However, as discussed later, educational attainment is likely the most important predictor of cultural dimensions of social class.

Research from a variety of disciplines has begun to shed light among important socio-cultural variations across social class groups. For instance, according to Kusserow (1999, 2004), WC display a form of independence that emphasizes self-reliance, hard work, and resisting influence, whereas independence among MC is characterized by a desire for uniqueness, self-actualization, and personal choice. Similar observations have been made by other scholars (e.g., Lamont, 2000; Lareau, 2003; Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007). The purpose of the current work was to follow up the general theme developed in this emerging literature and propose two contrasting types of independence that are linked with social class. We will then explore social and relational attitudes and associated cognitive tendencies among Americans with different social class backgrounds. The general hypothesis is that as compared to WC, MC tend to be "socially more expansive."

Two Forms of Individualism

By definition, social classes differ in terms of wealth, occupational prestige, and educational attainment, which as a whole give rise to greater personal, economic, and social resources available among MC than among WC. For example, Americans in the highest quintile of income have a median net worth of $185,500, whereas those in the lowest quintile have a median net worth of only $7,400—less than the value of many used cars (Orzechowski & Sepielli, 2003). These resource disparities, in turn, are reflected in health outcomes. Among 25-year-olds, White men who attended at least some college will live, on average, over five years longer than those who did not receive a high school degree. For Black men, this difference is almost seven full years (Lin, Rogot, Johnson, Sorlie, & Arias, 2003). Furthermore, there are substantial social class

differences in health and well-being throughout the lifespan (e.g., Lachman & Weaver, 1998; Williams & Collins, 1995; for a review, see Adler, Boyce, Chesney, Cohen, Folkman, Kahn, et al., 1994).

Along with other researchers (Lareau, 2003; Snibbe & Markus, 2005), we propose that the availability of social and personal resources or the absence thereof can greatly afford or constrain some possible ways in which the ever-important cultural ideal of independence can be achieved and maintained. In MC contexts, where resources are abundantly available, individuals will have a luxury of choosing to have what they want to have and choosing to be who they want to be. Individuals are therefore socialized to choose among many different material goods, social groups to participate in, and friends to interact with. Personal choices are indeed quite ubiquitous and afford each individual the opportunity to create his or her own personalized self and social relationship. In addition, each individual is largely free to achieve his or her own way of being independent.

The emphasis on choice, quite common in the MC form of independence, is likely to entail both personal and social characteristics. At the personal level, in order to make choices, people will have to know themselves well, and they will have to believe that they are in charge of their own life. It is therefore likely that self-chosen individuals are characterized by a strong sense of personal mastery, efficacy and control. At the social and interpersonal levels, choice is likely to be extended to selection of friends and acquaintances. Self-chosen individuals are likely to seek their friends and acquaintances as they think fit. They are likely to be quite social and even altruistic to these people, because they have chosen them as their friends or acquaintances. Moreover, these others

are also likely to be resourceful in their own ways and, as a consequence, they become part of the social resources of MC. As a result, individuals become extremely social, expanding and maintaining a mutually supportive network of social relationships.

In contrast, in WC contexts, individuals must work to manage and adapt to an environment in which available social and material resources and the ability to exert control are limited. Instead of achieving independence through mastery and control, WC will be more likely to develop a strong sense of self-reliance. This form of independence is displayed through acting and making decisions by oneself, a reluctance to ask others for help, and a general inclination to "do-it-yourself." On a social and interpersonal level, WC do not create extensive networks of friends and acquaintances; instead, they interact with close and extended family members, neighbors, and a small number of other friends. The need to attend carefully to these relationships is relatively low, because these relationships are not the product of social expansion. Rather, these interpersonal relationships are largely formed through circumstance and are thus relatively stable.

In short, we hypothesize that massive social class differences in resource availability gives rise to two different forms of independence. Specifically, MC independence is defined primarily by personal control and an expansive network of voluntarily created social relations, whereas WC independence is defined primarily by self-reliance and a relatively close and small set of socially ascribed, kin-based relations. In accordance with this analysis, available evidence suggests systematic social class differences in personal control, self-reliance, and responsiveness to non-kin friends and acquaintances.

Social Class Differences in Personal Control

The evidence is very clear that control is more central in MC contexts than in WC contexts. For instance, MC are more able to exercise choice than are WC. Within the workplace, as compared to WC employees, MC employees have more decision-making ability, receive less direct supervision, and have more freedom to choose which tasks they will perform (Earle & Heymann, 2004; Kohn & Schooler, 1983). Moreover, MC employees tend to have more personal control and choice outside of work through more flexible schedules, more leisure and vacation time, and greater disposable income (e.g., Argyle, 1994; Earle & Heymann, 2004). Not surprisingly, Lachman and Weaver (1998) found that MC report higher levels of personal control than WC. In addition, MC are often subject to fewer environmental stressors and constraints than are WC. Relative to their WC counterparts, MC tend to experience less familial violence, less neighborhood crime, more daily order and routine, and higher quality schools (for a review, see Evans, 2004).

The emphasis on personal control among MC Americans is revealed in their responses to provision and usurpation of choice. MC Americans are far more motivated than WC Americans to justify their choices. Thus, Snibbe and Markus (2005) found that after choosing between two CDs that were similarly appealing, MC participants both increased their liking of the chosen CD and decreased their liking of the rejected CD (Study 2). Importantly, however, this effect was weaker for WC participants, who justified their choices by decreasing their liking of the rejected CD, but did not increase their liking of the chosen CD. Likewise, when their initial choice of a pen (from among several options) was usurped, MC participants gave less favorable ratings of the pen. But again, this effect was absent among WC participants (Study 3).

In addition, the choices of middle-class Americans—relative to those of working-class Americans—are motivated by a preference for maintaining uniqueness (Stephens et al., 2007). This argument is quite consistent with our theory, since attempts to make unique choices must be guided by (a) an understanding of others' choices and preferences, and (b) a desire to deviate from this norm. Supporting this idea, using both interviews and surveys, Stephens et al. found that many MC respondents would be upset—and would be more likely to be upset than would WC respondents—if their friend made the same choice that they did (Studies 4a and 4b). Moreover, Stephens et al. showed that magazines with a mostly MC audience are more likely than those with a primarily WC audience to contain advertisements specifically emphasizing how the featured products are different from their competition (Study 5).

Social Class Differences in Self-Reliance

Evidence also indicates that WC Americans are bound to be more self-reliant, embracing the "do-it-yourself" mentality more strongly than MC Americans do. In interview studies, WC men emphasize the importance of self-reliance for themselves (Lamont, 2000), and WC mothers note the importance of fostering self-reliance and "toughness" in their children (Kusserow, 1999). Furthermore, drawing on ethnographic observations, Kusserow (1999, 2004) referred to WC individualism as "hard" individualism and characterized it in terms of self-reliance, self-determination, and hard work. She notes that the surrounding neighborhoods in which many lower-working-class families live are unsupportive at best and often quite dangerous, so strangers and most adults are not to be trusted. In other words, these lower-working-class families practiced "a 'mind your own business' protective style of individualism" (Kusserow, 1999, p. 217),

which is best defined as avoiding negative environmental influences and learning to deal with hardship. In upper-working-class communities, the opportunity for educational and economic advancement is seen as a distinct possibility, but only as the product of individual hard work, effort, and perseverance.[1] Moreover, for both groups of WC, children are seen as being emotionally resilient and are expected to adhere to (sometimes pointed) parental directives without question (also see Dodge, Pettit, & Bates, 1994). In further support of the notion of "hard" individualism, several observers have noted that WC parents seek to instill toughness in their children through teasing and contradicting their narratives (Miller, 1986; Wiley, Rose, Burger, & Miller, 1998).

Given the degree of emphasis on self-reliance and toughness in WC culture, it follows that helping is bound to be much less prevalent in WC communities than in MC communities. Several large-scale surveys have documented that WC neighbors less frequently provide a variety of forms of help—including lending food, providing advice, helping with household maintenance, and shopping—than do MC neighbors (Market Opinion and Research International [MORI], 1982; Willmott, 1987). In addition, WC parents are less likely than MC parents to feel they can rely on family, friends, or neighbors for help (Earle & Heymann, 2004); as a result, relying on oneself can be a particularly effective—and, in some cases, necessary—means of navigating one's environment. This social dynamic is summed up succinctly by Steele and Sherman (2001) in their study of homeless mothers: "Among the things these women have to count on, the self may be the most reliable" (p. 417). With these findings on social class differences in self-reliance, we now turn to a third type of social class differences: differences in social responsiveness.

Social Class Differences in Social Responsiveness

If WC are more self-reliant, affording only to focus on their own business while expecting others to do the same, they might be expected to pay less attention to their social surroundings. Conversely, if MC are invested in choice in both social and material domains, they might be expected to be highly attuned to social contexts, where choice must be exercised to participate in social groups of their choice and to interact with friends and neighbors who are like themselves (Argyle, 1994; Lareau, 2003).

To be sure, WC are more conforming to community norms than MC (Stephens et al., 2007), and WC parents are far more likely than MC parents to emphasize the importance of obedience and respectability (Bronfenbrenner, 1958; Kohn, 1969; Kusserow, 1999, 2004). Thus, in some respects, WC may be reasonably said to be more social than MC. However, as Kohn describes, "[c]onformity does not imply sensitivity to one's peers, but rather obedience to the dictates of authority" (1969, p. 35). Instead, MC environments encourage individuals to use their own preferences, interests, and attitudes to guide social behaviors. MC parents are more likely to emphasize interpersonal warmth and sympathy (Dodge et al., 1994). Moreover, people are also aware that others are likely to do the same. As a consequence, there is an increasingly urgent need to be liked and chosen by others as their friends or neighbors if they are to have any social relationships at all. This will further exacerbate the MC sensitivity to social contexts.

In support of this analysis, MC tend to have a more diffuse network of friends (Fischer, 1977) and are more likely to make friends through participation in voluntary clubs and organizations than WC (Putnam, 2000). Moreover, observing British populations, Willmott (1987) noted that the middle-class tends to have a larger group of

friends, whereas the working-class tends to have greater overlap between friends, neighbors, and family; that is, one's friends often *are* one's family members and neighbors. Finally, as may be expected, WC Americans spend considerably more time with close and extended family than do MC Americans (e.g., Komarovsky, 1964; Rubin, 1992).

Importantly, experimental studies indicate that MC children and adolescents display greater attunement to social others than do their WC counterparts. For instance, Gottman and colleagues (Gottman, Gonso, & Rasmussen, 1975) found that eight- to nine-year-old children from MC backgrounds performed better than children from WC backgrounds at role-playing, perspective-taking, and even decoding facial expressions of emotion. MC children (ages 9-11) also performed better than WC children on an interpersonal understanding task (Pelligrini, 1985). Moreover, this difference is unlikely to be accounted for by differences in intelligence, as performance on this interpersonal task was virtually uncorrelated with intelligence. Indeed, Gollin (1958) found that MC teenagers were better than WC teenagers at ascribing motives and accounting for behavior, even when controlling for IQ.

Educational Attainment as an Indictor of Social Class

In the present research, we defined social class in terms of education attainment for several reasons. First, in American society, education often serves as a gatekeeper for entering high-income and high-status jobs (Duncan, 1961; Lin, 1999); thus, it holds a unique role in determining access to future resources. Second, educational attainment is arguably the most reliable measure of social class, since people know their educational attainment (whereas they may not know their income, which may be unstable over time)

and there is a clear delineation between "higher" and "lower" educational attainment (whereas this may not always be the case for occupational prestige). Moreover, since various indicators may capture different aspects of social class, researchers have argued against combining multiple measures (Graetz, 1995). Third, educational attainment is more closely linked to other measures of social class than income. Using a nationally representative sample of almost 4,000 Americans, Oakes and Rossi (2003) found that educational attainment was highly correlated with three measures of occupational prestige (mean $r = .61$), whereas the correlation between income and occupational prestige was much lower (mean $r = .39$). In other words, education explained more than twice as much variance in occupational prestige as did income. Fourth, potentially for similar reasons, other cultural psychologists have also defined social class in terms of education (Markus, Ryff, Curhan, & Palmersheim, 2004; Snibbe & Markus, 2005; Stephens et al., 2007).

Fifth, and perhaps most importantly, educational attainment is a better predictor of social and material resources than are other social class measures. In their study of the measurement of social class, Oakes and Rossi (2003) constructed an index of resources that combined social capital, human capital, and material capital. Even though one of these three dimensions is defined solely in terms of finances, they found that educational attainment was a much better predictor of overall resources than was income; furthermore, education was also a stronger predictor of resources than were three separate measures of occupational prestige. Indeed, this strong link to social and material resources may explain why education is the most effective social class variable for predicting mortality (Elo & Preston, 1996; Kitagawa & Hauser, 1973) and why education

is the most commonly used indicator of social class in health research (Liberatos, Linke, & Kelsey, 1988).

Present Research

This paper seeks to address several gaps in the literature. First, much of the evidence on self-reliance comes from small qualitative studies, so these findings have limited generalizability. Second, while research has examined social class differences in the nature of social networks, the overall quality of these relationships has received little attention. Third, to our knowledge, no studies have directly examined how advice giving and receiving (i.e., a form of helping behavior that is contrary to self-reliance) might vary across social class groups. Finally, it is unclear whether there are social class differences in cognitive propensities associated with independence, such as causal attribution and visual attention (Nisbett, 2003). In order to address these issues, we conducted several studies. In Study 1, we used a nationally representative survey to examine patterns of independence among MC and WC adults. In Studies 2a and 2b, we addressed the hypothesized social class differences in sensitivity to social context by examining a causal attribution task, and in Study 3, we examined this hypothesis with a task designed to assess holistic attention.

Study 1

Study 1 used an existing dataset from a national representative survey, Midlife Development in the United States (MIDUS), to examine three primary hypotheses. The first hypothesis states that as compared to WC, MC would be higher in personal control. As a measure of personal control, we used items that gauged the level of personal mastery and perceived constraint (from Lachman and Weaver, 1998). The second

hypothesis is that as compared to MC, WC would be higher in self-reliance. As a measure of self-reliance, we used items that explored the tendency to solve problems independently, seek help, and give and receive advice. Third, we also tested the hypothesis that as compared to WC, MC would be more socially responsive. As a measure of social responsiveness, we used questions probing support from social others, including friends, family members, and one's spouse/partner, which were drawn from scales in several other studies (Grzywacz & Marks, 1999; Schuster, Kessler, & Aseltine, 1990; Whalen & Lachman, 2000). Consistent with the idea of social expansion, we expected that the social class difference would be most pronounced for non-kin relations (i.e., friends).

Method

Data source and participants. Data from the National Survey of Midlife Development in the United States (MIDUS) was used. This survey was based on a nationally representative random-digit-dial sample of non-institutionalized, English-speaking adults in the 48 contiguous states, aged 25-74. The sample was stratified by age and sex; men and older adults were oversampled. Data were gathered from one phone interview (which took approximately 30 minutes to complete) and two self-administered mail questionnaires (approximately one hour each). Participants received $20 and a boxed pen for their involvement with the study. The response rate was 70% for the phone interview and then 87% for the follow-up mail questionnaires, yielding a total response rate of 70% x 87% = 61%. For the current analyses, data from only the European American participants were examined, which yielded a total of 2,586 participants (1,260 male, 1,326 female).

Measures. Survey items from the MIDUS were used to construct indices of personal control, self-reliance, and interpersonal relationships. Measures of personal mastery (e.g., "I can do just about anything I really set my mind to") and constraint (e.g., "I have little control over the things that happen to me") were taken from scales used in Lachman and Weaver (1998). The personal mastery scale consisted of four items (Cronbach's alpha = .69), and the perceived constraint scale contained eight items (α = .85). In addition, three indices captured various aspects of self-reliance. First, an overall self-reliance scale was created (three items; α = .69); these items asked about the degree to which participants tend to act independently (e.g., "I don't like to ask others for help unless I have to"). In addition, one aspect of self-reliance is the refusal to (or preference not to) seek advice when making decisions. Thus, we created scales that measured participants' preference for receiving advice (e.g., "I like to get advice from others before I make a decision") as well as their actual advice-giving and receiving behavior (e.g., "How often do you turn to a friend, relative, or coworker for advice or help with a personal or practical problem you have?"). Despite the small number of items in these two scales, the reliabilities were adequate (three items and α = .61 for preference for receiving advice, and two items and α = .66 for frequency of advice-giving and receiving). Finally, three indices were used to measure social support, all of which have appeared in previous studies (Grzywacz & Marks, 1999; Schuster et al., 1990; Whalen & Lachman, 2000). That is, separate scales gauged the level of social support from one's spouse/partner (six items; α = .91), from family members (four items; α = .83), and from non-family friends (four items; α = .88). These items, for example, asked participants to report "How much can you open up to [your friends] if you need to talk about your

worries?" Appendix A provides descriptive statistics and the exact phrasing of the items. Moreover, since the original items were al scored such that lower values represented higher frequencies or levels of agreement, all items were subsequently reverse-coded and mean-scaled indices were created. Therefore, higher values on the indices represent higher levels of a given attribute.

To provide additional evidence for the validity of these scales, a principal component factor analysis with oblique rotation was conducted for all items. The number of factors was determined by using the criterion Eigenvalues greater than one, and inspection of scree plots confirmed that this cutoff was empirically meaningful. Importantly, the analysis yielded the same eight factors described above. There were two items regarding time spent with family and with friends that would have decreased the reliabilities of the factors onto which they initially loaded ("How often are you in contact with any of your [friends] – including visits, phone calls, letters, and electronic mail messages?"). As a result, these items were used as separate indicators. The loadings for items included in the scales were all greater than .55. With one exception, the correlations among factors were low, $| r\text{'s} | < .27$, suggesting that these represent distinct constructs. In contrast, the correlation between personal mastery and perceived constraint was moderate, $r = .38$. Constraint and mastery were kept as separate scales, however, since an inspection of scree plots and the resulting factors and loadings suggested an eight-factor solution was preferable to a seven-factor solution. In addition, preliminary analyses separated by social class group showed that the same eight factors were evident among both working-class and middle-class participants.

Finally, we used the same social class categories as Snibbe and Markus (2005), with middle-class defined as having a bachelor's degree or greater, and working-class as having some college or less.

Results and Discussion

Means for the eight scales are reported separately for MC and WC in Table 2.1. A multivariate 2 (social class) x 2 (gender) analysis of variance was conducted on seven of the eight variables. Since only about two-thirds of participants had a spouse or partner, the variable for social support from spouse/partner was excluded so that the analysis would include all participants. We found a highly significant multivariate main effect for social class, $F(7, 2502) = 21.40$, $p < .001$. There was also a significant multivariate main effect for gender, $F(7, 2502) = 26.46$, $p < .001$, and a significant class x gender interaction, $F(7, 2502) = 3.31$, $p < .005$.

Personal control. As predicted, WC participants reported experiencing substantially higher levels of perceived constraint ($M = 2.86$) than did MC participants ($M = 2.36$), $F(1, 2558) = 83.78$, $p < .001$. Furthermore, MC experienced greater personal mastery ($M = 5.92$) than did WC ($M = 5.78$), $F(1, 2562) = 7.97$, $p < .01$. Clearly, these effects reflect real-world differences in environmental constraints and the degree to which MC and WC can exercise choice and control. Moreover, for mastery, there was a significant class x gender interaction, $F(1, 2558) = 6.39$, $p < .02$. It seems that the social class differences in mastery are most pronounced among women, as MC women reported experiencing much more mastery ($M = 5.92$) than did WC women ($M = 5.68$), $t(627.74)$ [2] $= 3.69$, $p < .001$, whereas the social class difference among men was negligible ($M = 5.92$ and $M = 5.91$, respectively), $t < 1$. Finally, women reported higher levels of perceived

constraint than men ($M = 2.66$ and $M = 2.55$, respectively), $F(1, 2558) = 4.72$, $p < .04$, along with lower levels of personal mastery ($M = 5.80$ and $M = 5.91$), $F(1, 2562) = 7.07$, $p < .01$.

Self-reliance. In contrast, WC participants reported greater self-reliance ($M = 3.29$) than did MC participants ($M = 3.13$), $F(1, 2566) = 34.40$, $p < .001$. Therefore, this study replicates previous research (mostly ethnographic and interview-based), which suggests that self-reliance is the more prevalent form of independence among WC. In addition, men reported greater self-reliance than did women ($M = 3.23$ and $M = 3.17$, respectively), $F(1, 2556) = 4.67$, $p < .04$. Moreover, there was a class x gender interaction, $F(1, 2566) = 5.06$, $p < .03$, such that the social class difference was more pronounced for women than men. However, the gap between WC and MC was significant both for men ($M = 3.29$ and $M = 3.18$), $t(1251) = 2.74$, $p < .01$, and for women, ($M = 3.29$ and $M = 3.05$), $t(1315) = 5.39$, $p < .001$.

Self-reliance can be seen as contrasting with advice-seeking and receiving, since providing advice is a form of helping behavior. Consistent with this interpretation, advice-related behaviors and preferences were much less common among WC. Specifically, WC participants ($M = 2.66$) were less likely than MC participants ($M = 2.82$) not only to prefer to receive advice, $F(1, 2569) = 33.49$, $p < .001$, but also to have actually received advice from and given advice to their friends, relatives, or coworkers ($M = 3.04$ and $M = 3.34$), $F(1, 2579) = 61.78$, $p < .001$. Gender differences were also apparent: Women were more likely than men to prefer to receive advice ($M = 2.79$ and $M = 2.70$, respectively), $F(1, 2569) = 10.97$, $p < .005$, and to give and receive advice frequently, ($M = 3.43$ and $M = 2.98$), $F(1, 2579) = 94.01$, $p < .001$. Furthermore, for

advice giving and receiving, there was a class x gender interaction, $F(1, 2579) = 8.48$, $p < .005$, such that the pattern was stronger for women than for men. Once again, the social class difference was significant for both men, ($M = 2.86$ and $M = 3.10$), $t(1257) = 3.72$, $p < .001$, and women ($M = 3.18$ and $M = 3.68$), $t(1322) = 7.21$, $p < .001$.

Social responsiveness. In terms of social networks, the most relevant group for social expansion is one's friends. As the previous literature suggests, MC ($M = 5.87$) reported having more frequent contact with friends than did WC ($M = 5.59$), $F(1, 2564) = 19.94$, $p < .001$. Women ($M = 5.89$) also reported more contact with friends than did men ($M = 5.59$), $F(1, 2564) = 18.25$, $p < .001$. Furthermore, there was a class x gender interaction, $F(1, 2564) = 4.01$, $p < .05$, such that the social class difference for women was clearly significant ($M = 3.34$ and $M = 2.87$), $t(650.57) = 4.76$, $p < .001$, but the difference was only marginally significant for men ($M = 3.50$ and $M = 3.32$), $t(1252) = 1.82$, $p < .07$. Importantly, consistent with a greater social responsiveness toward non-family members, MC participants ($M = 3.29$) reported more social support from friends than did WC participants ($M = 3.21$), $F(1, 2569) = 17.82$, $p < .001$. In addition, women ($M = 3.39$) reported receiving greater social support from their friends than did men ($M = 3.12$), $F(1, 2569) = 94.86$, $p < .001$

As expected, WC ($M = 5.91$) communicated with their families much more frequently than did MC ($M = 5.59$), $F(1, 2547) = 17.27$, $p < .001$, $d = .21$, and women ($M = 5.95$) were in more frequent contact with family members than were men ($M = 5.55$), $F(1, 2547) = 37.54$, $p < .001$. However, frequency of contact does not imply that WC receive more support from their family than do MC. In fact, there was no difference in support from family between WC ($M = 3.41$) and MC ($M = 3.45$), $F(1, 2562) = 1.75$, *ns*,

and the non-significant trend was toward the middle-class receiving more support. Similarly, there was a trend toward MC ($M = 3.62$) having more support from their spouse/partner than WC ($M = 3.56$), $F(1, 1847) = 2.34$, $p < .15$, though this pattern did not reach significance. Overall, these findings support the notion of social expansion among the middle-class, which emphasizes greater attention to and responsiveness within social relationships, particularly with non-kin friends. Finally, women ($M = 3.46$) reported greater social support from family than did men ($M = 3.40$), $F(1, 2562) = 5.34$, $p < .03$, whereas men ($M = 3.66$) reported greater levels of support from their spouse/partner than did women ($M = 3.51$), $F(1, 1847) = 28.28$, $p < .001$. The gender pattern is reversed for support from spouse/partner, because in most cases, men are receiving social support from female partners, and vice-versa.

In sum, compared with MC participants, WC participants exhibited greater self-reliance and were less likely to engage in—and to prefer to engage in—advice-related behavior. In contrast, MC had greater mastery, less constraint, and greater support from friends than WC.

Study 2a

The results of Study 1 suggest that working-class European Americans tend to focus more on the self (vis-à-vis others) than do middle-class European Americans. That is, MC were more likely than WC to engage with social others through giving and receiving advice, having control over their actions and surrounding environment, and forming supportive relationships with non-family members. If MC are more sensitive than WC to social others, MC may also be more likely than WC to assume that others are quite sensitive to social or contextual information in deciding what to do.

An extensive social psychological literature has demonstrated that in accounting for another person's behavior, Americans often fail to acknowledge situational constraints, instead assigning a much larger weight to dispositional factors. This is true even when situational constraints are highly salient and dispositional explanations are highly implausible (e.g., Gilbert & Jones, 1986; Miyamoto & Kitayama, 2002; for a review, see Gilbert & Malone, 1995). This cognitive bias, called the fundamental attribution error (Ross, 1977), strongly suggests that Americans hold a strong lay belief that people decide what to do in accordance with their own attitudes, desires, and other internal attributes without considering situational factors. Importantly, the fundamental attribution error is not universal. East Asians, who are socially much more attuned than Americans (e.g., Kitayama et al., 2007; Nisbett et al., 2001), are more likely to consider salient situational information when drawing attributions about others' behavior (Choi, Nisbett, & Norenzayan, 1999). In the present context, since MC are socially more attuned than WC, we expected MC to be less susceptible to this error than are WC. In Studies 2a and 2b, participants were presented with several vignettes and asked to what degree the protagonist's behavior was caused by dispositional and situational factors. Study 2a is designed as a smaller pilot study on a less academically selective sample, whereas Study 2b uses a larger, more selective sample for which data on general cognitive skills is available.

Method

Participants. Participants were 23 European American students (16 female, seven male) from a community college in southeastern Michigan. One participant did not provide social class data, so the data from the remaining 22 participants (15 female, seven

male) were used in the analyses. Students were recruited from introductory psychology and child psychology and were paid $8 for their participation. Since just over half of those who enter community colleges are first-generation college students (Choy, 2001), this sample was selected to yield a pool of participants that (a) come from a wide range of socioeconomic backgrounds, and (b) do not represent a highly self-selected group of WC and MC Americans (i.e., it is the case that many "typical" people from working- and middle-class backgrounds attend community college).

Broadly speaking, undergraduate education—particularly within the social sciences—teaches students about a variety of situational and contextual factors that affect individuals and groups; these influences can range from economic, political, sociological, cultural, and psychological, among others. Therefore, the use of college students from both WC and MC backgrounds in this study provides a more stringent test of the notion that cultural norms in MC and WC environments contribute to differences in causal attribution (as opposed to potential responses from MC older adults that may simply reflect outcomes of their undergraduate education). Since the students in this sample were enrolled in the same courses within the same college, social class differences in their responses should primarily reflect factors that are independent of the college environment.

Materials and procedure. Participants completed the study in groups of 6-11 people. They were given a framed line test (the results of which will be discussed in Study 3), two categorization tasks,[3] and several attribution vignettes. The four vignettes, which each consisted of a short paragraph, described someone who engaged in either a prosocial or an antisocial behavior (e.g., a business executive who makes a large

charitable donation; see Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006). Participants were then asked to what degree this person's actions were influenced by the person's disposition or by situational factors. In addition, participants were asked whether someone else would have behaved differently in the same situation (i.e., another means of indicating the role of disposition), or whether the person would have behaved differently if the circumstances were different (i.e., another means of assessing situational factors). These two questions are "counterfactual" in that they ask the participant to consider a different set of circumstances than those provided in the vignettes. The questions that directly asked about the protagonist's behavior are referred as "factual." All items used a 7-point Likert scale (from 1 = "strongly disagree" to 7 = "strongly agree"). The average responses for each of the four items—dispositional factual, dispositional counterfactual, situational factual, and situational counterfactual—were computed across all four situations. In addition, since the responses for the factual and counterfactual items were highly correlated, these were averaged to create two composite measures for dispositional and situational responses.

At the end of the study, participants completed a demographic questionnaire. Since all participants were currently enrolled in community college and the vast majority were traditional-aged college students (18-24 years old), questions used to assess social class inquired about parental education (1 = "some high school" to 6 = "post-graduate degree"). Since previous studies have illustrated the important role of the mother in fostering cognitive and interpersonal development (see Bradley & Corwyn, 2002; Mercy & Steelman, 1982), mother's education was used as the indicator of social class. Working-class was defined as mother's education of high school diploma or less, and

middle-class as mother's education of some college or more. Preliminary analyses showed that results were similar when using a combination of mother's and father's education as the definition of social class.[4]

Results and Discussion

A 2 x 2 analysis of variance (ANOVA) was conducted with one within-subject factor (attribution response: dispositional vs. situational) and one between-subject factor (social class: working-class vs. middle-class). Preliminary analyses showed that there was no main effect and no interactions for gender, so this variable was not included in the analyses. There was a main effect of type of attribution, such that participants were more likely to endorse dispositional ($M = 5.56$, $SD = .70$) than situational ($M = 4.82$, $SD = .74$) explanations for behavior, $F(1,20) = 30.62$, $p < .001$. In addition, there was a significant interaction between type of attribution and social class, $F(1,20) = 13.19$, $p < .005$ (see Figure 2.1). Specifically, there was no social class difference in dispositional attributions, $t < 1$, but MC participants ($M = 5.20$, $SD = .81$) were considerably more likely than WC participants ($M = 4.43$, $SD = .34$) to endorse situational attributions, $t(17.26) = -3.04$, $p < .01$. This difference in situational attributions was massive (Cohen's $d = 1.16$).

MC were not significantly more likely to make dispositional attributions ($M = 5.46$, $SD = .75$) than situational attributions ($M = 5.20$, $SD = .81$), $t(12) = 1.62$, $p > .10$. In contrast, the difference between dispositional ($M = 5.67$, $SD = .67$) and situational ($M = 4.43$, $SD = .34$) attributions for WC was very large, $t(8) = 5.36$, $p = .001$. In sum, MC exhibited a substantially greater tendency toward making situational attributions than did WC, but there was no social class difference for dispositional attributions.

However, there are two key limitations with this study. First, despite the large effect sizes found here, the sample size was fairly small (n = 22). As a result, it is unclear whether these findings might be replicated within a larger sample. Second, it is possible that the social class differences in situational attributions are the result of differences in general cognitive ability. The tendency to emphasize dispositional factors (vis-à-vis situational factors) in causal attribution is termed as the fundamental attribution *error* (Ross, 1977) or correspondence *bias* (Jones, 1979), which suggests that people who have greater cognitive abilities may be less prone to make this error. Indeed, by experimentally manipulating cognitive load, Gilbert, Pelham, & Krull (1988) found that participants with fewer available cognitive resources are more likely to draw dispositional attributions, even when situational attributions are warranted. Therefore, our argument that these attribution patterns reflect important cultural differences (rather than general cognitive abilities) would be bolstered by examining groups that are similar in intellectual ability or by accounting for differences in intellectual ability.

Study 2b

Study 2b sought to expand upon Study 2a by replicating the attribution findings among working-class and middle-class students at a prestigious university. Given the rigorous admissions standards at this institution, students from disparate social class backgrounds are not only likely to be similar in intellectual ability, but they also have all taken at least one college admissions test (ACT and/or SAT). Therefore, these test results can be used to control for potential differences in academic or cognitive ability.

Method

Participants. Seventy-seven European American college students (42 female, 35 male) enrolled in introductory psychology courses at the University of Michigan participated in the study in exchange for partial course credit.

Materials and procedure. In groups of 2-10 people, participants completed the same framed line test and attribution questionnaire as described in Study 2a. In addition, participants completed a demographic questionnaire in which they reported their ACT and SAT scores. When applicable, SAT scores were converted to equivalent ACT scores (conversion table available from College Board, 2002). All respondents reported scores for at least one exam. For participants who reported scores for both exams, the average of the ACT score and converted SAT score was computed. The same definitions of working-class (mother's education = high school diploma or less) and middle-class (mother's education = some college or more) from Study 2a were used in this study.

Results and Discussion

A 2 x 2 ANOVA was conducted with one within-subject factor (attribution response: dispositional vs. situational) and one between-subject factor (social class: working-class vs. middle-class). Preliminary analyses showed no main effect and no interactions for gender, so this variable was not included in the analyses. Once again, there was a main effect of attribution type, $F(1,75) = 35.98$, $p < .001$, such that participants were more likely to make dispositional ($M = 5.78$, $SD = .65$) than situational attributions ($M = 5.16$, $SD = .68$). In addition, consistent with Study 2a, MC participants ($M = 5.25$, $SD = .69$) were much more likely than WC participants ($M = 4.75$, $SD = .51$) to endorse situational attributions, $t(75) = -2.46$, $p < .02$ (Cohen's $d = .82$), whereas there was no difference between WC ($M = 5.77$, $SD = .53$) and MC ($M = 5.78$, $SD = .70$) in

endorsement of dispositional attributions, $t < 1$. Furthermore, both WC and MC endorsed dispositional attributions more strongly than situational attributions, $t(12) = 6.42$, $p < .001$, and $t(63) = 4.78$, $p < .001$, respectively.

Using the same independent and dependent variables, a 2 x 2 analysis of covariance (ANCOVA) was conducted to control for academic ability. To some degree, this analysis is superfluous, since there was no difference in average admissions test scores of WC ($M = 28.0$, $SD = 2.70$) and MC ($M = 28.3$, $SD = 2.42$) participants in the sample, $t < 1$. The ANCOVA findings replicated the previous findings, and there was a significant interaction between attribution type and social class, $F(1,73) = 3.91$, $p = .05$ (see Figure 2.2). There was also no significant relationship between test scores and type of attribution, $F < 1$, which suggests that, within this academically selective sample, attribution style was not associated with general cognitive ability.

This study replicates the findings of Study 2a, which indicates that MC were more likely than WC to endorse situational attributions for explaining behavior. In both studies, the effect size of the social class difference in situational attributions was quite large (*d*'s > .80), whereas there were no differences for dispositional attributions. Furthermore, since there was no social class difference in ACT/SAT scores, the attributional pattern does not merely reflect differences in cognitive or intellectual ability, but instead reflects substantive differences in the way in which working-class and middle-class Americans view the world.[5]

Study 3

Studies 2a and 2b provide convincing evidence for the tendency for middle-class Americans to make greater use of situational attributions than do working-class

Americans. These psychological differences may extend beyond lay theories of human behavior; they might also be apparent in basic visual perception. Cultural psychologists have suggested that there is a link between social orientation and perceptual processes at the cultural level (e.g., Fiske, Kitayama, Markus, & Nisbett, 1998). Therefore, if middle-class Americans are chronically more likely than working-class Americans to attend to social others in their interpersonal relationships and in making causal attributions, then they might also be more likely to attend to their physical surroundings (as opposed to a single object) within their environment.

Method

Participants. Participants were 173 European American college students (121 female, 52 male) from a community college, the University of Michigan, and a branch of a state university on the East Coast, which has a level of prestige between that of the community college and of the University of Michigan. Participants at the East Coast university were enrolled in either an introductory psychology or a psychology research methods course; they were asked to participate in the study at the end of their first day of class and received extra credit for their involvement. Participants from the community college and the University of Michigan were recruited in the manner described in Studies 2a and 2b.

Materials and procedure. Participants completed the framed line test (FLT; Kitayama, Duffy, Kawamura, & Larsen, 2003). In this test, participants are shown a square with a line inside of it. Then participants are shown a second square, which is either larger than, smaller than, or the same size as the original square, and are asked to reproduce the line. In one form of the task, participants must draw a line that is the same

proportion to the square as in the original stimulus; this "relative task" is designed to measure simultaneous attention to an object and its surrounding physical context. In another form, participants must draw a line that is the exact same length as the original (e.g., 30mm); this "absolute task" is designed to gauge one's ability to focus on a single object, independent of its surroundings.

In this study, participants were given a booklet and asked to read the instructions on the front page, which described either the absolute task or the relative task (this was a within-subjects design, and the order was counterbalanced across sessions). The experimenter (a European American male) asked whether there were any questions and then led participants through a sample trial. He explained that they would receive five seconds to look at the square with the line. Then he would tell them to flip the page, and they would have five seconds to draw the line in the new blank square that is provided, without measuring the line with their pens or flipping back to the previous page. After asking once again whether there were any questions, the experimenter began the first task, which contained 12 trials of the FLT. When these trials were completed, the experimenter asked participants to read a set of instructions for another task that is somewhat similar to the first (these were the instructions for the relative or absolute task—whichever one participants had not yet completed). The experimenter then asked whether everyone understood the difference between this task and the preceding task. After answering any questions, the experimenter proceeded with the task, which had the same timing and number of trials as the first task.

The dimensions for 11 out of the 12 stimuli were taken from Kitayama et al. (2003, Studies 1 and 2). However, this procedure differed from the previous study in that

(a) participants used a questionnaire-type booklet with colored paper (as opposed to a single sheet of white paper given for each trial), (b) participants performed the task with other participants in the room (as opposed to individually), and (c) exactly five seconds were given for participants to draw the line (as opposed to working at their own pace). These modifications were enacted to allow multiple participants to complete the task simultaneously. Pilot testing had indicated that five seconds per trial constituted ample time for participants to complete the task. While these changes may have altered the performance of all participants, there is no reason to believe that these changes would differentially affect the performance of working-class versus middle-class participants.

The dependent variables were the average length of error (in millimeters) on the absolute task and on the relative task; that is, lower values for these dependent variables indicate better performance. Once again, working-class was defined as mother's education of high school diploma or less, and middle-class as mother's education of some college or more.

Results and Discussion

A 2 x 2 x 3 ANOVA was conducted with one within-subject factor (FLT task: absolute vs. relative) and two between-subject factors (social class: working-class vs. middle-class, and institution: University of Michigan vs. regional university vs. community college). Preliminary analyses showed that there was no main effect and no interactions for gender, so this variable was not included in the analyses. None of the main effects were significant, and the only significant interaction was the expected FLT task x social class effect, $F(1,171) = 5.08$, $p < .03$ (see Figure 2.3). Specifically, there was no social class difference in performance on the absolute task, $t(175) < 1$, but MC

participants performed better than did WC participants on the relative task, $t(94.17) = 2.180$, $p < .04$. This pattern parallels the findings of Studies 2a and 2b, in which social class differences appear only when considering the surrounding context, not the focal object. In addition, WC performed better (i.e., had smaller errors) on the absolute task ($M = 5.90$, $SD = 2.47$) than on the relative task ($M = 7.08$, $SD = 4.79$), $t(60) = -1.97$, $p = .05$. In contrast, there was no difference for MC in relative task ($M = 5.57$, $SD = 3.35$) and absolute task ($M = 6.03$, $SD = 2.50$) performance, $t(115) = 1.341$, *ns*.

Furthermore, there was no main effect of institution, $F(2,171) = 1.01$, *ns*, which means that students at one college or university did not exhibit better overall perceptual skills than were students at another institution. Moreover, there was no two-way interaction between institution and FLT task and no three-way interaction between institution, FLT task, and social class, F's < 1. Thus, the social class patterns in FLT performance were not driven by students within any one particular sample; in fact, the effect sizes for social class differences on the relative task are remarkably similar across the three institutions (see Figure 2.4).

General Discussion

It goes without saying that American culture strongly embraces the value of independence. We reasoned, however, that exactly how the value of independence is realized might depend, in part, on social and material resources that are available in one's environment. In working-class contexts, where these resources are limited, people tend to be self-reliant and act without the assistance or advice of others. In contrast, in middle-class contexts where resources are highly abundant, people tend to exercise a great deal of personal control, which is typically exhibited through choice and advice-seeking

behavior. Importantly, this emphasis on choice in MC contexts also extends to the formation and maintenance of social networks, which are largely comprised of non-kin friends. To manage these interpersonal relationships—which are potentially short-lived—MC must be more socially attentive than WC, whose social networks are primarily composed of one's family members.

The findings of the present studies strongly supported this theory. In Study 1, consistent with the social expansion hypothesis, MC received more social support from their friends than did WC. Moreover, although WC were more often in contact with their family members than were MC, this contact did not result in greater support from their family. Furthermore, advice-related behaviors and preference for receiving advice were much more common among MC than WC. Finally, Study 1 also yielded the predicted patterns for independence: Compared with MC, WC were more self-reliant, experienced greater perceived constraint, and had less mastery over their lives.

In Studies 2a and 2b, within two samples of college students at very different institutions, MC were more likely to endorse situational attributions for behavior than were WC, but there were no social class differences for dispositional attributions. Moreover, this pattern persisted even when controlling for differences in cognitive ability. Finally, in Study 3, MC performed better than WC on the FLT relative task, which is a measure of diffused visual attention. In contrast, there was no social class difference on the FLT absolute task. Clearly, then, these social class differences are exhibited solely through attention to situational and contextual cues, as opposed to attention to dispositional or focal objects.

These findings are consistent with recent social psychological research that demonstrates important social class differences in modes of agency (Snibbe & Markus, 2005; Stephens et al., 2007) and well-being (Lachman & Weaver, 1998; Markus et al., 2004). The current study expands the theoretical scope of this emerging social class literature in two primary ways. First, the link between the two types of American independence and the nature of social relationships has been illuminated. That is, the form of independence in MC contexts is characterized by "social expansion" in terms of both the nature of social networks and the responsiveness associated with these interpersonal relationships. Second, it shows that the two modes of independence are associated with different tendencies in social and non-social perception. Overall, MC are more attuned than WC to the surrounding context, whether that context involves social situations or more basic visual stimuli. A conceptual figure that captures this general framework is presented in Figure 2.5.

The Root of Social Class Differences: Culture or Intelligence?

An alternative explanation could be that the social class differences for attribution and FLT responses may reflect social class differences in intelligence or cognitive ability. However, we find this explanation to be highly unlikely for several reasons. First, Study 2b statistically controlled for academic ability while assessing attribution responses. Furthermore, not only was standardized test performance unrelated to responses for dispositional vs. situational attributions in Study 2b, but there was also no difference in ability between the two social class groups. As a result, the attribution patterns persisted when controlling for ability. Second, for Study 3, the effect size of the social class difference in the FLT relative task was quite similar among the three colleges and

universities in the sample, which strongly suggests that this tendency is not unique to academically gifted students.

Third, it is unclear why greater intelligence (if such social class differences existed among these participants) would contribute to better performance in the relative task of the FLT, but not the absolute task. In fact, studies show that young children are initially much better at measuring or estimating relative lengths (e.g., as required in the relative task), whereas the ability to ignore contextual information in length estimation (e.g., as in the absolute task) develops relatively later in childhood (Duffy, Huttenlocher, & Levine, 2005; Duffy, Toriyama, Itakura, & Kitayama, 2007). Therefore, if social class differences in FLT performance were driven by intelligence or cognitive ability, one would expect that these differences would be more pronounced for the absolute task (i.e., the skill that develops later in life) than for the relative task. In contrast, the present findings show the exact opposite pattern, which strongly implies a cultural explanation.

Fourth, the interpersonal relationship and independence findings from Study 1 provide a clear framework for interpreting the results in Studies 2a, 2b, and 3. In general, middle-class participants diffused their social attention to friends and family more so than did working-class participants; this broader attention was evident not only through support from friends, but also in the prevalence of, and preference for, giving and receiving advice. Although this form of interpersonal connection does not imply that MC define the self in terms of others (e.g., Markus & Kitayama, 1991), it does suggest that they pay relatively more attention to social others. In contrast, WC were more likely than MC to experience self-reliance (i.e., focusing on the self in behavior and decision-

making). As a result of these multiple influences, WC were less likely to attend to factors outside of the individual or singular object in person perception and visual perception.

Implications

Clearly, as evinced through numerous previous studies, the form of independence prevalent among middle-class Americans diverges greatly from the form of interdependence evident within many East Asian cultures. Although socially expansive independence is associated with attending to others to some degree, MC Americans are far less attuned to social others and peripheral cues than are East Asians (for reviews, see Fiske et al., 1998; Nisbett et al., 2001). Furthermore, European Americans do not define themselves in terms of social others as East Asians do (e.g., Markus & Kitayama, 1991). Rather, this socially expansive independence emphasizes individual choice and action, including the choice of friends and acquaintances, which then results in a need to attend to these potentially ephemeral relationships. That is, heightened interpersonal sensitivity may actually stem from the individualized and unique social networks associated with this form of independence. The association between social relationships and independence across social class groups merits further attention.

Footnotes

[1] These beliefs are, to some degree, related to the Protestant Work Ethic, which is the belief that hard work will result in future success (Weber, 1958). Some studies have shown that the Protestant Work Ethic is more common among WC (Furnham, 1987; Tang & Tzeng, 1991), whereas other studies have shown no social class differences (Aldag & Brief, 1975; Buchholz, 1977). Given the inconsistency of these findings, it is clear that any complete description of WC independence should include much more than an emphasis on hard work.

[2] For most of our *t*-test analyses, Levene's test showed that we could not assume equality of variances. When this occurs, degrees of freedom often take the form of a decimal, as is the case here.

[3] These two tasks were a pictoral version of the relational vs. categorical task from Ji, Zhang, and Nisbett (2004) and a shorter version of the rule vs. family resemblance task from Norenzayan, Smith, Kim, and Nisbett (2002, Study 2). Interestingly, there were no social class differences in these categorization tasks. Since social expansion is unlikely to promote a particular type of categorization, these findings are quite consistent with our theory.

[4] In fact, similar results were obtained for Studies 2a, 2b, and 3 when defining middle-class as both parents with at least some college education and working-class as having at least one parent with no college education.

[5] In addition, we considered the possibility that this narrowed attention may also be explained through belief in a just world (e.g., Hafer & Begue, 2005); that is, people who strongly believe that others deserve the bad things that happen to them may be likely to

ignore situational factors in causal attributions. However, just world beliefs do not differ across social class groups. Within a sample of over 1,200 European Americans, Hunt (2000) found that educational attainment did not predict just world beliefs. Furthermore, studies of multiple British samples yielded the same results (Wagstaff, 1984). Thus, it seems quite unlikely that this alternative explanation could account for these findings.

Table 2.1 Means and standard deviations for independence indices

	Working-class		Middle-class	
Category and index	Mean	*SD*	Mean	*SD*
Personal Control				
Personal mastery	5.78	1.05	5.92	0.93
Perceived constraint	2.86	1.30	2.36	1.05
Self-Reliance				
Self-reliance	3.29	0.66	3.13	0.70
Advice giving and receiving	3.04	1.11	3.34	1.08
Preference for receiving advice	2.66	0.67	2.82	0.66
Social Orientation				
Social support from spouse/partner	3.56	0.59	3.62	0.52
Social support from family	3.42	0.63	3.45	0.57
Social support from friends	3.21	0.68	3.29	0.61

Figure 2.1 Endorsement of dispositional and situational attributions within a community college sample (Study 2a)

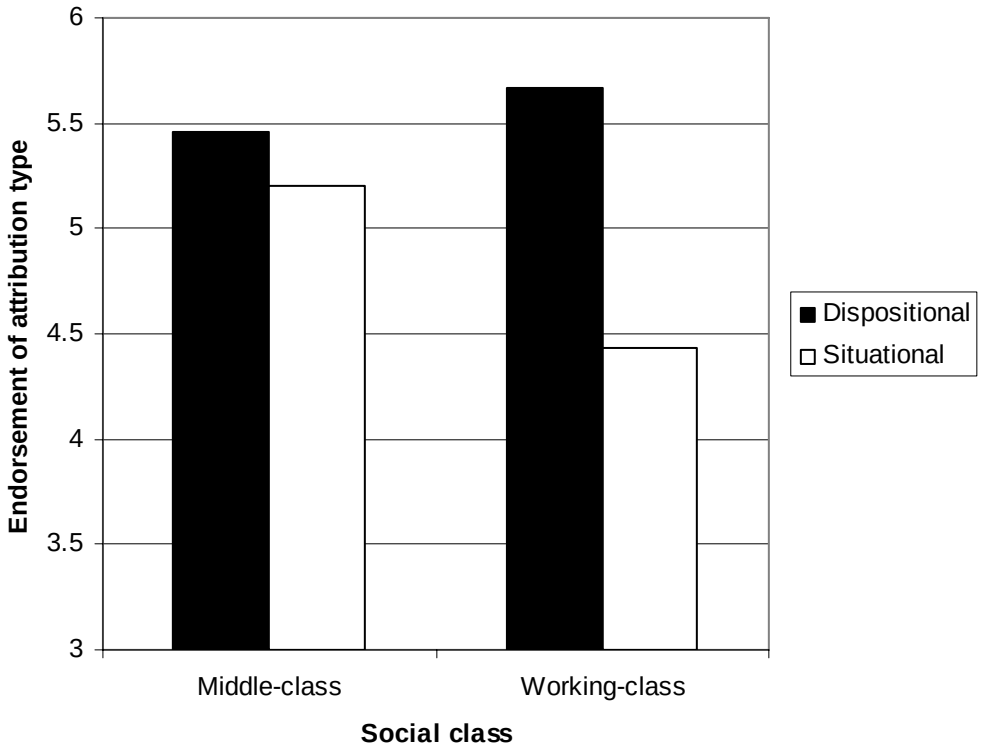


Figure 2.2 Endorsement of dispositional and situational attributions, controlling for standardized test scores, within a sample from the University of Michigan (Study 2b)

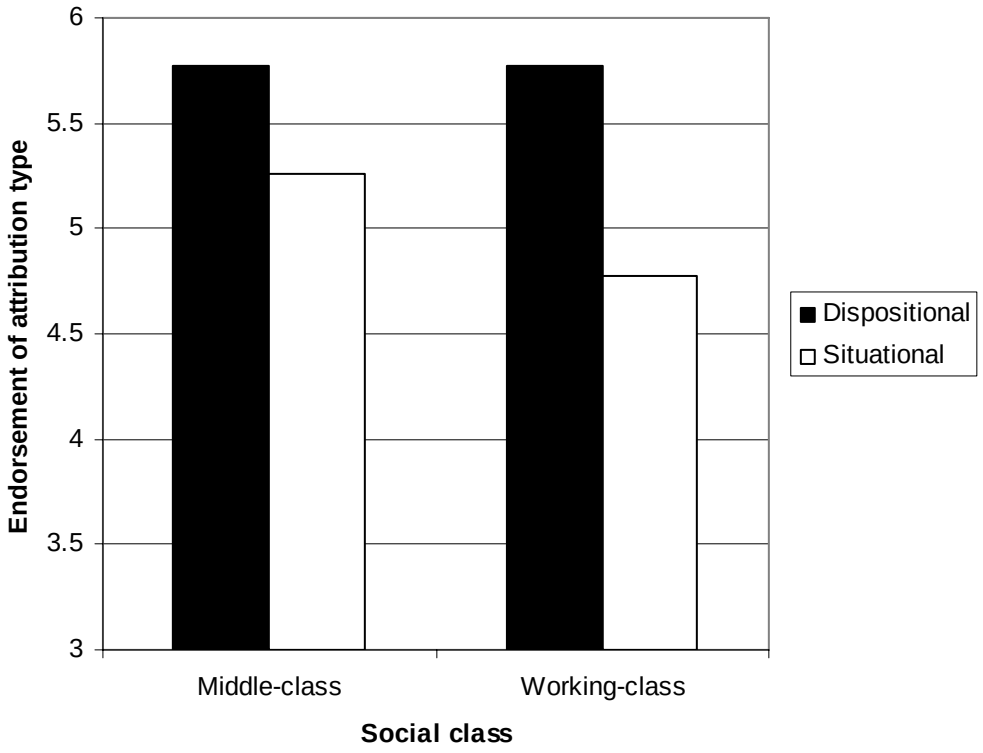


Figure 2.3 Performance on the absolute and relative tasks of the framed line test (FLT) for participants at all three institutions (Study 3). Note that smaller errors (measured in mm) indicate better performance.

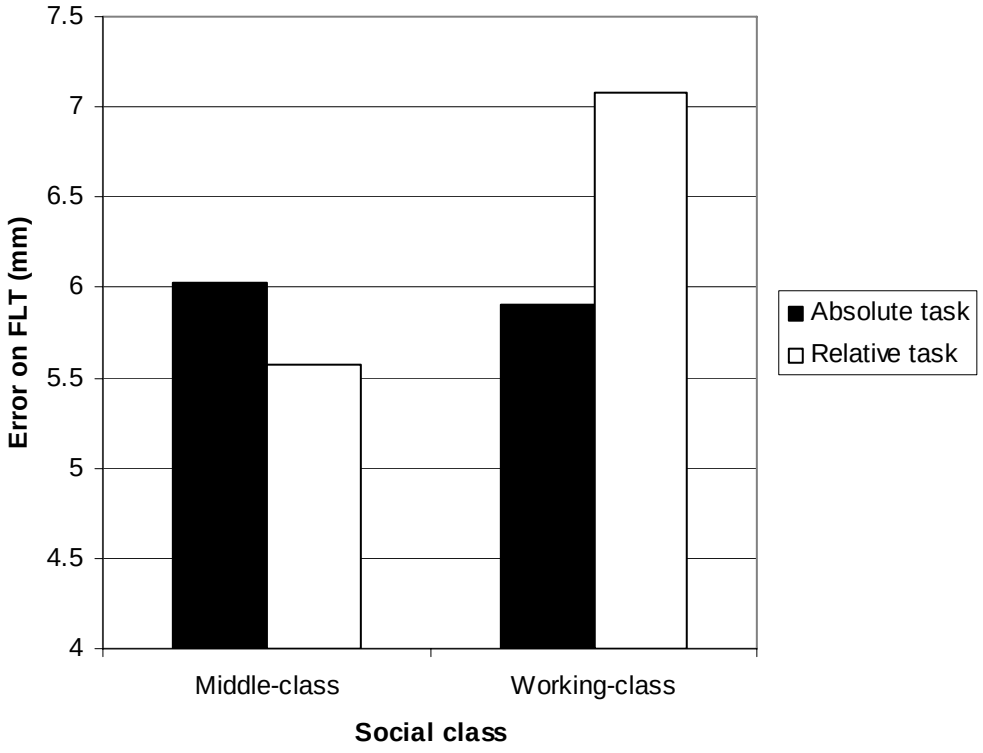


Figure 2.4 Effect sizes of social class differences in performance on the framed line test (FLT) within each institutional sample (Study 3). Note that positive values reflect better performance (i.e., smaller errors) among middle-class (relative to working-class) participants.

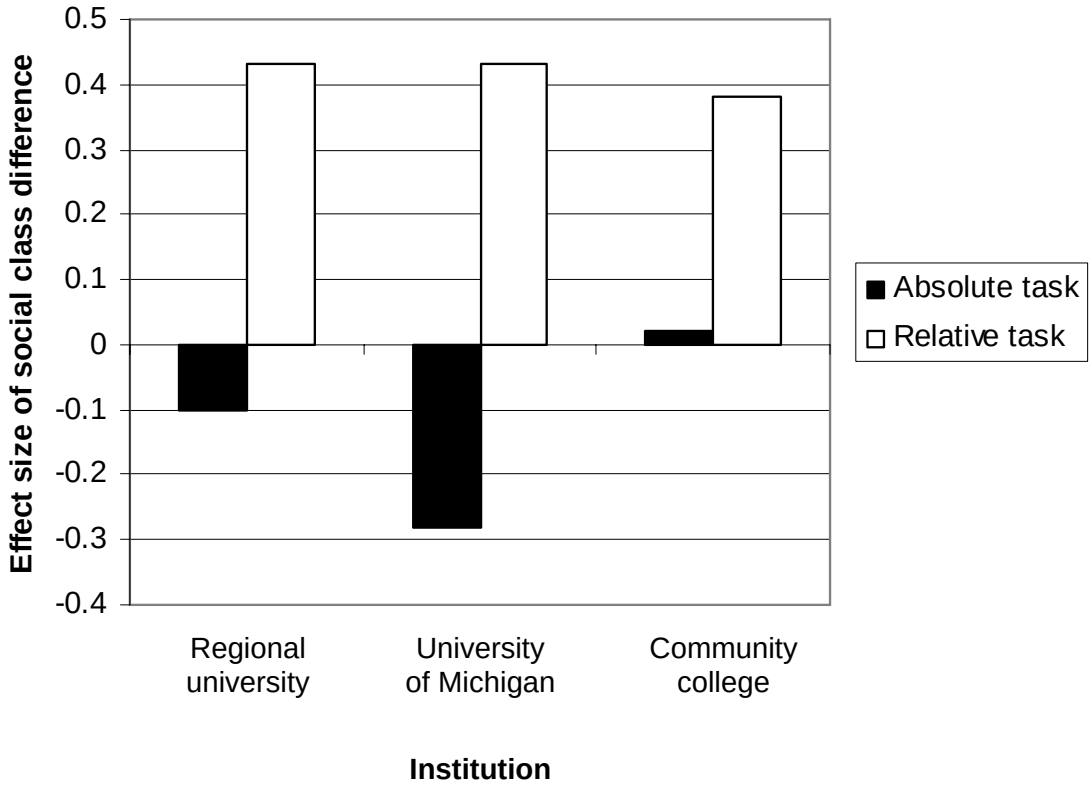
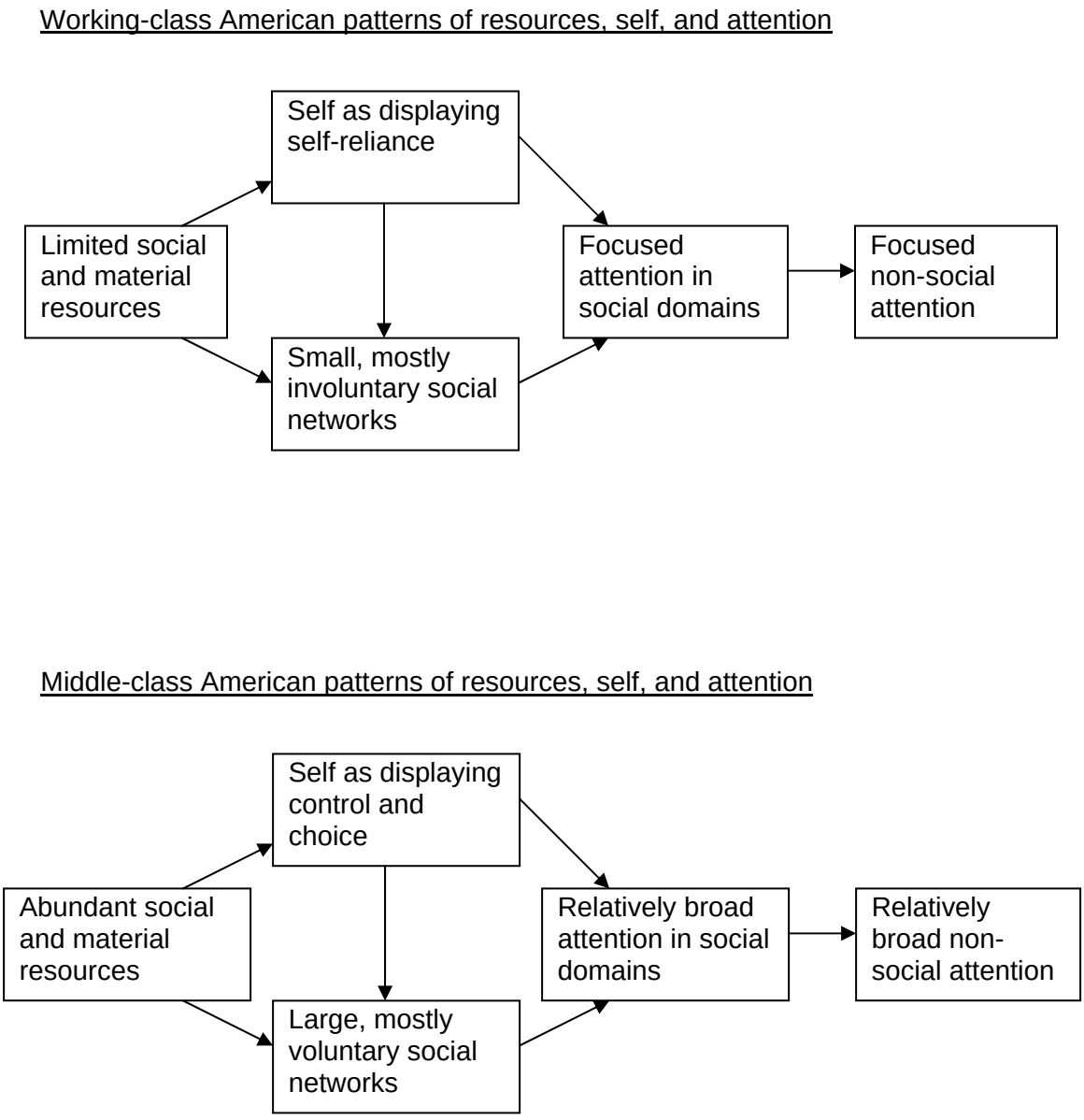


Figure 2.5 Conceptual model of socio-cultural processes for working-class and middle-class Americans



Appendix A.

Means and Standard Deviations for Independence Items

Factor and item	Mean	SD
Personal Mastery (seven-point scale; α = .69)		
I can do just about anything I really set my mind to.	2.11	1.38
When I really want to do something, I usually find a way to succeed.	2.00	1.29
Whether or not I am able to get what I want is in my own hands.	2.62	1.55
What happens to me in the future mostly depends on me.	1.97	1.38
Perceived Constraint (seven-point scale; α = .85)		
I have little control over the things that happen to me.	5.43	1.69
I often feel helpless in dealing with the problems of life.	5.16	1.89
There is really no way I can solve the problems I have.	6.01	1.44
What happens in my life is often beyond my control.	5.21	1.89
I sometimes feel that I am being pushed around in my life.	5.31	1.90
Other people determine most of what I can and cannot do.	5.86	1.56
There is little I can do to change the important things in my life.	5.33	1.88
There are many things that interfere with what I want to do.	4.06	1.96
Self-Reliance (four-point scale; α = .69)		
I would rather deal with problems by myself.	1.74	0.84
I don't like to ask others for help unless I have to.	1.79	0.91
Asking others for help comes naturally for me.	3.23	0.84
Preference for Receiving Advice (four-point scale; α = .61)		
When I'm upset about something, I feel better after I talk it over with others.	2.18	0.89
I like to get advice from others before I make a decision.	2.41	0.85
I prefer to make decisions without input from others.	2.72	0.94
Advice Giving and Receiving (eight-point scale; α = .66)		
How often do any friends, relatives, or coworkers turn to you for advice or help with a personal or practical problem they have?	3.53	1.37

How often do you turn to a friend, relative, or coworker for advice or help with a personal or practical problem you have?	2.73	1.18
Support from Friends (four-point scale; α = .88)		
How much can you open up to [your friends] if you need to talk about your worries?	1.87	0.85
How much do they understand the way you feel about things?	1.88	0.74
How much do your friends really care about you?	1.62	0.68
How much can you rely on them for help if you have a serious problem?	1.70	0.80
Support from Family (four-point scale; α = .83)		
How much can you open up to [your family members] if you need to talk about your worries?	1.78	0.88
How much do they understand the way you feel about things?	1.84	0.80
How much can you rely on them for help if you have a serious problem?	1.41	0.74
Not including your spouse or partner, how much do members of your family really care about you?	1.27	0.56
Support from Spouse/Partner (four-point scale; α = .91)		
How much does your spouse or partner appreciate you?	1.49	0.71
How much can you open up to your spouse or partner if you need to talk about your worries?	1.54	0.79
How much can you rely on your spouse/partner if you have a serious problem?	1.29	0.64
How much does your spouse or partner understand the way you feel about things?	1.72	0.79
How much does your spouse or partner really care about you?	1.21	0.52
How much can you relax and be yourself around your spouse or partner?	1.28	0.61
Frequency of Contact (treated as separate items; each uses a six-point scale)		
How often are you in contact with any of your friends – including visits, phone calls, letters, and electronic mail messages?	3.18	1.53
How often are you in contact with any of your family members – including visits, phone calls, letters, and electronic mail messages?	3.33	1.67

Note. For all items, lower values represent higher frequencies or levels of agreement.

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Chapter 3:

Feeling Happy versus Feeling Healthy: Social Class Differences in the Meaning of Psychological and Physical Well-Being

In general, being "well" can take two different forms. One way of being well is psychological, which can be described as being satisfied with one's life, having high positive affect and low negative affect, and successfully confronting the existential challenges of life (Keyes, Shmotkin, & Ryff, 2002). An additional way of being well is physical, which can be captured in terms of subjective health, objective indicators of health problems and symptoms, and limitations that one's health places on daily activities (e.g., Lachman & Weaver, 1998). Although these forms are clearly related to each other, the physical and the psychological may each constitute a distinct type of human flourishing and suffering (Shweder, 1994).

However it is defined, the degree to which people experience flourishing and suffering varies substantially by social class. Not surprisingly, people from lower social class backgrounds have lower levels of physical health (e.g., Lin, Rogot, Johnson, Sorlie, & Arias, 2003; Williams & Collins, 1995; for a review, see Adler et al., 1994) and psychological well-being (e.g., Ryff, Keyes, & Hughes, 2003; Tomes, 1986; Witter, Okun, Stock, & Haring, 1984). In their review, Adler and colleagues (Adler et al., 1994)

showed that health disparities are apparent not only between rich and poor, but also along the entire social class continuum. These findings strongly suggest that social class differences in health are the product of much more than limited health care or economic resources; for example, psychological stress, psychological characteristics, and health behaviors may account for some of these disparities (e.g., Marmot, Shipley, & Rose, 1984; Ruberman, Weinblatt, Goldberg, & Chaudhary, 1984).

However, little attention has been paid to how the meaning of health and well-being may vary across socioeconomic contexts. That is, people in certain social class groups may display distress (or flourishing) primarily through physical well-being, whereas others may primarily display distress and well-being psychologically. In this study, we expected to find that middle-class Americans (MC) would be more likely to display well-being psychologically, whereas working-class Americans (WC) would be more likely to display well-being physically.

Somatization and Psychologization across Social Class Groups

Physical health is a concern among many working-class Americans. Regardless of race or gender, Americans who have earned at least a college degree will live several years longer than those who have earned a high school degree or less (Lin et al., 2003). Moreover, social class differences in all aspects of health, ranging from chronic disease to aches and pains, are quite substantial throughout the lifespan (Adler et al., 1994). Concerns about health and "feeling good" physically are also reflected in cultural products and artifacts. For instance, Markus, Curhan, and Ryff (2007) conducted an analysis of advertisements in magazines whose audiences are either primarily WC or primarily MC. They found that magazines with a primarily WC audience are more likely

to contain themes related to health or sensory experiences, including health promotion, comfort/pain relief, and eating/drinking.

Conversely, middle-class American environments are more likely to emphasize the importance of psychological phenomena. Snibbe and Markus (2005) and others suggest that middle-class European American models of agency emphasize the expression of one's unique preferences. That is, choice is primarily important insofar as it reflects one's psychological states. For example, Snibbe and Markus show that MC exhibit greater psychological reactance to having their choice usurped than do WC. In contrast, WC models of agency emphasize behavioral dimensions, such as loyalty, reliability, and cross-situational consistency. Importantly, these attributes can only be defined through their behavioral components (i.e., psychological states are relatively unimportant), whereas middle-class agency functions to express psychological preferences and feelings that can exist independent of action.

Research on child rearing is consistent with these models of agency. Through their interactions with their children, WC place a greater emphasis on behavior and actions than on psychological states. In his classic work, Kohn (1969) shows that WC parents tended to punish their children on the basis of violating rules and orders; these punishments are more likely to reflect the consequences of children's actions (e.g., breaking something or hurting someone) than children's intent in doing so. In addition, WC parents are generally more likely to administer physical punishment than are MC parents; this tendency shows that misbehavior (typically defined through physical action) is also more often punished through physical means.

In contrast, MC mothers are much more likely than WC mothers to attend to psychological states and to emphasize sharing one's preferences. For example, MC parents often ask children a variety of questions; these questions can serve, in part, to have children express their preferences and emotions (Kusserow, 2004; Lareau, 2003). For example, when disciplining their children, MC parents often do not issue direct orders. Instead, they tend to ask their children leading questions, such as "Do you think that was a good idea?" or "Do you think that was a nice thing to do?" (Kusserow, 2004). The importance of psychological factors is also evident in parents' willingness to take action: MC parents are more likely than WC parents to punish on the basis of children's intent (Kohn, 1969).

Defining Social Class: Educational Attainment versus Income

Traditionally, social class or socioeconomic status has been defined in terms of educational attainment, income, occupational status, or some combination of these (Argyle, 1994; Dutton & Levine, 1989). Since these three measures are often at least moderately correlated with one another, it sometimes does not matter empirically which is used as an indicator of social class. That is, the results of statistical analyses would be similar regardless of how class is defined.

However, in other instances, the particular measure used is both theoretically and empirically significant. Most of the studies discussed above examined cultural differences in the degree to which psychological states are emphasized. It is likely that these differences are not caused by income or resource disparities, but instead by the cultural norms that stem from generations of growing up in a certain socioeconomic milieu. As Bourdieu (1977) argues, cultural norms, values, conceptions, and dispositions

vary substantially (if not primarily) as a function of educational attainment. In addition, educational attainment is much more highly correlated with occupational prestige than is income, and a composite measure of three forms of capital—social, human, and material—is much more strongly related to education than to income (Oakes & Rossi, 2003). Especially since material capital is purely financial (and thus closely related to income), these findings strongly emphasize the effectiveness of education as the most useful socioeconomic predictor of socio-cultural factors. Consistent with this view, recent cultural psychological research on social class has used education exclusively to define social class groups (e.g., Bowman, Kitayama, & Nisbett, 2008; Markus, Ryff, Curhan, & Palmersheim, 2004; Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007).

To offer some real-world examples, we would characterize a teacher at a private high school—who typically has at least a bachelor's degree, yet earns a surprisingly small wage—as living in a primarily MC environment. Thus, we would expect her to exhibit tendencies toward psychologized well-being that are characteristic of MC. In contrast, we would characterize a factory worker at General Motors—whose income exceeds that of many college-educated adults—as living in a primarily WC environment. As a result, he would likely exhibit tendencies toward physical health that more closely resemble WC patterns. In sum, we anticipated that educational attainment would be the indicator of social class that best predicts a cultural emphasis on psychological well-being (vis-à-vis physical health). As we will demonstrate, this choice of definition is crucial to our findings.

Present Research

Overall, we hypothesized that well-being would be expressed among WC more through physical health, whereas well-being would be expressed among MC more through psychological well-being. We operationalized this broad prediction through the following specific hypotheses. First, we expected that the intercorrelations among psychological well-being measures would be higher for MC (i.e., people who had earned at least a bachelor's degree) than for WC (i.e., people who had attended some college or less), whereas the reverse would be true for physical health measures. Second, we hypothesized that the association between psychological well-being measures and physical health would be higher for WC than for MC, since WC would tend to base these global psychological evaluations on their perceptions of physical health. Third, we predicted that psychosocial factors would be positively associated with psychological and physical outcomes for all participants, but we expected that psychosocial factors would be stronger predictors of psychological well-being for MC, whereas these factors would be stronger predictors of physical health for WC. To test these hypotheses, the current study used a nationally representative sample of Americans adults in their midlife (i.e., 25-74 years old).

In addition, we wanted to reconcile these hypotheses with previous research. Lachman and Weaver (1998) used the same nationally representative dataset to explore the role of sense of control as a moderator of social class differences (as defined by income) in health and psychological well-being. Some of their findings were quite consistent with our expectations across education groups: Sense of control was more strongly associated with health outcomes for lower-income than for higher-income Americans. However, they also found the same moderation effect for life satisfaction and

depressive symptoms, whereas we predicted that the opposite pattern would occur. That is, we hypothesized that psychosocial factors (including sense of control) would be stronger predictors of psychological well-being among MC than among WC when social class is defined in terms of educational attainment.

The particular measure of social class may be critical to explain these diverse predictions. In this context, income primarily serves as an indicator of financial and material resources. Therefore, people who have limited financial resources will tend to be less satisfied with their lives, on average, than those with greater income (Diener & Biswas-Diener, 2002). However, if someone feels a strong sense of control despite having relatively low levels of financial resources, she is likely to be more satisfied with her life. This pattern is exactly what Lachman and Weaver (1998) found. On the other hand, educational attainment may serve as a better proxy for the cultural factors that vary across social class groups (e.g., Bourdieu, 1977). Therefore, to the degree that MC norms emphasize psychological forms of well-being and WC norms emphasize physical health, these well-being tendencies will be reflected through group differences in educational attainment. Therefore, in this study, we tested how psychosocial variables moderated both education and income differences in psychological and physical well-being.

Method

Data Source and Participants

Data from the National Survey of Midlife Development in the United States (MIDUS) was used. This survey was based on a nationally representative random-digit-dial sample of non-institutionalized, English-speaking adults in the 48 contiguous states, aged 25-74. The sample was stratified by age and sex; men and older adults were

oversampled. Data were gathered from one phone interview (which took approximately 30 minutes to complete) and two self-administered mail questionnaires (approximately one hour each). Participants received $20 and a boxed pen for their involvement with the study. The response rate was 70% for the phone interview and then 87% for the follow-up mail questionnaires, yielding a total response rate of 70% x 87% = 61%.

Only European Americans were included in the present analyses, resulting in a total of 2,586 participants (1,260 male, 1,326 female). This decision was made for several reasons. First, previous cultural studies of social class and well-being have used MC samples that were primarily or exclusively White (e.g., Kohn, 1969; Kohn & Schooler, 1983; Kusserow, 2004; Snibbe & Markus, 2005); thus, it is unclear to what degree this form of psychologized MC well-being may generalize to other racial groups.[1] Second, it can be very difficult to disentangle the effects of race and class, since these variables are simultaneously related to each other and to health and well-being in complex ways (e.g., Krieger, Rowley, Herman, Avery, & Phillips, 1993; Williams, Yu, Jackson, & Anderson, 1997). Performing analyses on only one racial group obviates this potential problem. Third, in the overall MIDUS dataset (and in the population at large), White participants are far more likely than Black and Native Americans participants to have received at least a bachelor's degree. If included in the analyses, these minority groups would have been largely overrepresented among the working-class.

For the sample used in this study, 787 participants had received at least a bachelor's degree, and 1,799 participants had attended some college or less.

Measures

Multiple indices of social support and personal control were used. The social support scales were drawn from previous studies by Grzywacz & Marks (1999), Schuster, Kessler, & Aseltine (1990), and Whalen & Lachman (2000). Specifically, four items asked about support from one's family, and four more asked about support from non-kin friends (e.g., "How much can you open up to [your friends] if you need to talk about your worries?"). In addition, four personal mastery items (e.g., "I can do just about anything I really set my mind to") and eight perceived constraint items (e.g., "I have little control over the things that happen to me") from scales in Lachman and Weaver (1998) were also used. The presence of four distinct factors was confirmed through a principal components factor analysis with oblique rotation: social support from family ($\alpha = .83$), social support from friends ($\alpha = .88$), personal mastery ($\alpha = .69$), and perceived constraint ($\alpha = .85$). Each index was computed as a mean-scaled average of the relevant items. When applicable, items were reverse-coded so that high values always represented high levels of the particular construct. Moreover, to simplify interpretation of the findings, the perceived constraint factor was coded to represent a lack of constraint; thus, all psychosocial factors were framed as having potential positive influences on psychological and physical well-being. For use in the regression analyses (discussed later), the psychosocial variables were standardized with a mean of 0 and a standard deviation of 1. This practice serves to reduce multicollinearity among predictor variables when interaction terms are present (Jaccard, Turrisi, & Wan, 1990).

Several measures of psychological well-being were also included.[2] A six-item scale measured positive affect (e.g., "During the past 30 days, how much of the time did you feel cheerful?"), and another six-item scale measured negative affect (e.g., "During

the past 30 days, how much of the time did you feel nervous?") (see Mroczek & Kolarz, 1998). Furthermore, a single item gauged overall life satisfaction ("At present, how satisfied are you with your life?"). In addition, scales for each of the six dimensions of Ryff's (1989) multidimensional model of eudaimonic well-being were included. (Note that the Ryff scales are often referred to as measuring "psychological well-being," but since we are using this phrase to describe a broader group of constructs that includes subjective well-being, we will refer to the Ryff measures solely as eudaimonic well-being.) Once again, a factor analysis showed that positive affect ($\alpha = .91$), negative affect ($\alpha = .86$), and eudaimonic well-being ($\alpha = .76$) represented three coherent and distinct constructs. As expected, the life satisfaction item did not clearly load onto any single factor, so this item was kept as a separate measure.

Moreover, several measures of physical health and well-being were included. These included numerous items pertaining to the presence of chronic conditions (e.g., diabetes, asthma), the frequency of somatic symptoms (e.g., headaches, joint stiffness), the severity of functional limitations resulting from health conditions (e.g., bending, kneeling, or stooping), subjective physical health ("In general, would you say your physical health is poor, fair, good, very good, or excellent?"), and subjective overall health ("How would you rate your health these days?"). When factor analyses were attempted, the resulting factors did not make sense empirically or theoretically; therefore, scales were created on the basis of a priori theoretical conceptions. The five health measures included an index of 29 chronic conditions ($\alpha = .71$), an index of eight somatic symptoms[3] ($\alpha = .74$), an index of nine functional limitations ($\alpha = .93$), a single item gauging overall health, and another single item gauging physical health.

In addition, several demographic indicators were used in the analyses. These included gender (1 = male, 2 = female), age, marital status (0 = not married, 1 = married), educational attainment (0 = some college or less, 1 = bachelor's degree or higher), and total household income (0 = less than $25,000, 1 = $25,000 to $49,999, and 2 = $50,000). The income categories were identical to those used by Lachman and Weaver (1998). Consistent with recent cultural psychological literature on social class (e.g., Bowman et al., 2008; Snibbe & Markus, 2005), we refer to participants with at least a bachelor's degree as middle-class (MC) and those with some college or less as working-class (WC). This differentiation by educational attainment serves as the basis for conducting subgroup analyses.

Results and Discussion

Educational Attainment and Levels of Psychosocial, Psychological, and Physical Health

T-tests were conducted to compare mean differences in health, well-being, and social support across educational attainment. As expected, MC reported much higher levels of psychological well-being and physical health than did WC (see Table 3.1). That is, relative to WC, MC reported better overall and physical health, along with fewer chronic conditions, somatic symptoms, and functional limitations. Moreover, MC had greater life satisfaction, positive affect, and eudaimonic well-being, as well as lower negative affect (p's < .001, except for positive affect, p = .05). Social class patterns were similar for psychosocial variables. MC reported greater social support from friends, greater personal mastery, and greater lack of constraint (i.e., less perceived constraint) than did WC, p's < .005. There was no significant difference in social support from family members.

Relationships among Psychological and Physical Health Measures

Next, we examined Pearson correlations among the various psychological well-being measures and among physical health measures. As shown in Table 3.2, the correlations among psychological measures were generally higher for MC than for WC. These findings support our expectation that psychological well-being is a more salient construct among MC. Interestingly, this social class pattern only occurred for positive aspects of psychological well-being: There were significant differences in all correlations between positive psychological well-being measures, whereas no differences were found for any correlation with negative affect.

As expected, the opposite overall pattern occurred for physical health; that is, higher correlations among health measures were found among WC than among MC (see Table 3.3). These results were quite strong, as nine of the 10 correlations showed significant social class differences (p's < .05). An alternative to the cultural explanation could be that some of these effects may be the product of differences in high-quality health care. For example, it might be the case that chronic conditions among WC are associated with relatively higher levels of somatic symptoms simply because these individuals do not typically receive the same quality of care with which to manage these conditions effectively. However, this alternative explanation cannot account for the higher correlations for WC among other variables, such as between somatic symptoms and self-reported levels of overall health and physical health. Thus, it seems that these social class differences occur because WC conceptualize physical health as a single, salient construct more so than do MC.

As noted earlier, mean differences were present for all psychological well-being and physical health variables across social class groups. Therefore, it is possible that some of these correlational findings may be the product of working-class participants' having greater variance than middle-class participants on these measures (the Levene's tests for equality of variance were significant for all variables, p's < .01, signifying variance differences across groups). Importantly, this alternative explanation cannot account for the psychological well-being findings, since having a broader range on the dependent variables would result in WC's having stronger relationships than did MC. Instead, we found that the relationships among the psychological well-being variables were stronger for MC than for WC. Thus, the limited range of these variables among MC may actually be attenuating the existing findings.

However, this artifactual explanation is a possibility for the health-related outcomes, since we found stronger relationships for WC than for MC. Therefore, we conducted the same analyses with a restricted sample. Since most of the significant correlations and regression coefficients (to be discussed later) occurred for the two self-report measures, we reduced the range of these variables by removing all participants who reported either having poor physical health and/or having overall health that was in one of the bottom two categories. In other words, we removed 20% of the range from the physical health variable and 18% of the range from the overall health variable. This truncation typically reduces the relationships between variables and thus decreases the likelihood of finding significant differences on any inferential test (see Weiss, 2007). Indeed, in the restricted sample, virtually all of the correlations and regression coefficients were smaller than with the full sample. Nevertheless, we found that most of

the correlations that showed significant social class differences in the full sample analyses remained significant or marginally significant with the truncated sample. Thus, these results are not the product of a statistical artifact, but instead reflect substantive differences in the meaning and experience of well-being.

Moreover, we examined whether the correlations between physical health measures and psychological well-being measures differed across social class. As shown in Table 3.4, WC tended to exhibit stronger correlations (i.e., further from zero) than did MC. Although one correlation pair differed significantly in the opposite direction, WC showed significantly higher correlations on nine of the 20 correlations, and a tenth correlation was also marginally significant in the expected direction. Overall, 17 of the 20 correlations were larger (in terms of absolute value) for working-class than for middle-class participants, which is a greater proportion than would be expected by chance, $\chi^2(1) = 9.80$, $p < .005$. We conducted the same analyses with the truncated sample described above and found that most of the significant differences in correlations remained at least marginally significant. These findings support our hypothesis that working-class Americans use their perceptions of physical health to inform their perceptions of psychological well-being.

Psychosocial Factors Predicting Psychological Well-Being

We performed a series of ordinary least squares (OLS) multiple regressions using psychological well-being and physical health measures as outcome variables. Initially, these analyses were performed separately for working-class and middle-class participants. In Block 1, gender, age, and marital status were the independent variables, with a psychosocial factor (personal mastery, lack of constraint, support from friends, or

support from family) entered as an additional independent variable in Block 2. Because the psychosocial indices were all moderately correlated with one another (.18 < *r*'s < .45), only one psychosocial factor was added in each regression. That is, for instance, four regression equations were created using life satisfaction as an outcome; all of these included gender, age, and marital status, but one also added support from family, another had support from friends, a third included personal mastery, and the final used lack of constraint. This use of multiple analyses is preferable not only as a means of reducing collinearity, but the results also make much more conceptual sense than if all psychosocial factors were entered into one equation. For instance, it is unclear how one should interpret the independent effect of personal mastery when partialling out lack of constraint, as these two constructs are quite closely related.[4]

The results for these analyses were consistent with expectations and are shown in the first two columns for each dependent variable in Table 3.5 (i.e., the columns labeled "WC" and "MC"). That is, the relationships between psychosocial factors and three of the four psychological well-being variables (life satisfaction, positive affect, and eudaimonic well-being) were positive for both WC and MC, suggesting that psychosocial factors promote—or are at least positively associated with—psychological well-being for all European Americans. Also as expected, these patterns were in the opposite direction for negative affect, such that higher levels of control and social support were associated with lower negative affect.

More central to our primary hypotheses, we conducted multiple regressions with all participants to determine whether the relationship between psychosocial factors and psychological well-being varied by social class. For these analyses, the independent

variables were entered in a single block that included gender, age, marital status, education, income, a psychosocial measure, and the interaction between education and the psychosocial measure. As with the previous analyses, four separate regressions were conducted for each dependent variable, using only one psychosocial factor per regression equation. As predicted, the relationships between psychosocial factors and psychological well-being measures were significantly stronger among MC than among WC, particularly for life satisfaction and positive affect.[5] Overall, seven of the interactions between education and psychosocial variables were significant and an eighth was marginally significant; all of these effects were in the expected direction. Moreover, although the education x psychosocial factor interactions were generally not significant predictors of negative affect and eudaimonic well-being, they were largely in the expected direction. Overall, 14 of the 16 interaction terms with education were in the predicted direction, which is more than would be expected by chance, $\chi^2(1) = 9.00$, $p < .005$.

Psychosocial Factors Predicting Physical Health

The same regression analyses were conducted for physical health outcomes, and the findings were once again consistent with our hypotheses. When examining WC and MC separately and controlling for gender, age, and marital status, all psychosocial variables were positively associated with self-rated health and negatively associated with functional limitations and objective health conditions (see the first two columns under each DV in Table 3.6). However, as predicted, the relationships between psychosocial variables and health outcomes were stronger for WC than for MC. In addition, these patterns were particularly pronounced for subjective ratings of overall and physical health. For instance, as shown in Table 3.6, personal mastery, lack of constraint, and

support from friends explain about 2-9 times as much variance in overall health and physical health for WC than for MC. When conducting regression analyses on the entire, five of the eight interactions predicting self-reported global measures of health were significant, and all eight were in the expected direction, which is significantly greater than what would be expected by chance, $\chi^2(1) = 8.00$, $p < .005$.[6] In addition, for analyses predicting functional limitations, significant interactions between education and both personal control variables were apparent, and all four interactions were in the expected direction.

Thus, it seems that education is a particularly strong moderator of the relationship between psychosocial factors and perceptions of health (i.e., overall health and physical health) and between psychosocial factors and reactions to health (i.e., functional limitations). In contrast, education is a weak moderator of the relationship between psychosocial factors and more objective measures of health (i.e., chronic conditions and somatic symptoms). Specifically, only one significant relationship was found for chronic conditions and somatic symptoms (lack of constraint predicting chronic conditions), and only three of the eight coefficients were in the expected direction.

Moreover, the interactions between education and sense of control more often accounted for variation in health outcomes than did the interactions between education and social support. Seven out of the eight significant interaction terms were found for personal control variables, and nine out of the ten interactions involving control were in the predicted direction; this pattern for the direction of findings is greater than what would be expected by chance, $\chi^2(1) = 6.40$, $p < .02$. On the other hand, only one of the

education x social support interactions was significant, and only six of the ten interactions were in the expected direction.

Finally, we conducted the same regression analyses using the truncated sample to ensure that these findings do not simply reflect the greater range of values for WC participants. For both psychological well-being and physical health outcomes, we found that most of the significant interaction terms in the regressions remained significant or marginally significant when using this reduced sample, which provides strong evidence for a cultural interpretation of these results.

Psychosocial Factors Predicting Well-Being across Income Groups

The regressions for the full sample were re-conducted using interactions with income instead of education. That is, gender, age, marital status, education, income, a psychosocial factor, and the interaction between income and the psychosocial factor served as independent variables, and an indicator of psychological or physical well-being served as the dependent variable. For psychological well-being measures, the results were quite mixed. Recall that in Lachman and Weaver's study (1998), the relationships between psychosocial factors and psychological well-being were stronger for people from lower-income households than for those with higher-income households. Some results were consistent with this pattern. As shown in Table 3.7, two interactions were marginally significant in this direction (both of these findings occur for family support; note that this pattern is indicated by a positive sign for negative affect and a negative sign for all other psychological well-being variables). However, three interactions were significant or marginally significant in the opposite direction, such that the effects of psychosocial factors were stronger for higher-income than lower-income participants.

Thus, in this sample, income has no consistent moderating effect on the relationship between psychosocial factors and psychological well-being for European Americans.

For health outcomes, there was solid support for Lachman and Weaver's (1998) original findings. The effects of personal mastery, lack of constraint, and support from friends were stronger predictors of functional limitations for lower-income participants than for higher-income participants. Personal mastery was also a stronger predictor of overall health for lower-income participants than for higher-income participants. Overall, 13 of the 20 interactions were in the predicted direction, but this pattern was not greater than what would be expected by chance, $\chi^2(1) = 1.80$, *ns*.

General Discussion

Social Class and Forms of Well-Being

In sum, our findings support the hypothesis that middle-class European Americans tend to exhibit well-being psychologically, whereas working-class European Americans tend to exhibit well-being physically. First, correlations among psychological well-being measures were higher for MC than for WC, whereas correlations among physical health measures were higher for WC than for MC. Second, the correlations between psychological well-being measures and physical health measures were higher for WC than for MC, which suggests that physical health plays a greater role in informing perceptions of well-being for WC. Third, multiple regression analyses indicated that the relationships between psychosocial factors and psychological well-being were stronger for MC, whereas the relationships between psychosocial factors and physical health were stronger for WC. Moreover, these results cannot be explained by multicollinearity in the

regression models or by social class differences in the variance of psychological well-being or physical health measures.

Some detailed aspects of these findings merit further discussion. It seems that positive aspects of psychological well-being may be particularly important for MC. For the psychological well-being correlations, significant social class differences were found for all comparisons involving two positive measures (i.e., life satisfaction, positive affect, and eudaimonic well-being), whereas no correlations with negative affect differed across groups. Moreover, in the regression analyses, almost all social class interaction terms for life satisfaction and positive affect were significant, and every interaction term for life satisfaction, positive affect, and eudaimonic well-being was in the expected direction. Conversely, no significant interactions appeared for negative affect, and two of the four interactions were in the opposite direction. Thus, it seems that the meaning and manifestation of psychological well-being vary in general between MC and WC, but these social class differences may be even more substantial for positive aspects of well-being.

In addition, personal control was a much stronger moderator of social class differences in physical health than was social support. Almost all significant interactions for health outcomes occurred for personal mastery and lack of constraint, whereas only one such interaction occurred for support from family or from friends. Thus, sense of control may play a particularly strong role in fostering positive health outcomes for WC. However, the cross-sectional nature of the data in this study makes drawing causal conclusions quite difficult, especially since physical health and personal control display reciprocal effects over time (Kitayama & Bowman, 2008). Furthermore, sense of control

is a complex variable that is informed by a variety of life experiences. In other words, an intervention to improve sense of control may not yield concomitant gains in health outcomes (or reduce social class differences in these outcomes), since one's overall sense of control may serve as a proxy for many previous unmeasured experiences and psychological reactions to those experiences.

Overall, education served as a much stronger moderator than did income, and the patterns for education were quite consistent with our cultural explanation. Education serves as a better indicator of the meanings, values, and norms associated with WC and MC socio-cultural contexts. One important aspect of these contexts, we have argued, is the meaning and salience of physical well-being for WC and psychological well-being for MC. As a result, we found stronger relationships among sense of control and psychological well-being for MC than for WC, since well-being is primarily manifested psychologically in MC contexts. In addition, given the emphasis on behavior and physical well-being in WC contexts, we expected to find the reverse pattern for physical health outcomes. This is exactly what we found.

In contrast, income likely serves as an indicator of financial resources. Thus, the moderating effect associated with income and psychological well-being reflects the degree to which sense of control allows people with lower household incomes to compensate psychologically for a relative dearth of tangible, material resources. In these circumstances, we would expect sense of control to be more strongly associated with psychological well-being (and physical health) among people with lower financial resources than among people with greater resources. Replicating Lachman and Weaver's (1998) earlier findings, we found that the relationship between personal control and

psychological well-being was stronger for lower-income than for higher-income participants. However, there were no consistent moderation effects for psychological well-being.

Connections with Previous Research

We were somewhat surprised that our income analyses did not more closely replicate Lachman and Weaver's (1998) results for psychological well-being, since we used the same dataset with the same dependent variables (life satisfaction and negative affect) and the same independent variables of interest. There were a number of differences in our analyses, so we decided to perform the exact same analyses that they used to determine whether we could replicate their findings. In doing so, we found regression coefficients that were virtually identical to theirs for all independent variables. Subsequently, we wanted to determine whether altering some of their decisions to match our own may affect the interactions between income and control that they had observed. Some of the changes had little impact on the overall results, which included (a) creating scales for participants that had completed at least 60% of the items (their cutoff was 50%), (b) performing listwise deletion for missing cases (it appeared that they imputed data for missing cases[7]), (c) including educational attainment as a covariate (they used income as the only social class measure), and (d) using a life satisfaction item that straightforwardly asked participants how satisfied they are with their current life, ranging from "a lot" to "not at all" (the scale that they used asked participants to rate their life on a scale ranging from the worst possible life that they could imagine to the best possible life).

Although some decisions did not substantively alter the findings, other decisions did affect the key relationships. As discussed previously, entering personal mastery and lack of control in separate regressions makes more sense than entering them in the same equation for both empirical reasons (because these two variables are strongly correlated) and for conceptual reasons (it is unclear how to interpret the effects of mastery when controlling for lack of constraint). Thus, we examined whether we could replicate their findings when examining each predictor by itself. For both life satisfaction and negative affect (or depressive symptoms, as they called it), the interaction effects for mastery that were previously quite strong (p's < .01) became marginally significant when mastery was entered as the only psychosocial variable. They did not observe a significant income x constraint interaction for either dependent variable, and no such pattern was observed when constraint was the only psychosocial predictor included.

In our analyses, we chose to examine only White participants. Some of the reasons for doing so were related to our specific interest in cultural phenomena, which had been established only for MC samples that were predominantly or exclusively White. Other reasons were related to the available sample (which contained few Black and Native Americans in higher social class groups) and to the difficulties associated with disentangling race and class, particularly in the context of health and well-being outcomes (Krieger et al., 1993; Williams et al., 1997). When we attempted to replicate Lachman and Weaver's (1998) analyses for White participants only, the moderation effects for life satisfaction and for negative affect were nonsignficant.[8] In sum, it seems that the discrepancies between Lachman and Weaver's findings and our findings for

income can be primarily explained by our focus on White participants and our using only one psychosocial variable in each regression equation.

Limitations and Future Directions

The limitations of this study primarily stem from the cross-sectional nature of the sample. Correlational data from only a single time point was used, which means that causal inferences cannot be made conclusively. The relevant causal relationships can be further explored by using longitudinal data, experimental studies, or a combination of these. For example, if psychosocial variables do contribute more to psychological well-being for MC and to physical health in WC, one would expect to find that psychosocial factors would better predict changes in psychological well-being over time for MC and similar changes over time in physical health for WC. Furthermore, if this were the case, it seems likely that psychological measures at Time 1 would be more highly correlated with the psychological measures at Time 2 for MC than for WC, whereas physical health measures would be more closely associated over time for WC than for MC.

Experimental studies could also more carefully illustrate how social class differences in well-being occur in response to real-world phenomena. For instance, when exposed to the same positive or negative situation, one might expect MC to exhibit greater psychological reactions (relative to WC), whereas WC might exhibit more physical reactions (relative to MC). In addition, these effects might vary upon the valence of the situation, since the current study suggests that positive aspects of psychological well-being are particularly meaningful or salient in MC environments. However, it is unclear whether exposure to the same stimulus would yield divergent effects, since WC generally live under more stressful conditions (Argyle, 1994) and in relatively more

deprived material and physical environments (e.g., Evans, 2004; Kozol, 1991). Thus, it may be that what constitutes a negative experience in MC contexts may be relatively less extreme in WC environments. The participants of most social psychological experiments tend to be upper-middle-class, traditional-aged college students (Sears, 1986), so relatively little experimental research has been done on WC Americans.

Finally, this study only examined social class differences among European Americans. The ways in which well-being is psychologized in MC European American culture may be somewhat unique to this group or unique to MC Caucasians in North America and Western Europe. Therefore, it is unclear whether the same social class patterns would emerge for racial/ethnic minorities within the United States or for cultures outside of the U.S. The implications of this research are critical, since the degree to which the meaning of "being well" varies considerably across socio-cultural contexts, even within the same racial group in the same country.

Footnotes

[1] Preliminary analyses were conducted to compare patterns for participants of color and White participants. As expected, some of these patterns differed by race. However, the patterns were inconsistent, and the relatively small sample sizes for each racial group makes it difficult to draw conclusions from these findings.

[2] Initially, we were interested in using depression as a measure of psychological well-being. However, we decided against doing so for two reasons. First, continuous indicators of depression in the sample were highly skewed, such that the vast majority of participants showed no symptoms of depression. The only transformation that would allow for valid analyses was to create a dichotomous variable. However, when a large proportion of participants falls into one group in a dichotomous variable, the amount of variance to be explained is quite small (Long, 1997). Second, like panic attacks and anxiety, depression can include a variety of physical and physiological symptoms, such as fatigue, loss of appetite, irregular sleep patterns, and physical pain (American Psychiatric Association, 2000). Therefore, it would be conceptually questionable to classify depression solely as a form of psychological well-being (or ill-being), which would imply that it is not characterized or defined in terms of physical ill-being. Finally, it is worth nothing that the index we have labeled negative affect was also used in Lachman and Weaver (1998), which they called depressive symptoms.

[3] The MIDUS database contains nine items regarding somatic symptoms. However, one of the original nine items was dropped, since its factor loading was below .30, whereas loadings for all other items were above .45.

[4] We conducted preliminary analyses using a single overall control measure that combined the personal mastery and lack of constraint items. The findings for the combined index were virtually identical to those found for lack of constraint. However, the reliability of the combined scale is less than either of the two distinct scales ($\alpha = .63$), which is, in part, why we chose to measure mastery and constraint separately.

[5] Since life satisfaction and physical health have a very limited range of values (with four-point and five-point scales, respectively), it is conceptually preferable to conduct ordered regression analyses instead of OLS regression analyses (Long, 1997). Therefore, we conducted ordered logit regressions with the same independent variables and with life satisfaction and physical health as dependent variables. For these analyses, the findings for education x psychosocial interactions were virtually identical to those with OLS regressions (i.e., the seven interactions that were significant with OLS regression remained significant using ordered logit regression, all *p*'s < .05). However, the one income x psychosocial interaction that was marginally significant with OLS regression (family support predicting life satisfaction) became non-signficant when using ordered logit regression analyses. For ease of interpretation and comparison across analyses, only OLS regression coefficients are presented in Tables 3.5-3.7.

[6] This analysis contains expected cell frequencies less than five, which violates an assumption of chi-square analyses. However, simple probability calculations yield the same result. If there were no social class differences in the relationships between these variables in the general population, then there would be a 1 in 256 ($1/2^8$) chance of all values in a sample being in the expected direction ($1/256 \approx .004$).

[7] Lachman and Weaver (1998) did not report how they treated missing cases. When attempting to replicate their analyses, we found that using mean imputations for missing data provided results that much more closely resembled their own than using listwise or pairwise deletion. The particular form of imputation may explain why we did not replicate every one of their coefficients exactly: If they used a more advanced form of data imputation (e.g., EM algorithm), then this might have produced very small differences relative to mean imputation procedures.

[8] We should point out that in our replication analyses, the interaction between income and mastery predicting life satisfaction was one of the few variables whose effects differed at all from those reported in Lachman and Weaver's (1998) original paper. Thus, it may be that this interaction would be marginally significant if we had replicated their analyses perfectly and then constraint and the income x constraint interaction variables were removed.

Table 3.1 Social class differences in psychological well-being, physical health, and psychosocial factors

	Working-class	Middle-class		
Dependent variable	Mean	Mean	*df*	*t*-value
Overall health	7.26	7.54	1810.78	4.40***
Physical health	3.36	3.79	1693.59	11.06***
Chronic conditions	1.10	1.07	1972.99	-7.93***
Somatic symptoms	2.26	1.99	1807.96	-7.74***
Functional limitations	1.57	1.32	2004.31	-9.51***
Life satisfaction	3.48	3.60	1637.64	4.01***
Positive affect	3.34	3.40	1634.78	1.96+
Negative affect	1.60	1.47	1948.24	-5.26***
Eudaimonic well-being	16.27	17.18	1725.68	9.71***
Social support from family	3.42	3.45	1638.76	1.11
Social support from friends	3.21	3.29	1667.17	2.94**
Personal mastery	5.78	5.92	1669.03	3.24**
Lack of constraint	5.14	5.64	1824.47	10.38***

Note. Decimal values for degrees of freedom occur when equal variances are not assumed.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3.2 Correlations among psychological well-being measures for working-class and middle-class Americans

	Life satisfaction		Positive affect		Negative affect	
	WC	MC	WC	MC	WC	MC
Positive affect	.472*	.544*				
Negative affect	-.434	-.468	-.657	-.634		
Eudaimonic well-being	.384**	.493**	.502*	.567*	-.522	-.523

Note. All correlations are significantly different from zero, p's < .001. Asterisks represent significant differences between correlations for working-class and middle-class participants, using Fisher r-to-z transformations. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3.3 Correlations among physical health measures for working-class and middle-class Americans

	Overall health		Physical health		Chronic conditions		Somatic symptoms	
	WC	MC	WC	MC	WC	MC	WC	MC
Physical health	.612	.576						
Chronic conditions	-.446**	-.347**	-.400*	-.324*				
Somatic symptoms	-.425*	-.332*	-.362***	-.192***	.572***	.463***		
Functional limitations	-.488**	-.381**	-.509***	-.360***	.439*	.358*	.422**	.314**

Note. All correlations are significantly different from zero, p's < .001. Asterisks represent significant differences between correlations for working-class and middle-class participants, using Fisher r-to-z transformations. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3.4 Correlations among physical health and psychological well-being measures for working-class and middle-class Americans

	Psychological well-being							
	Life satisfaction		Positive affect		Negative affect		Eudaimonic well-being	
Phys health	WC	MC	WC	MC	WC	MC	WC	MC
Overall health	.297*	.195*	.386	.324	-.386**	-.267**	.345*	.252*
Physical health	.236	.174	.289*	.200*	-.319***	-.151***	.299**	.182**
Chronic conditions	.216*	-.297*	-.339	-.326	.456**	.360**	-.286	-.277
Somatic symptoms	.257	-.308	-.421	-.453	.555	.533	-.335	-.313
Functional limitations	-.188	-.170	-.221+	-.149+	.310**	.180**	-.251*	-.154*

Note. All correlations are significantly different from zero, p's < .001. Asterisks represent significant differences between correlations for working-class and middle-class participants, using Fisher r-to-z transformations.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3.5 Standardized coefficients and variance explained for OLS multiple regressions predicting psychological well-being across educational attainment

Independent variable		Dependent variable											
		Life satisfaction			Positive affect			Negative affect			Eudaimonic well-being		
		WC	MC	Interact w/educ	WC	MC	Interact w/educ	WC	MC	Interact w/educ	WC	MC	Interact w/educ
Personal mastery	β	.21	.29	.04*	.32	.36	.02	-.27	-.29	.02	.45	.50	.01
	ΔR^2	.045	.083		.103	.130		.071	.082		.203	.243	
Lack of constraint	β	.31	.45	.09***	.43	.51	.07**	-.49	-.48	.02	.68	.66	.02
	ΔR^2	.097	.198		.183	.254		.237	.229		.459	.436	
Family support	β	.19	.33	.07**	.25	.33	.05*	-.23	-.33	-.03	.32	.38	.03
	ΔR^2	.034	.103		.061	.108		.049	.107		.101	.143	
Friend support	β	.18	.27	.04*	.23	.30	.05*	-.18	-.23	-.02	.36	.42	.04+
	ΔR^2	.032	.066		.049	.086		.033	.050		.126	.168	

Note. Change in R^2 values represent the additional proportion of variance explained when adding the psychosocial variable to a regression equation with gender, age, and marital status as existing predictors. For analyses conducted within class groups, betas for all psychosocial variables are significant, *p*'s < .001. Asterisks represent whether the interaction terms for analyses conducted across all class groups are significant, with gender, age, marital status, education, income, and the pertinent psychosocial variable as additional predictors. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3.6 Standardized coefficients and variance explained for OLS multiple regressions predicting physical health across educational attainment

Indep variable		Dependent variable														
		Overall health			Physical health			Chronic conditions			Somatic symptoms			Functional limitations		
		WC	MC	Int w/ educ	WC	MC	Int w/ educ	WC	MC	Int w/ educ	WC	MC	Int w/ educ	WC	MC	Int w/ educ
Personal mastery	β	.26	.16	-.06**	.15	.07	-.05*	-.18	-.14	.04	-.18	-.19	.01	-.15	-.06	.06**
	ΔR^2	.065	.024		.022	.004		.032	.021		.031	.035		.022	.003	
Lack of constraint	β	.30	.21	-.05*	.29	.17	-.05*	-.30	-.24	.04*	-.35	-.35	-.00	-.26	-.15	.07**
	ΔR^2	.090	.042		.081	.028		.089	.059		.118	.122		.065	.021	
Family support	β	.17	.14	-.02	.14	.12	-.01	-.12	-.15	-.01	-.14	-.22	-.03	-.09	-.08	.02
	ΔR^2	.027	.020		.018	.013		.014	.021		.020	.046		.008	.007	
Friend support	β	.17	.10	-.03	.19	.07	-.05*	-.10	-.12	-.01	-.13	-.16	-.02	-.11	-.04	.03
	ΔR^2	.028	.009		.035	.004		.010	.014		.016	.023		.012	.002	

Note. Change in R^2 values represent the additional proportion of variance explained when adding the psychosocial variable to a regression equation with gender, age, and marital status as existing predictors. For analyses conducted within class groups, betas for all psychosocial variables are significant, *p*'s < .02, except for analyses of middle-class participants in which (a) support from friends and personal mastery predicted physical health, and personal mastery predicted functional limitations, *p*'s < .10, and (b) support from friends predicted functional limitations, *ns*. Asterisks represent whether the interaction terms for analyses conducted across all class groups are significant, with gender, age, marital status, education, income, and the pertinent psychosocial variable as additional predictors. + $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3.7 Standardized coefficients for OLS multiple regressions predicting psychological well-being and physical health across income groups

Indep variable	Dependent variable								
	Life satisfaction	Positive affect	Negative affect	Eudaimonic well-being	Overall health	Physical health	Chronic conditions	Somatic symptoms	Functional limitations
Personal mastery x income	-.03	-.03	.05	.13**	-.11*	-.08	.04	.03	.15**
Lack of constraint x income	-.02	.05	.08	-.06	-.01	-.04	.07	.01	.17**
Family support x income	-.10+	-.00	.10+	.03	.06	.04	-.01	-.03	-.00
Friend support x income	-.02	.09+	-.05	.09+	-.07	-.02	-.01	-.02	.10+

Note. Asterisks represent whether the interaction terms for analyses conducted across all class groups are significant, with gender, age, marital status, education, income, and the pertinent psychosocial variable as additional predictors.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

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Chapter 4:

The Development of Psychological Well-Being among First-Generation and Non-First-Generation College Freshmen

With the substantial socioeconomic diversity of today's college students, it is increasingly important to understand the experiences and development of students from diverse backgrounds. Recently, some researchers have examined the experiences of "first-generation" college students, a group that is often defined as students whose parents did not attend any college. This group constitutes a substantial proportion of today's undergraduate students; in 1995-1996, 34% of students entering four-year colleges and 53% of students entering two-year colleges were first-generation students (Choy, 2001). Unfortunately, these students are much more prone to stopping out and dropping out than are non-first-generation students. Three years after starting coursework at a four-year institution, first-generation students were more than twice as likely as non-first-generation students to not be enrolled and not have attained a degree (27% vs. 12%; Warburton, Bugarin, & Nunez, 2001).

As Pascarella, Terenzini, and colleagues note (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996), most research on first-generation students has focused on one of three topic areas: 1) precollege activities (e.g., college choice and academic preparation), 2) transition from high school to college, and 3) graduation and labor market outcomes. In addition, some recent studies

have begun to examine cognitive outcomes, most of which are academic in nature (e.g., critical thinking and general education; see Pascarella et al., 2004; Pike & Kuh, 2005). However, an important area that has received little empirical attention in the research on socioeconomic diversity is the development of positive psychological functioning. As Ryff (1989) has demonstrated, these skills and perceptions are crucial for successfully engaging in meaningful relationships, navigating one's environment, and realizing one's fullest potential. Therefore, positive psychological functioning is important not only within the college environment, but also throughout one's adult life. This study explores psychological well-being among first-generation and non-first-generation college freshmen.

Conceptual Framework

The concept of psychological well-being (PWB; Ryff, 1989) is based on the premise that "being well" encompasses a range of characteristics and perceptions; that is, positive functioning constitutes much more than one's current level of happiness. The theoretical origins of PWB are grounded in Maslow's (1968) concept of self-actualization, Erikson's (1959) psychosocial stage model, and Jung's (1933) formulation of individuation, among others. Incorporating these perspectives, Ryff (1989) developed a model of psychological well-being that encompasses six dimensions: autonomous functioning and decision-making, mastery of one's environment, seeking opportunities for personal growth, maintaining positive relations with others, having a sense of purpose in life, accepting and thinking positively about oneself. Although it is correlated with other constructs, PWB is theoretically and empirically distinct from related notions of life satisfaction, happiness, self-esteem, and locus of control (Ryff, 1989; Ryff & Keyes,

1995). Importantly, PWB contributes to a range of positive outcomes in adult life, including increased social support and improved physical health (Kitayama & Bowman, 2008).

Moreover, Ryff's model of psychological well-being captures a broad array of conceptions of self. In fact, the dimensions associated with PWB are closely aligned with established student development outcomes. For instance, Kegan's (1994) concept of self-authorship (see also Baxter Magolda, 2001) includes cognitive, interpersonal, and intrapersonal components, which encompass similar types of skills and tendencies as the PWB dimensions of autonomy, environmental mastery, self-acceptance, and positive relations with others. Like self-authorship, PWB encompasses the use of certain skills and perspectives that are useful for overcoming challenges and effectively navigating one's life (e.g., Ryff, Keyes, & Hughes, 2003).

Social Class and PWB

On average, American adults with lower educational attainment (i.e., "working-class") score substantially lower than adults with higher educational attainment (i.e., "middle-class") on almost all dimensions of PWB (Keyes, Shmotkin, & Ryff, 2002; Marmot, Ryff, Bumpass, Shipley, & Markus, 1997; Ryff et al., 2003). In contrast, differences in life satisfaction or happiness across educational attainment groups are either small or non-existent (Markus, Ryff, Curhan, & Palmersheim, 2004; Witter, Okun, Stock, & Haring, 1984). This pattern may stem from the fact that theories of positive psychological functioning largely stem from middle-class norms and values (Ryff, 1985). More recent studies have expanded upon this idea and proposed that different types of independence are prevalent among working-class and middle-class Americans.

Specifically, independence among working-class Americans is typically characterized by self-reliance, hard work, and a "do-it-yourself" mentality, whereas independence among middle-class Americans is characterized by personal control, uniqueness, and exercising choice (Bowman, Kitayama, & Nisbett, 2008; Kusserow, 2004; Snibbe & Markus, 2005). Moreover, Bowman et al. (2008) argue that the prominence of choice in middle-class environments extends to interpersonal relationships, such that middle-class Americans tend to have relatively large, diffuse social networks (Argyle, 1994; Lareau, 2003) that therefore require considerable social responsiveness and attention to numerous social others.

As a product of these socio-cultural tendencies, one would expect to find social class differences on PWB dimensions that reflect middle-class forms of independence. In fact, middle-class independence is apparent in most of the dimensions of PWB; these include personal control (related to PWB dimensions of environmental mastery and purpose in life), choice (purpose in life and personal growth), and social responsiveness (positive relations with others). Indeed, studies show consistent social class differences on all of these PWB dimensions (Keyes et al., 2002; Markus et al., 2004; Ryff et al., 2003). In contrast, middle-class and working-class independence both emphasize aspects of autonomy (uniqueness and self-reliance, respectively); not surprisingly, autonomy is the only dimension of PWB for which there are no social class differences (Keyes et al., 2002; Markus et al., 2004; Ryff et al., 2003).

Higher Education, Social Class, and PWB

At many four-year colleges and universities, the prevailing cultural norms often reflect middle-class values; this dynamic is captured well in the first-hand accounts of

current and former first-generation college students who struggled to adjust to the college environment (e.g., Lara, 1992; Oldfield, 2007; Rendon, 1992). For instance, Oldfield (2007) describes his early experiences with debate and argument on campus and how he was quite surprised that this form of interaction was seen as non-threatening. Other middle-class norms include the presence and presumption of substantial wealth among students' families (Rendon, 1992; Terenzini et al., 1994) and an emphasis on learning and personal growth for its own sake (Lara, 1992; Oldfield, 2007). Thus, for middle-class students, college is an extension of their previous upbringing, whereas for first-generation students, it can constitute culture shock (Terenzini et al., 1994; Zwerling & London, 1992). In American society today, a four-year college degree functionally serves as the gateway to middle- and upper-middle-class adulthood (Brint & Karabel, 1991), so first-generation students who want to receive a bachelor's degree will likely have to adapt to this new set of norms.

Although some studies have examined the subjective difficulties and emotions that first-generation students experience, none has explored the development of positive psychological functioning among a large college student sample. Some research, though, has examined the relationship between age and PWB among adults. When comparing young adults to middle-age adults, autonomy and environmental mastery show significant increases over time (Ryff, 1989; Ryff & Keyes, 1995). Moreover, these patterns were replicated with a nationally representative sample of adults ages 25-74 when age was analyzed as a continuous variable (Ryff et al., 2003). Furthermore, Ryff et al. also found that age was positively associated with self-acceptance and positive relations with others, whereas it was negatively related to purpose in life and personal

growth. However, all of these relationships were quite small when controlling for other variables.

In general, research on the well-being of first-generation college students has focused almost exclusively on subjective well-being and adjustment processes. Although students from disadvantaged educational backgrounds often have more difficulty adjusting to college (e.g., Terenzini et al., 1994), some evidence suggests that psychological well-being is higher among groups that face greater adversity (Ryff et al., 2003). Moreover, since education attainment is positively associated with PWB among adults (Keyes et al., 2002; Ryff et al., 2003), attending college may increase PWB for first-generation college students. This study sought to answer three questions:

1. What background characteristics predict levels of psychological well-being before students enter college?
2. Does the development of psychological well-being during the freshman year vary by first-generation status, and if so, to what extent?
3. To what extent do college experiences foster or inhibit the development of PWB among first-generation and non-first-generation college freshmen?

Method

Data Source and Participants

Data from the Wabash National Study of Liberal Arts Education (WNSLAE) were used for this study. Nineteen colleges and universities (11 liberal arts colleges, two community colleges, three research universities, and three regional universities) were included in the sample on the basis of their strong commitment to liberal arts education. The study sample contained both private and public institutions, along with religiously

affiliated, single-sex, and minority-serving schools. Moreover, institutions exhibited a wide range of selectivity, tuition costs, and geographic diversity.

Before their freshman year in the fall of 2006, incoming students were invited to participate in a longitudinal study. Either before classes began or during their first 2-3 weeks on campus (Time 1), students completed: (a) a registration form that included demographic information; (b) a questionnaire of various high school experiences, interests, attitudes, and values; and (c) a battery of five assessments, including a scale of psychological well-being. Students who completed all measures received $50 for their participation. A total of 4,501 students participated. Toward the end of their freshman year (Time 2), students who took part in the initial assessment were invited to participate in a second wave of data collection. They completed the same battery of assessments, along with questionnaires that asked about their college experiences, interests, attitudes, and values. Once again, students who completed all measures received $50 as compensation. A total of 3,081 students participated in this second wave, yielding a retest response rate of 68%. Among students who responded to both waves of the survey, 54.9% were female, 81.5% were White non-Hispanic, 7.4% were Asian/Pacific Islander, 5.1% were Hispanic, 4.0% were Black non-Hispanic, 0.4% were American Indian/Alaska Native, 1.5% did not report their race or ethnicity, and 10.4% were first-generation college students.

Measures

Dependent variable. The 54-item version of the Ryff psychological well-being questionnaire was used (Ryff, 1989). The questionnaire contained six dimensions of well-being (autonomy, environmental mastery, personal growth, positive relations with others,

purpose in life, and self-acceptance), each of which was measured by nine items (Cronbach's alphas ranged from .77 to .84 at Time 1, and .79 to .86 at Time 2). These six dimensions were then combined into an index of overall PWB (α = .87 at Time 1, and α = .89 at Time 2). Descriptive statistics for all variables are provided in Appendix A.

Independent variables. The primary demographic variable of interest was first-generation status. Consistent with previous studies (Pascarella et al., 2004; Pike & Kuh, 2005; Terenzini et al., 1996), first-generation students were defined as students whose parents had not attended college, whereas non-first-generation students where those for whom one or both parents attended some form of postsecondary education. This variable was dummy-coded (1 = first-generation, 0 = other). In addition, a series of dummy-coded variables was used to indicate race/ethnicity, which included Black non-Hispanic, American Indian/Alaska Native, Asian/Pacific Islander, Hispanic, and students who did not report their race or ethnicity. White non-Hispanic served as the referent group. Other demographic variables included gender (0 = female, 1 = male) and whether students were traditional college age (0 = 19 years old and younger, 1 = 20 years old and older at the beginning of freshman year). Parental income was also recoded into several categories, since over 10% of participants did not report their parents' income. That is, instead of inputting an income value for these students, dummy-coded variables were created to reflect different levels of income. Dummy variables were computed for low-income students (parents' combined income less than $35,000 per year), high-income students (at least $100,000 per year), and students who did not report their income (many of whom reported that they were economically self-sufficient). Middle-income students ($35,000-$99,999) served as the referent group.

Several additional pre-college variables were used. Degree aspirations were coded on a six-point scale (1 = vocational/technical certificate or diploma, to 6 = doctorate degree). High school grade point average was also included. Because high school GPA was strongly skewed, dummy-codes were created for students who had a B average (B+ to B-) and for those with a C or D average (C+ or lower); students who had an A average (A+ to A-) served as the referent group. The racial/ethnic composition of one's high school was also included. For all students, this variable was coded such that higher values reflect a high school student body that is similar to oneself. That is, for White non-Hispanic students, 1 = almost all students of color, whereas 5 = almost all White students. On the other hand, for students of color, 1 = almost all White students, whereas 5 = almost all students of color. Finally, for some analyses, psychological well-being at the beginning of the freshman year was included as an independent variable.

A number of college experience variables were used as predictors of PWB. Since the number of hours spent working on-campus and the number of hours spent working off-campus were weakly and negatively correlated, these were treated as separate variables. Moreover, given the strong skew of both variables, these were both recoded with zero hours per week as the referent group. Dummy-coded variables were created to indicate working 1-10 hours per week, 11-20 hours per week, and 21 hours or more per week. In addition, dummy-coded variables indicated whether a student had an athletic scholarship and whether s/he was a member of a social fraternity or sorority. To indicate one's living situation, dummy-coded variables also indicated whether a student lived in a fraternity/sorority house and whether s/he lived in non-Greek on-campus housing (e.g., residence halls), with living off-campus as the referent group. Continuous single-item

measures gauged the number of hours spent participating in co-curricular activities and the number of hours spent relaxing and socializing (1 = 0 hours, to 8 = more than 30 hours). The frequency of drinking alcoholic beverages was also included. Since a majority of students reported not drinking during their first year, three dummy-coded variables were created to gauge the number of times per week that a student drank alcohol: 1-2 times/week, 3-4 times/week, and five or more times/week, with zero times as the referent group. Moreover, institutional type was included to gauge institutional differences that were not measured by other college experience variables. Dummy-coded variables were created for research universities, regional universities, and community colleges, with liberal arts colleges as the referent group.

Furthermore, several college experience factors were created (see Appendix B for reliabilities, loadings, and individual items for all factors). The quality of relationships with other students was measured by computing the mean of five items ($\alpha = .82$), each of which was measured on a five-point Likert scale (1 = strongly disagree, to 5 = strongly agree). For this index, two items were reverse-coded so that higher values indicate higher quality relationships. In addition, an eight-item scale gauged the frequency of positive diversity experiences ($\alpha = .89$); each item was measured on a five-point scale (1 = never, to 5 = very often). Conversely, a five-item index was created to measure the frequency of negative interactions with diversity ($\alpha = .83$) with the same five-point scale. Since most students reported that these interactions occurred hardly ever or never, this mean-scaled index was recoded into dummy-coded variables representing rare negative interactions (at least 1.5 and less than 2.5 on the five-point scale) and somewhat common negative

interactions (at least 2.5 on the five-point scale), with hardly ever or never as the referent group (i.e., less than 1.5).

Three indices were created to gauge the impact of experiences with faculty and coursework. A four-item index assessed the frequency of faculty contact ($\alpha = .70$), with each item on a four-point scale (1 = never, to 4= very often). Also, a six-item index measured the level of challenge that occurred in the classroom ($\alpha = .82$), using a five-point scale (1 = never to 5 = very often). In this instance, in-class challenge refers to how often students and faculty challenged each other's ideas and how often students argued for their point of view. Finally, the number of courses taken that focused on issues of diversity, gender, and social justice was included. Since the continuous variable for the number of courses was strongly skewed, several dummy-coded variables were used in the analyses; zero courses served as the referent group, and dummy-coded variables were computed to reflect one course, two or three courses, and four or more courses.

Analyses

The data were weighted to make the sample representative of the incoming freshman class of these institutions. In all analyses, seven dependent variables were used: the six dimensions of psychological well-being and the overall index of PWB. First, preliminary analyses were performed to determine whether levels of well-being were similar for participants who completed only the Time 1 assessments and those who completed both the Time 1 and Time 2 assessments. Second, *t*-tests were conducted to compare levels of psychological well-being between first-generation and non-first-generation students at the beginning of the freshman year. Next, ordinary least squares (OLS) multiple regressions were performed. Psychological well-being at Time 1 served

as the dependent variable, and the independent variables were first-generation status, race/ethnicity, age, gender, parental income, high school GPA, high school demographics, and degree aspirations.

Additional *t*-tests were conducted to compare levels of PWB at the end of freshman year between first-generation and non-first-generation students. In addition, in order to compare *changes* in PWB during the freshman year, OLS multiple regressions were conducted with PWB at Time 2 as the dependent variable and first-generation status and PWB at Time 1 as independent variables. Subsequently, hierarchical blocked OLS multiple regressions were performed with PWB at Time 2 as the dependent variable. In Block 1, the independent variables were first-generation status, race/ethnicity, age, gender, parental income, high school GPA, high school demographics, degree aspirations, and PWB at Time 1. In Block 2, institutional type (whether the institution was a regional university, research university, community college, or liberal arts college) was added. In Block 3, the college experience variables were added; these included frequency of faculty contact, in-class challenge, courses about diversity issues, time spent working on-campus, time spent working off-campus, time spent relaxing and socializing, time spent participating in co-curricular activities, living situation, Greek membership, athlete status, full-time student status, quality of relationships with other students, positive interactions with diverse peers, and negative interactions with diverse peers. Because all analyses controlled for Time 1 levels of PWB, the coefficients for the independent variables represent the degree to which relevant factors are associated with changes in psychological well-being.

Limitations

Several limitations to this study should be mentioned. First, this study examines the effects of college experiences only during the freshman year. It is certainly possible that the effects of college experiences in promoting or hindering psychological well-being differ in later years of college. Second, because the items in this study refer to broad categories of "diversity" (e.g., as "students differing from you in race, national origin, values, religion, political views"), it is unclear whether interactions with certain kinds of diversity (e.g., religious, racial/ethnic) are particularly influential in shaping PWB. Third, the sample contains a smaller proportion of first-generation students, community college students, and non-traditional-age students than does the general college population. For example, first-generation students constitute about 1/3 of all incoming college students in four-year institutions (Choy, 2001), whereas only 10.4% of participants in the current sample were first-generation students. Although the proportion of first-generation students in this sample was relatively small, over 300 first-generation students were included. Thus, meaningful conclusions can certainly be drawn from this data.

Findings

Preliminary Analyses: Comparability of Time 1 and Time 2 Samples

On all dimensions except autonomy, participants who completed the Time 2 assessments have higher levels of PWB at Time 1 than do participants who only completed the Time 1 assessments, p's < .02. As I argue later, the greater attrition among lower-PWB students may be evident not only for this survey, but also for dropping out of college.

Moreover, these effects were driven by the non-first-generation students, since the effects were consistent for these students, p's < .01, whereas no such effects were found for first-generation students. In fact, the only significant difference for first-generation students was that participants who completed the Time 2 assessments have *lower* autonomy than do those who only completed the assessments at Time 1. It is unclear why this difference across social class groups occurs; it is possible, though, that PWB may be generally more important for influencing the behavior of non-first-generation students.

Psychological Well-Being at the Beginning of Freshman Year

A series of *t*-test analyses showed that PWB differences between first-generation and non-first-generation college students at the beginning of college were minimal. Specifically, non-first-generation students have statistically higher levels of personal growth, self-acceptance, and a composite measure of well-being, but these differences are quite small. There are no significant differences in the other four dimensions (see Table 4.1).

Similar results are apparent when controlling for other variables through OLS multiple regressions. As shown in Table 4.2, first-generation status is associated with lower self-acceptance and marginally lower levels of personal growth. There are no such differences among the other four PWB dimensions or the overall well-being index. Importantly, several other variables are significantly related to most or all dimensions of PWB. Specifically, women have higher levels of well-being than men on all dimensions except autonomy. The consistency of these differences is somewhat surprising, since research on adults has shown that women tend to score higher than men on only two dimensions of well-being: positive relations with others and personal growth (Ryff, 1989,

1991; Ryff, Lee, Essex, & Schmutte, 1994). The strength and consistency of these gender differences may reflect this early stage of adulthood, and these observed differences may narrow or disappear over time. It is also possible that these differences reflect cohort or generational effects, which would imply that the differences observed here may persist over time.

In addition, consistent with previous findings on well-being and ethnicity among adults (Ryff et al., 2003), incoming Hispanic freshmen have higher levels of psychological well-being than non-Hispanic White freshmen on four of the six dimensions. In contrast, Asian/Pacific Islanders have lower levels of psychological well-being than non-Hispanic Whites on all six dimensions. Cross-cultural research on positive affect and life satisfaction often shows such disparities between White Americans and East Asians (E. Diener & M. Diener, 1995; Suh, 2002). Certainly, some dimensions of PWB, such as environmental mastery and self-acceptance, are not as strongly valued in East Asian cultures as in European American cultures (e.g., Markus & Kitayama, 1991), which may be contributing to this effect for Asian-American college students. Furthermore, East Asians and Asian Americans tend to exhibit—and prefer—a balance of positive and negative emotions (for a review, see Tov & E. Diener, 2007). Consistent with this view, the PWB levels of Asian/Pacific Islander students are lower than those of Whites, but the mean values for Asian/Pacific Islander students are still above the midpoint of the PWB scales (i.e., they tend to show positive rather than negative psychological functioning). Moreover, although the sample of American Indian/Alaskan Native students is small, some significant effects were apparent. In particular, American Indian students have dramatically lower levels of personal growth

(Cohen's d = -1.17) and positive relations with others (Cohen's d = -1.22) than do non-Hispanic White students. Indeed, many American Indian students face substantial difficulties in attempting to balance their family and home life with attending college (e.g., Brayboy, in press), and the effects of these struggles may be reflected in their psychological well-being.

In general, students from low-income families exhibit similar patterns of overall well-being to students from middle-income families. Specifically, being from a low-income family is negatively related to autonomy, but it is also associated with greater purpose in life and marginally greater self-acceptance. In contrast, significant PWB benefits are apparent for students from high-income families. Controlling for all other variables, these students have greater environmental mastery, positive relations with others, purpose in life, self-acceptance, and overall PWB than do students from middle-income families. When considered with the findings for first-generation students, it seems that facing socioeconomic adversity does not contribute to greater PWB among incoming college freshmen; in fact, the opposite is true.

Age also plays a powerful role in predicting well-being. That is, being at least 20 years old at the beginning of freshman year is negatively related to autonomy, environmental mastery, positive relations with others, and self-acceptance. However, these non-traditional-age freshmen have greater purpose in life. The explanations for these trends are probably specific to college student samples, not to adults at large. For instance, people who decide to enter college after taking at least a year off after high school may be more likely to have specific career-related reasons for doing so, which contributes to their higher levels of purpose in life. Similarly, in their more deliberate

choice to attend college, these non-traditional students may be seeking the control and autonomy that would result from this course in life. Moreover, as evinced through this change, these older adults may not be satisfied with their current self and are looking to develop a new sense of self during college.

Finally, high school grades and degree aspirations are strongly and positively related to well-being. This pattern makes sense in light of how academic ability and performance are central to the identity and self-worth of many college students (Crocker & Luhtanen, 2003; Crocker, Sommers, & Luhtanen, 2002).

Psychological Well-Being at the End of Freshman Year

Although first-generation students have comparable levels of well-being to non-first-generation students at the beginning of the freshman year, substantial and consistent gaps are apparent at the end of freshman year (see Table 4.3). Specifically, first-generation students have lower levels on all dimensions of PWB (all p's < .01; except environmental mastery, p = .05). Furthermore, as shown in Table 4.4, first-generation students exhibit lower *gains* in autonomy, personal growth, positive relations with others, and purpose in life during their freshman year (all p's < .01). Clearly, it is important to determine what factors contribute to these disparities.

Changes in Psychological Well-Being During the Freshman Year

Detailed results of Model 3 (i.e., the model that contains pre-college, institutional, and college experience variables) are provided in Table 4.5. Due to space constraints, the results of the previous models are not listed in tabular form; however, results from these models are discussed when applicable. When controlling for a variety of precollege characteristics and college experiences, first-generation status is negatively related to

gains in autonomy, personal growth, positive relations with others, and overall well-being. Thus, first-generation students face not only greater subjective difficulties in adjusting to college (see Terenzini et al., 1996; Zwerling & London, 1992), but also diminished psychological well-being during the freshman year. In addition, most of the precollege variables that consistently predicted changes in PWB were those that were related to entering levels of PWB. That is, men, Asian/Pacific Islanders, and students who had relatively low high school GPAs tend to have lower gains in PWB than do women, White non-Hispanics, and students with high HSGPAs, respectively. However, in contrast to patterns at the beginning of freshman year, degree aspirations are negatively associated with gains in environmental mastery, positive relations with others, self-acceptance, and overall well-being. It is possible that students who intend to pursue a post-baccalaureate degree upon entering college face additional pressure to succeed, and this pressure causes them to feel unsure about their ability to control their environment and to have less time and energy to spend on interpersonal relationships. Moreover, whereas non-traditional-age students initially entered college with lower levels of PWB, these students experience greater gains on four of the six dimensions during college than do traditional-age freshmen. Thus, the college environment may be providing the sorts of growth opportunities that they may have sought upon entering school.

Perhaps surprisingly, students who attend research universities show greater gains in positive relations with others, purpose in life, and self-acceptance than do students who attend liberal arts colleges. Importantly, these differences are not suppressor effects that result from controlling for college experiences. In Block 2, which does not contain any college experience variables, the same trends for research universities are found. It may

be that the variety of social and academic options at these larger institutions affords students greater opportunities to find themselves, their friends, and their purpose in life. Since the analyses control for a variety of pre-college characteristics, it seems somewhat unlikely that these effects are the product of selection effects (i.e., differences among students who choose research universities versus liberal arts colleges).

The findings for social experiences are most clear when discussed as a whole. Controlling for all other variables, living in a residence hall initially seems to have a negative impact on most well-being dimensions; however, these are merely suppressor effects. If living in a residence hall was entered as the only college experience variable, then it would not be significantly related to any of the six PWB dimensions. This suppressor effect occurs because the analyses in Model 3 control for the overall quality of relationships with other students, which in turn promotes gains in all dimensions of PWB. Indeed, close, meaningful interactions with other students likely constitute the primary means through which benefits accrue from residence life; as a result, statistically removing these interpersonal bonds can be misleading. Moreover, drinking alcohol is negatively associated with all dimensions of well-being. As with the residence hall findings, the patterns in Table 4.5 describe the relationships when controlling for all other social interactions. If the drinking variables were the only college experiences entered into the equation, they would still show negative effects on well-being, but these would be somewhat less frequent than in the current models. Moreover, when controlling for other variables, time spent in co-curricular activities contributes positively to gains in personal growth, positive relations with others, and purpose in life. If this variable was

the only college experience variable entered into the equation, then it would be positively related to all dimensions of PWB except autonomy.

Diversity experiences are also strongly related to changes in well-being. For instance, positive interactions with diversity and diverse students lead to gains in most dimensions of PWB, even when controlling for the quality and frequency of other interpersonal interactions and relationships. Furthermore, students who had negative or hostile interactions pertaining to diversity show sharp decreases in PWB, even when these occurred rarely (relative to those who never or hardly ever had such encounters). As noted by other scholars, promoting a safe environment for interacting across diverse students is critical for fostering the well-being of all college students (e.g., Hurtado, Milem, Clayton-Pedersen, & Allen, 1999). Interestingly, the effects of diversity courses are mixed, depending on the number of courses taken. Taking only one course leads to decreases in environmental mastery and purpose in life, whereas taking two or three courses positively contributes to personal growth, positive relations with others, and purpose in life. Drawing upon the framework proposed by Gurin and colleagues (Gurin, Dey, Hurtado, & Gurin, 2002), it is possible that students who have taken only one course are at a point of disequilibrium, in which they are attempting to reconcile their previous schemas and attitudes with those presented in their diversity course. By taking multiple courses, students are then able to work through these issues and become more "at ease" with these new perspectives, which then contributes to improved well-being.

The psychological benefits of forming quality relationships with peers, along with the sharp decrements associated with adverse interactions with diverse peers, provide support to an intriguing experimental study by Walton and Cohen (2007). They show that

assuaging concerns about whether a student belongs at one's college—by informing some students that everyone has these concerns and that these tend to diminish over time—increases students' perceived sense of belonging. These effects were most pronounced for Black students, who even received higher grades than a control group that did not receive the intervention. Moreover, for both students of color and White students, having frequent positive interactions with racially/ethnically diverse peers and avoiding uncomfortable actions are both associated with greater sense of belonging (Locks, Hurtado, Bowman, & Oseguera, 2008). Thus, the consistent and powerful effects of peer interactions, whether with diverse peers or peers in general, on promoting PWB should be expected.

Finally, some types of classroom experiences also promote psychological well-being. Specificially, experiencing in-class challenge promotes gains in all dimensions of well-being, and the frequency of faculty interactions contributes to gains in most dimensions. In both cases, it is likely that students are becoming active participants in the learning process, which thereby contributes to a variety of outcomes, whether directly or indirectly.

Differential Effects of College Experiences by First-Generation Status

An additional block of interaction terms between first-generation students and each college experience was added to determine whether the effects of college experiences on well-being differ between first-generation and non-first-generation students. As shown in Table 4.6, most of the interaction terms are not consistent across dimensions of well-being, with a few noteworthy exceptions. First, working on-campus minimally (1-10 hours/week) or extensively (21 or more hours/week) promotes well-

being more among first-generation than among non-first-generation students. Given the importance of involvement to student adjustment and persistence (Astin, 1984; Tinto, 1993), this on-campus experience likely provides an additional connection to campus for first-generation students, who typically are less comfortable in or less involved with the mainstream college environment (Pascarella et al., 2004; Zwerling & London, 1992). Second, drinking alcohol occasionally (1-2 times/week) is associated with greater decreases in well-being for first-generation than non-first-generation students. It is unclear why this is the case. It is possible that students whose parents have attended college are better able to support them when they stray from acceptable college behavior, such as through underage drinking and experiences (note that 95% of students were 19 or younger at the beginning of freshman year, which suggests that a vast majority of drinkers in the sample are under 21). It is also quite possible that some students may have had negative experiences while they drank.

Third, taking multiple diversity courses is more beneficial to the well-being of first-generation students than non-first-generation students. Given first-generation students' minority status on most college campuses, exposure to the issues of other social or demographic groups may provide a sense of commonality with other minority students. Consistent with this interpretation, the PWB dimension that receives the greatest boost from these experiences is positive relations with others. Finally, in-class challenge, which contributes to gains in PWB for the overall sample, is generally ineffective at promoting PWB for first-generation students. This particular form of interaction, which often involves debate and questioning others' views directly, can be unusual or seemingly inappropriate for some first-generation students (Oldfield, 2007).

Over time, first-generation students may become acclimated to this form of interaction, but it may be off-putting for them particularly during their first year in college. Moreover, the construct of in-class challenge also entails students' perceptions of what is considered "challenging." Given that first-generation students are, on average, less academically prepared than non-first-generation students (Warburton et al., 2001), the same activities or assignments may be more difficult for first-generation students to complete successfully.

Conclusion

In sum, first-generation college students enter college with levels of psychological well-being that are comparable to non-first-generation students. However, by the end of freshman year, first-generation students fall behind on all dimensions of well-being. This finding runs counter to the argument that adversity promotes psychological well-being (Ryff et al., 2003). Instead, this pattern is consistent with the substantial subjective and objective difficulties that first-generation students face in adjusting to the college environment (Lara, 1992; Oldfield, 2007; Rendon, 1992; Terenzini et al., 1994). Moreover, several types of college experiences have pronounced effects on subsequent well-being. Experiences with diversity are quite important; positive interactions consistently promote well-being, whereas hostile or negative interactions lead to significant decreases on all dimensions. In terms of social life, forming meaningful relationships with other students is critical for well-being, whereas drinking alcohol leads to decreases in well-being, other factors being equal. Finally, interactions with faculty and in-class challenge promote well-being, particularly for non-first-generation students, who are often more accustomed to such forms of engagement.

Implications for Practice

Overall, colleges and universities should work toward facilitating meaningful relationships among all students. The two non-classroom experiences that significantly influenced gains on all dimensions of PWB were the formation of quality peer relationships and having adverse interactions with peers from different racial/ethnic groups. As Allport (1954) and numerous others have argued, merely creating the opportunities for social interaction and engagement (e.g., through residence halls) is not sufficient for facilitating meaningful relationships, particularly across racial/ethnic groups. Instead, it is critical that students form quality relationships with one another while avoiding hostile interactions across diversity (also see Locks et al., 2008). These findings suggest that programs about group dynamics and conflict mediation—whether based in the curriculum or co-curriculum—may be useful for improving students' interpersonal relationship skills and, subsequently, their psychological well-being.

Moreover, drinking alcohol in students' first year is negatively associated with PWB, even if students only drink once or twice a week. The effects shown in Table 4.5 are somewhat accentuated by controlling for the overall quality of peer relationships, since social events that have alcohol can serve as a means of creating interpersonal relationships. However, these adverse effects generally still remain if the other college experience variables are removed. It is unclear whether drinking alcohol results in lower PWB, or whether students who have difficulty adjusting to college start to exhibit lower PWB, which then leads to drinking. Regardless of the direction of causality, programs should be enacted to educate students about the risks associated with drinking alcohol. To prevent drinking on campus, it may also be effective to suggest to students that drinking

is a non-normative behavior, since influencing the perceptions of group norms can alter people's behavior more than informing them about the harmful effects of that behavior (e.g., Cialdini, 2003; Cialdini, Reno, & Kallgren, 1990).

Psychological Well-Being and College Adjustment

An important characteristic of PWB—and the instruments that measure it—is that it is not designed to reflect a single context or aspect of one's life. That is, participants respond to general questions about autonomy, personal growth, and relations with others, regardless of where "autonomy" occurs or who the "others" are with whom one has relationships. However, particularly for full-time, traditional-age students, college life should play a key role in informing participants' responses and self-perceptions. For instance, a student who is having trouble making friends on campus would probably rate herself lower on positive relations with others. In addition, these negative experiences can also affect her acceptance of self (through wondering whether something is "wrong" with her), her ability to master her environment (since interactions with others play a key role in shaping one's surroundings), and/or her purpose in life (especially if she has awkward relationships with students who are primarily in her field of study). Indeed, the quality of interpersonal relationships with other students had a significant effect on all six dimensions of well-being. Thus, for many students, the college environment shapes and contributes to numerous facets of psychological well-being.

It seems, then, that adjustment processes may play a crucial role in fostering psychological well-being. To the degree that students' first-year experiences play a role in the adjustment process, this study has already demonstrated such a link. However, it is also the case that well-being is quite beneficial (if not necessary) to adjust to and excel in

college. For example, students must have a sufficient degree of autonomy to choose a major and corresponding courses, to find a job and/or co-curricular activities, and to think and write papers independently. In addition, students must be able to master their environment so that they can find the time and energy to complete coursework and to participate in activities and social events. Furthermore, to select a field of study, they must have at least a general purpose in life (although choosing a major or career is clearly just one aspect of purpose). Students also need sufficient confidence in themselves and acceptance of themselves to make decisions and interact effectively with others. Moreover, all of these actions would be extremely difficult if students did not have positive relationships with friends, family, and college faculty/staff. Finally, although it may not be a necessary condition for college success, personal growth is likely to result from engaging in all of these novel experiences.

Some future directions for research follow from this discussion. First, to what extent does psychological well-being at the beginning of college affect students' subsequent adjustment to college? It would clearly be helpful to understand which elements (or combination of elements) are most important for ensuring a successful adjustment process. Second, although students' experiences clearly affect subsequent well-being, it is unclear whether students' *subjective* perceptions of adjustment influence these psychological measures. That is, students who feel that they are having success or difficulty in adapting to college might exhibit subsequent increases or decreases in PWB, independent of the types of experiences in which they engage. Third, psychological well-being may contribute to positive short-term and long-term outcomes. In the short-term, students who gain or have high incoming levels of PWB may be more likely to persist

until graduation. In the long-term, these students might also be more likely to excel in their professional and personal lives after receiving their undergraduate degree. In a sense, PWB constitutes a set of skills, beliefs, or tendencies that can be used to effectively manage one's life (Kitayama & Bowman, 2008). Therefore, it is important to determine how people develop these proclivities and what role they may have in leading to productive and happy lives both during and after college.

Table 4.1 Mean differences in psychological well-being at the beginning of freshman year

Well-being dimension	First-generation M (SD)	Non-first-generation M (SD)	*df*	*t*-value
Autonomy	4.24 (.76)	4.28 (.78)	3026	0.85
Environmental mastery	4.32 (.81)	4.38 (.69)	370.37	1.24
Personal growth	4.56 (.69)	4.66 (.65)	3026	2.49*
Positive relations with others	4.59 (.81)	4.65 (.76)	3026	1.41
Purpose in life	4.62 (.79)	4.68 (.70)	375.10	1.36
Self-acceptance	4.36 (.90)	4.59 (.77)	370.81	4.36***
Overall well-being	4.44 (.64)	4.54 (.56)	376.50	2.66**

Note. Standard deviations are in parentheses. Decimal values for degrees of freedom occur when equal variances are not assumed.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4.2 Unstandardized OLS regression coefficients for variables predicting psychological well-being at the beginning of freshman year

Independent variable	Dependent variable: PWB scales						
	Autonomy	Environ Mastery	Personal Growth	Pos Rel w/Others	Purpose in Life	Self-Accept	Overall PWB
First-generation college student	.037 (.049)	.004 (.045)	**-.070+** (.041)	-.031 (.048)	-.011 (.045)	**-.126*** (.050)	-.033 (.036)
Male	-.046 (.028)	**-.115***** (.026)	**-.205***** (.024)	**-.242***** (.028)	**-.204***** (.026)	**-.061*** (.029)	**-.145***** (.021)
Black	.090 (.076)	-.089 (.070)	.041 (.064)	**-.185*** (.076)	.026 (.070)	-.015 (.077)	-.022 (.056)
American Indian	**.434*** (.211)	-.129 (.195)	**-.818***** (.178)	**-.934***** (.209)	**-.495*** (.193)	-.243 (.214)	**-.364*** (.154)
Asian/Pacific Islander	**-.186**** (.057)	**-.299***** (.053)	**-.135**** (.048)	**-.307***** (.057)	**-.184***** (.052)	**-.385***** (.058)	**-.250***** (.042)
Hispanic	**.324***** (.066)	.094 (.061)	**.110*** (.056)	**.118+** (.066)	**.151*** (.061)	.107 (.067)	**.151**** (.048)
Race/ethnicity unknown	-.057 (.118)	**-.238*** (.109)	**.247*** (.099)	-.192 (.117)	-.082 (.108)	-.122 (.120)	-.074 (.086)
Low parental income	**-.136**** (.046)	.052 (.043)	.061 (.039)	-.024 (.046)	**.112**** (.042)	**.086+** (.047)	.025 (.034)
High parental income	-.008 (.033)	**.079**** (.030)	.020 (.028)	**.091**** (.032)	**.056+** (.030)	**.109**** (.033)	**.058*** (.024)
Parental income not reported	-.062 (.048)	-.041 (.044)	**-.090*** (.040)	-.059 (.047)	.008 (.044)	**-.095+** (.048)	-.057 (.035)
Age 20+ at start of freshman year	**-.634***** (.070)	**-.236***** (.064)	.045 (.059)	**-.269***** (.069)	**.283***** (.064)	**-.260***** (.071)	**-.179***** (.051)
HSGPA B+ to B-	-.005 (.032)	**-.098**** (.029)	**-.063*** (.027)	**-.064*** (.031)	**-.198***** (.029)	**-.120***** (.032)	**-.092***** (.023)
HSGPA C+ and lower	**.157*** (.068)	**-.205**** (.063)	**-.139*** (.057)	-.034 (.067)	**-.309***** (.062)	**-.266***** (.069)	**-.133**** (.050)
HS student body similar to own race	.020 (.014)	-.005 (.013)	-.007 (.012)	**-.030*** (.014)	.005 (.013)	**-.040**** (.014)	-.009 (.010)
Degree aspirations	**.076***** (.012)	**.023*** (.011)	**.070***** (.010)	-.003 (.012)	**.078***** (.011)	**.037**** (.012)	**.047***** (.009)
N	2957	2958	2958	2957	2958	2956	2958
Adjusted R^2	.075	.042	.064	.059	.078	.059	.073

Note. Standard errors are in parentheses. Significant values are in bold.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4.3 Mean differences in psychological well-being at the end of freshman year

Well-being dimension	First-generation M (SD)	Non-first-generation M (SD)	*df*	*t*-value
Autonomy	4.21 (.77)	4.33 (.72)	3024	2.85**
Environmental Mastery	4.26 (.77)	4.35 (.72)	3024	1.93+
Personal Growth	4.44 (.82)	4.64 (.68)	366.74	4.18***
Positive Relations with Others	4.44 (.89)	4.68 (.75)	368.09	4.44***
Purpose in Life	4.48 (.87)	4.63 (.73)	367.56	2.96**
Self-Acceptance	4.38 (.89)	4.58 (.79)	375.20	3.76***
Overall Well-Being	4.37 (.70)	4.53 (.59)	368.91	4.04***

Note. Standard deviations are in parentheses. Decimal values for degrees of freedom occur when equal variances are not assumed.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4.4 Unstandardized OLS regression coefficients for variables predicting psychological well-being at the end of freshman year

Independent variable	Dependent variable: PWB Scales						
	Autonomy	Environ Mastery	Personal Growth	Pos Rel w/Others	Purpose in Life	Self-Accept	Overall PWB
First-generation college student	**-.099**** (.031)	-.042 (.032)	**-.142***** (.034)	**-.193***** (.035)	**-.114**** (.035)	-.034 (.035)	**-.098***** (.025)
Well-being at start of freshman year	**.652***** (.012)	**.707***** (.014)	**.615***** (.016)	**.631***** (.014)	**.628***** (.015)	**.705***** (.013)	**.734***** (.014)
Adjusted R^2	.489	.472	.339	.410	.365	.478	.492

Note. Standard errors are in parentheses. Significant values are in bold.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4.5 Unstandardized OLS regression coefficients for variables predicting psychological well-being at the end of freshman year (full model)

Independent variable	Dependent variable: PWB scales						
	Autonomy	Environ Mastery	Personal Growth	Pos Rel w/Others	Purpose in Life	Self-Accept	Overall PWB
First-generation college student	**-.139*** ** (.034)	-.023 (.034)	**-.119** ** (.036)	**-.155*** ** (.035)	-.033 (.037)	-.031 (.036)	**-.080** ** (.026)
Male	-.011 (.020)	-.024 (.020)	**-.082*** ** (.022)	**-.119*** ** (.021)	**-.131*** ** (.023)	**-.041+** (.022)	**-.057*** ** (.016)
Black	.058 (.053)	.061 (.052)	-.020 (.056)	-.077 (.054)	-.052 (.058)	-.027 (.057)	-.008 (.041)
American Indian	.121 (.143)	-.151 (.142)	**.277+** (.154)	.038 (.148)	.102 (.159)	.130 (.154)	.141 (.113)
Asian/Pacific Islander	**-.091*** (.041)	**-.073+** (.041)	-.040 (.044)	-.051 (.042)	-.046 (.045)	**-.109*** (.044)	**-.063+** (.032)
Hispanic	**.085+** (.047)	-.019 (.047)	.031 (.050)	.010 (.048)	**-.101+** (.052)	.027 (.050)	-.001 (.037)
Race/ethnicity unknown	**.173*** (.080)	-.004 (.080)	**.162+** (.086)	**.210*** (.083)	.042 (.089)	.078 (.086)	.102 (.063)
Low parental income	.024 (.032)	-.035 (.032)	.056 (.035)	-.017 (.033)	**-.113** ** (.036)	-.006 (.035)	-.019 (.025)
High parental income	.007 (.023)	.011 (.023)	.034 (.024)	.024 (.024)	-.015 (.025)	.016 (.025)	.008 (.018)
Parental income not reported	-.025 (.033)	-.005 (.032)	-.029 (.035)	-.033 (.034)	**-.110** ** (.036)	-.012 (.035)	-.036 (.026)
Age 20+ at start of freshman year	**.191** ** (.057)	.061 (.056)	**.434*** ** (.060)	**.113+** (.058)	.027 (.063)	**.259*** ** (.061)	**.175*** ** (.044)
HSGPA B+ to B-	.023 (.023)	**-.112*** ** (.023)	-.038 (.025)	-.024 (.024)	**-.122*** ** (.026)	**-.060*** (.025)	**-.053** ** (.018)
HSGPA C+ and lower	-.078 (.050)	**-.285*** ** (.050)	**-.192*** ** (.053)	**-.157** ** (.051)	**-.371*** ** (.055)	**-.202*** ** (.054)	**-.209*** ** (.039)
HS student body similar to own race	-.003 (.009)	.011 (.009)	.012 (.010)	.012 (.010)	-.004 (.010)	.000 (.010)	.005 (.007)
Degree aspirations	-.008 (.009)	**-.031*** ** (.009)	-.003 (.009)	**-.021*** (.009)	-.009 (.010)	**-.028** ** (.009)	**-.018** ** (.007)
PWB Time 1	**.658*** ** (.013)	**.627*** ** (.014)	**.508*** ** (.017)	**.489*** ** (.014)	**.525*** ** (.016)	**.635*** ** (.014)	**.623*** ** (.015)
Research university	-.012 (.028)	.010 (.028)	.032 (.030)	**.075** ** (.029)	**.086** ** (.031)	**.089** ** (.030)	**.043*** (.022)
Regional university	.037 (.031)	.048 (.031)	**-.101** ** (.033)-	-.018 (.032)	.023 (.034)	.053 (.033)	.005 (.024)
Community college	**.100*** (.050)	.049 (.050)	-.042 (.054)	.049 (.052)	.041 (.056)	.078 (.054)	.047 (.040)
Full-time student	**.363*** ** (.087)	.005 (.086)	.258 (.092)	**.274** ** (.089)	**.194*** (.096)	**.326*** ** (.093)	**.236** ** (.068)
Greek member	.043 (.032)	.005 (.032)	.035 (.034)	**.078*** (.033)	**-.065+** (.036)	**.099** ** (.035)	.035 (.025)
Scholarship athlete	**-.069+** (.038)	.025 (.037)	-.036 (.040)	-.034 (.039)	-.037 (.042)	.059 (.040)	-.017 (.030)

On-campus work:	.041	**-.049+**	.014	-.012	-.049	-.004	-.007
1-10 hours/week	(.027)	(.027)	(.029)	(.028)	(.030)	(.029)	(.021)
On-campus work:	-.050	-.034	.037	.020	**-.082***	.004	-.017
11-20 hours/week	(.036)	(.035)	(.038)	(.037)	(.039)	(.038)	(.028)
On-campus work:	**.193***	**.148+**	.046	.123	.047	**.225***	**.134+**
21+ hours/week	(.089)	(.089)	(.095)	(.092)	(.099)	(.096)	(.070)
Off-campus work:	**-.058+**	**-.084***	.003	**.059+**	**-.073***	-.040	-.035
1-10 hours/week	(.033)	(.033)	(.036)	(.035)	(.037)	(.036)	(.026)
Off-campus work:	.001	.023	.029	.058	.014	.029	.018
11-20 hours/week	(.036)	(.036)	(.038)	(.037)	(.040)	(.039)	(.028)
Off-campus work:	**.198*****	.021	-.009	**.092***	-.038	**.075+**	.042
21+ hours/week	(.041)	(.041)	(.044)	(.042)	(.046)	(.044)	(.032)
Live in residence hall	.004	**-.090***	-.058	**-.100****	**-.078***	**-.114****	**-.073****
	(.035)	(.035)	(.038)	(.036)	(.039)	(.038)	(.028)
Live in fraternity or	-.064	-.106	**-.315****	.012	-.143	**-.250***	**-.150***
sorority	(.097)	(.096)	(.103)	(.100)	(.107)	(.104)	(.076)
Quality of relations	**.058*****	**.156*****	**.110*****	**.303*****	**.133*****	**.173*****	**.148*****
with other students	(.013)	(.013)	(.014)	(.014)	(.015)	(.014)	(.010)
Time spent in co-	.003	-.005	**.023****	**.019***	**.021***	-.006	.008
curricular activities	(.008)	(.008)	(.009)	(.009)	(.009)	(.009)	(.007)
Time spent relaxing	.010	-.004	**-.012+**	.005	**-.015***	-.006	-.002
and socializing	(.006)	(.006)	(.007)	(.006)	(.007)	(.007)	(.005)
Drinking alcohol:	**-.086*****	-.029	**-.101*****	**-.040+**	**-.054***	**-.057***	**-.058****
1-2 times/week	(.022)	(.022)	(.023)	(.022)	(.024)	(.023)	(.017)
Drinking alcohol:	**-.079+**	**-.102***	**-.137****	**-.122****	**-.158****	-.051	**-.101****
3-4 times/week	(.051)	(.043)	(.046)	(.044)	(.047)	(.046)	(.034)
Drinking alcohol:	**-.097+**	-.050	**-.151****	-.081	**-.125***	-.072	**-.096***
5+ times/week	(.051)	(.051)	(.055)	(.053)	(.057)	(.055)	(.040)
Positive experiences	**.032***	**.051*****	**.044****	**.028***	-.002	.024	**.026***
with diversity	(.014)	(.014)	(.015)	(.014)	(.015)	(.015)	(.011)
Occasional negative	**-.071****	**-.074****	**-.097*****	**-.085*****	**-.048+**	**-.088*****	**-.069*****
diversity exper	(.022)	(.022)	(.024)	(.023)	(.025)	(.024)	(.018)
Frequent negative	**-.202*****	**-.134*****	**-.200*****	**-.173*****	**-.171*****	**-.188*****	**-.160*****
diversity exper	(.034)	(.034)	(.037)	(.035)	(.038)	(.036)	(.027)
Diversity courses: 1	-.028	**-.041+**	-.035	-.016	.035	**-.097*****	**-.033+**
	(.025)	(.025)	(.026)	(.026)	(.027)	(.027)	(.019)
Diversity courses:	.002	.006	**.079****	**.074****	**.082****	-.004	**.037+**
2-3	(.025)	(.025)	(.026)	(.025)	(.027)	(.027)	(.019)
Diversity courses:	-.020	-.044	.044	-.019	**.112****	-.018	.003
4 or more	(.037)	(.037)	(.040)	(.039)	(.042)	(.040)	(.030)
Faculty interactions	.006	**.038***	-.003	**.027+**	**.079*****	**.061*****	**.030***
	(.016)	(.016)	(.017)	(.016)	(.017)	(.017)	(.012)
In-class challenge	**.071*****	**.063*****	**.106*****	**.030+**	**.049****	**.067*****	**.061*****
	(.015)	(.015)	(.016)	(.016)	(.017)	(.016)	(.012)
N	2881	2882	2881	2881	2881	2880	2881
Adjusted R^2	.538	.538	.420	.546	.450	.555	.575

Note. Standard errors are in parentheses. Significant values are in bold.
+ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4.6 Unstandardized OLS regression coefficients for interaction terms with first-generation status predicting psychological well-being at the end of freshman year

Interaction term	Dependent variable: PWB scales						
	Autonomy	Environ Mastery	Personal Growth	Pos Rel w/Others	Purpose in Life	Self-Accept	Overall PWB
Full-time student	.311	-.337	**-.525***	-.405	**-.464+**	-.241	-.266
	(.239)	(.239)	(.256)	(.246)	(.265)	(.258)	(.188)
Greek member	.072	-.173	**-.371+**	.074	**-.344+**	.029	-.132
	(.178)	(.178)	(.190)	(.183)	(.197)	(.192)	(.140)
Scholarship athlete	.057	**-.397***	-.012	.075	-.145	.016	-.075
	(.155)	(.155)	(.166)	(.160)	(.172)	(.168)	(.122)
On-campus work:	.037	.153	.045	**.389*****	**.352****	**.353****	**.215****
1-10 hours/week	(.098)	(.098)	(.105)	(.101)	(.108)	(.106)	(.077)
On-campus work:	.065	-.154	-.084	.140	**.247+**	.159	.053
11-20 hours/week	(.115)	(.114)	(.122)	(.118)	(.127)	(.124)	(.090)
On-campus work:	**.680****	.046	-.073	**.547***	-.014	**.885*****	**.373***
21+ hours/week	(.214)	(.214)	(.228)	(.220)	(.237)	(.231)	(.168)
Off-campus work:	**-.199+**	.014	-.133	-.033	**-.299***	.124	-.097
1-10 hours/week	(.112)	(.112)	(.119)	(.115)	(.124)	(.121)	(.088)
Off-campus work:	.044	**.165+**	**.184+**	.076	.095	.112	.125
11-20 hours/week	(.098)	(.098)	(.105)	(.101)	(.109)	(.106)	(.077)
Off-campus work:	-.150	-.009	**-.410****	**-.331****	.018	.003	-.125
21+ hours/week	(.114)	(.114)	(.122)	(.117)	(.127)	(.123)	(.090)
Live in residence hall	.077	-.007	.043	-.080	**-.236***	-.012	-.038
	(.090)	(.090)	(.096)	(.092)	(.099)	(.097)	(.070)
Live in fraternity or	-.206	.158	**.861***	-.225	.154	.119	.185
sorority	(.336)	(.336)	(.359)	(.345)	(.372)	(.363)	(.264)
Quality of relations	.003	.016	**.083+**	**.092***	**.097***	.053	.049
with other students	(.044)	(.044)	(.047)	(.045)	(.048)	(.047)	(.034)
Time spent in co-	.000	**.105****	-.008	-.036	.041	-.046	.014
curricular activities	(.039)	(.039)	(.041)	(.040)	(.043)	(.042)	(.030)
Time spent relaxing	-.035	-.018	-.019	**-.056***	-.033	-.014	-.028
and socializing	(.022)	(.022)	(.023)	(.022)	(.024)	(.023)	(.017)
Drinking alcohol:	**-.217***	-.066	-.138	**-.254****	-.056	**-.212***	**-.154***
1-2 times/week	(.085)	(.085)	(.091)	(.087)	(.094)	(.092)	(.067)
Drinking alcohol:	-.044	.200	-.001	.250	.339	**.368+**	.187
3-4 times/week	(.187)	(.187)	(.199)	(.192)	(.207)	(.201)	(.147)
Drinking alcohol:	**-.450****	.054	.192	.234	-.178	-.240	-.050
5+ times/week	(.153)	(.153)	(.163)	(.157)	(.169)	(.165)	(.120)
Positive experiences	.071	.029	.066	.030	**.154****	.068	**.074+**
with diversity	(.049)	(.049)	(.053)	(.051)	(.055)	(.053)	(.039)
Occasional negative	-.108	-.072	.017	-.016	.011	.000	-.026
diversity exper	(.079)	(.078)	(.084)	(.081)	(.087)	(.085)	(.062)
Frequent negative	-.018	.056	-.013	.045	-.089	-.027	-.005
diversity exper	(.121)	(.121)	(.129)	(.124)	(.134)	(.131)	(.095)
Diversity courses: 1	.066	.055	.007	.051	-.137	-.074	-.010
	(.094)	(.094)	(.101)	(.097)	(.104)	(.102)	(.074)
Diversity courses:	.036	**.183***	**.160+**	**.324*****	.122	-.009	**.133***
2-3	(.082)	(.082)	(.087)	(.084)	(.090)	(.088)	(.064)
Diversity courses:	.066	**.216+**	**.409****	**.379****	.070	.100	**.210***
4 or more	(.128)	(.127)	(.136)	(.131)	(.141)	(.138)	(.100)

Faculty interactions	.043	**-.103+**	.036	-.044	-.084	-.011	-.035
	(.054)	(.054)	(.057)	(.055)	(.059)	(.058)	(.042)
In-class challenge	-.066	-.057	**-.127***	**-.087+**	**-.139****	-.048	**-.088***
	(.047)	(.047)	(.050)	(.049)	(.052)	(.051)	(.037)

Note. Standard errors in parentheses. Significant values in bold. + $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Appendix A. Descriptive statistics for all dependent and independent variables.

Variable	*M*	*SD*	Minimum	Maximum
First-generation college student	.104	.305	0	1
Male	.451	.498	0	1
Black non-Hispanic	.040	.196	0	1
American Indian/Alaska Native	.004	.065	0	1
Asian/Pacific Islander	.074	.261	0	1
Hispanic	.051	.220	0	1
Race/ethnicity unknown	.015	.121	0	1
Low parental income	.138	.345	0	1
High parental income	.315	.465	0	1
Parental income not reported	.118	.323	0	1
Age 20+ in beginning of freshman year	.050	217	0	1
HSGPA B+ to B-	.359	.480	0	1
HSGPA C+ and lower	.050	.218	0	1
HS student body similar to own race	3.86	1.08	1	5
Degree aspirations	4.22	1.24	1	6
Autonomy at Time 1	4.28	.777	1.44	6
Environmental mastery at Time 1	4.37	.707	1.44	6
Personal growth at Time 1	4.65	.654	1.78	6
Positive relations with others at Time 1	4.64	.768	1.33	6
Purpose in life at Time 1	4.67	.768	1.50	6
Self-acceptance at Time 1	4.57	.785	1.11	6
Overall PWB at Time 1	4.53	.570	2.09	6
Research university	.345	.475	0	1
Regional university	.255	.436	0	1
Community college	.149	.356	0	1
Full-time student	.987	.113	0	1
Greek member	.149	.356	0	1
Scholarship athlete	.099	.299	0	1
On-campus work: 1-10 hours/week	.181	.385	0	1
On-campus work: 11-20 hours/week	.086	.280	0	1
On-campus work: 21 or more hours/week	.011	.106	0	1
Off-campus work: 1-10 hours/week	.092	.290	0	1
Off-campus work: 11-20 hours/week	.088	.284	0	1
Off-campus work: 21 or more hours/week	.101	.301	0	1
Live in residence hall	.756	.430	0	1
Live in fraternity or sorority	.012	.109	0	1
Quality of interactions with other students	4.31	.838	1	5.4
Time spent in co-curricular activities	2.34	1.51	1	8
Time spent relaxing and socializing	4.07	1.67	1	8
Drinking alcohol: 1-2 times/week	.334	.472	0	1
Drinking alcohol: 3-4 times/week	.058	.234	0	1
Drinking alcohol: 5 or more times/week	.043	.203	0	1
Positive experiences with diversity	2.91	.882	1	4.88
Occasional negative diversity experiences	.312	.463	0	1
Frequent negative diversity experiences	.110	.313	0	1
Diversity courses: 1	.225	.418	0	1
Diversity courses: 2-3	.243	.429	0	1
Diversity courses: 4 or more	.081	.273	0	1
Frequent of faculty contact	-.065	.697	-1.38	2.22
In-class challenge	-.124	.727	-2.37	1.49
Autonomy at Time 2	4.32	.727	1.78	6

Environmental mastery at Time 2	4.34	.728	1	6
Personal growth at Time 2	4.61	.698	1	6
Positive relations with others at Time 2	4.65	.764	1	6
Purpose in life at Time 2	4.61	.746	1	6
Self-acceptance at Time 2	4.55	.801	1	6
Overall PWB at Time 2	4.51	.599	1.56	6

Appendix B. Factor loadings and reliabilities.

Factors and items	Loadings (reliabilities)
Positive Relationships with Other Students	(.82)
The student friendships R[a] has developed at this institution have been personally satisfying	.873
R has developed close personal relationships with other students	.852
It has been difficult for R to meet and make friends with other students	-.795
R's quality of relationships with other students	.790
Few of the students R knows would be willing to listen to and help R with a personal problem	-.545
Positive Diversity Interactions with Peers	(.89)
How often R had serious discussions with other students about different lifestyles and customs	.807
How often R had meaningful and honest discussions about issues related to social justice with diverse students while attending this college	.778
How often R had discussions regarding inter-group relations with diverse students while attending this college	.769
How often R had serious discussions with other students about major social issues such as racial diversity, human rights, equality, or justice	.765
How often R made friends with students whose race is different from their own	.744
How often R shared personal feelings and problems with diverse students while attending this college	.736
During current school year, how often has R had serious conversations with students of a different race or ethnicity than R's own	.683
How often R made friends with a student from another country	.683
Negative Diversity Interactions	(.83)
How often R had hurtful, unresolved interactions with diverse students while attending this college	.858
How often R had tense, somewhat hostile interactions with diverse students while attending this college	.818
How often R felt silenced by prejudice and discrimination from sharing personal experiences with diverse students while attending this college	.807
How often R felt insulted or threatened based on race, national origin, values, or religion with diverse students while attending this college	.757
How often R had guarded, cautious interactions with diverse students while attending this college	.656
Frequency of Faculty Contact	(.70)
During current school year, how often has R discussed ideas from readings or classes with faculty members outside of class	.771
During current school year, how often has R talked about career plans with a faculty member or advisor	.740
During current school year, how often has R discussed grades or assignments with an instructor	.694
During current school year, how often has R worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)	.634
In-Class Challenge	(.82)
How often faculty challenged R's ideas in class	.781
How often faculty asked R to argue for or against a particular point of view	.760

How often faculty asked R to point out any fallacies in basic ideas, principles, or points of view presented in the course	.751
How often faculty asked R to show how a particular course concept could be applied to an actual problem or situation	.704
How often students challenged each others' ideas in class	.695
How often faculty asked challenging questions in class	.684

Note. Reliabilities are listed in parentheses. When creating indices, items with negative factor loadings were reverse-coded. [a] R = Respondent

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Chapter 5:

Conclusion

This final chapter will tie together the preceding chapters and draw some general conclusions and observations. First, the primary arguments and findings from Chapters 2-4 will be summarized, noting intersections among the articles when applicable. Next, implications will be discussed for cultural psychological research. Then, the connection between higher education and social class will be discussed in terms of a historical perspective. Finally, I will discuss how social and cultural psychology may inform theory and practice in higher education.

Summary of Overall Findings

Chapter 2 put forth a theoretical conception of independence and self for working-class (WC) and middle-class (MC) European Americans. In general, both WC and MC display high levels of independence, but the forms of independence vary across social class groups. That is, WC environments place a strong emphasis on self-reliance and hard work, whereas MC environments tend to emphasize personal control and choice. Importantly, these socio-cultural contexts are also associated with divergent forms of social networks: WC networks are largely family-based, more tightly interconnected, and contain more fixed (i.e., non-voluntary) relationships, whereas MC networks are largely friend-based, more diffuse, and contain more voluntary relationships. In order to

maintain these voluntary networks, MC must pay relatively greater attention to their social surroundings, and we expected that this attention would have notable effects on social and non-social perception.

Using a large, nationally representative dataset, Study 1 found that MC had more personal mastery and less perceived constraint than did WC. In contrast, WC had much higher levels of self-reliance than did MC. Furthermore, relative to WC, MC received greater social support from friends, were more likely to receive advice from others, and were more likely to prefer to receive advice. Despite a strong emphasis on family connections among WC (Lareau, 2003; Rubin, 1992), the results showed no social class differences in support from family or from spouse/partner. Given the greater social support and advice-giving behavior among MC found in Study 1, we predicted that MC would be more attentive to social cues than WC. Studies 2a and 2b explored this possibility directly by having participants read several vignettes that described others' behavior and rate how much they endorsed dispositional and situational explanations for these behaviors. The patterns for students from a community college (Study 2a) and students from a research university (Study 2b) were identical: Participants from MC backgrounds were more likely than those from WC backgrounds to endorse situational attributions, whereas there were no social class differences for dispositional attributions. In both studies, the effect sizes of the social class differences in situational attributions were large (Cohen *d*'s = 1.16 and .82 for Studies 2a and 2b, respectively). Moreover, in Study 2b, the two social class groups performed equally well on college admissions tests, so these patterns cannot be attributed to differences in intellectual ability. Instead, the

social class pattern in attribution likely represents chronic attention toward social situations in MC environments.

In addition, research suggests that conceptions of self and attention toward the social environment are associated with cultural differences in perception of non-social objects (for reviews, see Kitayama, Duffy, & Uchida, 2007; Nisbett, Peng, Choi, & Norenzayan, 2001). As a result, we predicted that the interpersonal attribution patterns seen in Studies 2a and 2b may also be apparent for non-social stimuli. In Study 3, participants at three colleges and universities completed a visual task in which they had to attend to a single focal object (independent of its surrounding context) or to an object and its surrounding context simultaneously. The results were as expected; that is, MC performed better than WC on the task that required dispersed visual attention, whereas there was no social class difference for the task that required focused visual attention. Moreover, the patterns were similar across participants at diverse institutions, which suggests that sampling did not play a role in obtaining these results. In sum, Chapter 2 provides strong evidence for the impact of socio-cultural practices and norms on social class differences in attribution and cognition.

Chapter 3 explored another dimension of psychological functioning by examining whether the nature of well-being varies across social class. Specifically, we hypothesized that well-being among WC would be more often displayed and experienced physically, whereas well-being among MC would be more often displayed and experienced psychologically. This prediction followed from studies that suggest WC and MC differentially emphasize the role of behavior and psychological states, respectively, in their models of agency (Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007)

and child-rearing behavior (e.g., Kohn, 1969; Kusserow, 2004). In addition, the form of WC independence described in Chapter 2, in which self-reliance and hard work are quite important, also places a strong focus on behavioral (vis-à-vis psychological) independence.

Using a nationally representative dataset, three separate findings support our hypothesis. First, as predicted, correlations among psychological measures of well-being were stronger for MC than for WC; in contrast, correlations among measures of physical health were stronger for WC than for MC. These patterns imply that psychological well-being (broadly defined) is a more coherent construct for MC, whereas physical health is more coherent for WC. Second, correlations between psychological well-being measures and physical health measures were higher for WC than for MC, which suggests that WC may be using their physical health as a means of making judgments about their psychological health. Third, in a series of OLS multiple regressions, personal control and social support were better predictors of psychological well-being for MC than for WC, whereas control and support were better predictors of physical health for WC than for MC. Thus, to the degree that control and support influence well-being outcomes, this impact seems to be stronger when a particular aspect of well-being is culturally salient. Importantly, since the variation for all well-being variables was larger for WC than for MC, an additional set of analyses was performed after eliminating participants who had poor physical health. Despite the range restriction that resulted from this form of truncation, the overall pattern of findings was similar, and most of the significant relationships found in the full sample analyses remained significant in the restricted sample.

Finally, Chapter 4 examined the development of psychological well-being among first-generation and non-first-generation college freshmen. For this study, psychological well-being (PWB) was operationalized as Ryff's (1989) six dimensions of eudaimonic well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. In Chapter 3, this measure of well-being exhibited relatively few social class differences, so this may be the psychological indicator that is most meaningful across groups. However, unlike in Chapters 2 and 3, there was no clear prediction about the expected results, since different perspectives would suggest different social class patterns. Specifically, since MC adults score higher than WC adults on most dimensions of PWB (Keyes, Shmotkin, & Ryff, 2002; Ryff, Keyes, & Hughes, 2003), it seemed reasonable to expect that PWB among first-generation students would be bolstered in the freshman year and social class differences in PWB would diminish as a result. However, first-generation students tend to experience more difficulty in adjusting to the college environment (Terenzini et al., 1994; Zwerling & London, 1992), so it also seemed quite reasonable to expect that social class differences may be exacerbated during this difficult time. Moreover, substantial differences exist in the degree to which first-generation and non-first-generation students engage in numerous college experiences (Pascarella, Pierson, Wolniak, & Terenzini, 2004), so these differences might explain potential social class disparities in PWB.

This study examined a longitudinal sample of over 3,000 college freshmen at 19 colleges and universities. At the beginning of freshman year, social class differences were found for only two of the six PWB dimensions (personal growth and self-acceptance). In contrast, by the end of the freshman year, first-generation students scored

lower than non-first-generation students on all dimensions of PWB. Moreover, even when controlling for various background characteristics and college experiences, first-generation students showed smaller gains than did non-first-generation students on autonomy, personal growth, positive relations with others, and an overall measure of PWB. Thus, attending the first year of college actually increased social class disparities in well-being.

Overall, the impact of college experiences was fairly similar for first-generation and non-first-generation students. Some experiences were associated with substantial improvements in PWB for all students, including forming quality relationships with other students, having frequent interactions with faculty, and having positive interactions with students who were different from oneself. Moreover, some experiences were associated with decreases in PWB for all students, including drinking alcohol and having hostile interactions with diverse peers. In addition, the effects of some experiences varied by first-generation status. For instance, working on campus and taking at least two diversity courses led to greater PWB gains for first-generation students than for non-first-generation students. It may be that these two forms of campus involvement provide connection to their peers that are particularly beneficial for first-generation students, who often feel less able to make such connections (Zwerling & London, 1992). In general, placing students from WC backgrounds in primarily MC college environments seems to have an adverse short-term effect on PWB, but it would be quite interesting to see whether these effects may change for first-generation students who persist to graduation.

In Chapter 1, a conceptual framework was created to illustrate the processes underlying social class differences in the self, social networks, well-being, attention, and

cognition. The subsequent three chapters examined various aspects of this model. Specifically, Chapter 2 provided empirical support for differences in the self, attention, and cognition; Chapter 3 illustrated differences in the nature of health and well-being; and Chapter 4 showed the factors that are related to the development of psychological well-being. However, these studies did not provide evidence as to whether and how these factors are causally related. As discussed previously, constructs that are related to one another at the cultural level are not necessarily related at the individual level (Kitayama et al., 2008; Na et al., 2008), so the causal links may be difficult to test empirically.

Implications for Cultural Psychology

An important implication from this research is the consideration of social class in studying culture. The vast majority of psychological studies are conducted with undergraduate college students at research universities (Sears, 1986). Although a handful of first-generation students or other students from WC backgrounds may attend these institutions, the vast majority of students are from affluent families (Massey, Charles, Lundy, & Fischer, 2003). To the degree that cultural psychological studies merely attempt to offer evidence for the possibility of cultural differences, this selection bias may not be a problem. For example, in their study of change detection, Masuda and Nisbett (2006) assert that "[t]hese results suggest that there *can* be cultural variation in what may seem to be basic perceptual processes" (p. 381, emphasis added). In other words, the authors' basic intent is to provide evidence for the non-universality of certain processes. By restricting the age range, social class, and general cognitive ability of participants in both cultures, the possibility of alternative explanations for these findings is reduced. As

a result, using a college student sample may be considered a strength for this particular study.

However, this sampling technique becomes much more problematic when attempting to map the relative positions of cultures on various dimensions (e.g., see Inglehart & Baker, 2000; Inglehart & Klingemann, 2000; Oyserman, Coon, & Kemmelmeier, 2002). Under these circumstances, it is highly misleading to take participants from a narrow slice of a culture and generalize those findings to an entire nation or group of nations. For example, regional variations within a country are associated with substantial differences on collectivism (Vandello & Cohen, 1999), independent agency (Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006), honor-related violence (Nisbett & Cohen, 1996), and well-being profiles (Plaut, Markus, & Lachman, 2002). The studies in this dissertation suggest that social class constitutes another important source of systematic within-group variation. Chapter 2 showed sizable social class differences in performance on a contextual visual attention task (d = .38) and endorsement of situational attributions for others' behavior (d's > .80). In fact, these effect sizes are on par with the magnitude of cultural differences found between North America and East Asia (Miyamoto, Kitayama, & Talhelm, 2006). As a result, studies of college students at prestigious universities would provide misleading results for researchers who wish to determine the "average" American level on a given cultural attribute.

The issue of generalizability becomes even more complex when considering potential interactions between social class and culture. For example, educational attainment differences in subjective well-being are about three times larger in Central

Europe than in North America and Western Europe (Bowman, Varnum, & Nisbett, 2008). Therefore, exclusively analyzing samples of college students in these regions (who are likely to be from well-educated families) would underestimate cultural differences in subjective well-being. Moreover, the WC form of self-reliance described in Chapter 2 seems to be culturally specific. Although WC Americans are more self-reliant than MC Americans, a nationally representative survey in the Slovak Republic found that MC Slovaks are actually more self-reliant than WC Slovaks (Bowman, 2008). Furthermore, according to these self-report measures, MC Slovaks are much more self-reliant than MC Americans, whereas there are minimal overall differences in self-reliance between Slovaks and Americans. In this instance, sampling from a higher social class group does not merely misestimate the size of cultural differences; instead, it provides findings that are entirely inaccurate. These illustrations are just two examples that compare specific cultural regions. However, because very little work has been done to examine culture and social class differences simultaneously, it is unclear whether these variations are unusual or quite common.

The Inextricable Link between Higher Education and Social Class

Traditionally, colleges and universities have served to reproduce social class structures in American society. For the first 250-300 years of American higher education, very few students attended postsecondary education of any kind. In fact, before 1915, any student who could pass the entrance examination at a particular college was admitted (Wechsler, 1977). However, these exams were largely based on curricula at elite boarding schools. Therefore, although admissions were technically open to anyone, only students from families that could afford boarding schools had a realistic

chance of meeting the requirements. When top institutions finally started to receive enough applications to reject qualified students, their admissions procedures changed so as to filter out "undesirable" applicants, particularly Jewish students (Wechsler, 1977).

With the introduction of the GI Bill in 1944, college became a possibility for students who otherwise would not have even considered higher education (Rudolph, 1962/1990). This led to a massive influx of students into America's colleges and universities. At about the same time, a shift occurred at top American colleges from accepting students on the basis of wealth and family connections to considering which students were the "most qualified" academically (Lemann, 2000). Although the initial movement in this direction was slow, this constituted a profound shift toward social equality at the time. In theory, any (male) student could attend a top college if he showed sufficient academic promise. In 1934, Harvard began providing 10 full scholarships to working-class and middle-class students from across the country who scored highly on the SAT (at the time, fewer than 10,000 students took the SAT each year). Within a few years, Yale and Princeton enacted similar scholarship programs.

However, wealthy students were still clearly overrepresented among the top institutions, and this is still true today. Once the test preparation industry became popular among wealthy families in the 1980s, it became more difficult for non-affluent students to attend top-tier colleges (Lemann, 2000). Although the socioeconomic diversity of college students has increased substantially in the last 20 years, positions at the top schools are still overwhelmingly held by wealthy students (Bowen & Bok, 1998; Massey et al., 2003). Admission at top colleges is particularly important, since graduates from elite institutions receive greater outcomes in the job market than do their peers at

relatively less prestigious institutions, even when controlling for a variety of relevant factors (Bowen & Bok, 1998).

Today, first-generation students matriculate to college at rates that are higher than one might expect. Over a decade ago, 34% of students entering four-year colleges and 53% of students entering two-year colleges were first-generation students (Choy, 2001), and these figures may have increased in recent years. However, first-generation students are much less likely to stay in college than are students whose parents have attended some college (Warburton, Bugarin, & Nunez, 2001). All of the available evidence shows that it is much easier for people from higher social standing—however that is defined—to continue to fill the upper positions in American society.

In the title of their book, Zwerling and London (1992) suggested that higher education researchers and practitioners should "[confront] the cultural issues" that first-generation students face. Since then, many studies have examined racial climate on college campuses and ways to improve campus climate (for a review, see Hurtado, Milem, Clayton-Pederson, & Allen, 1999). In contrast, over 15 years later, virtually no researchers have taken up this challenge for first-generation students. In the next sections, I will suggest how a cultural and social psychological approach may be useful for improving the experiences of first-generation students. Furthermore, I will argue that psychological methods may provide valuable insight into processes and best practices for promoting student success (broadly defined).

Psychologically Informed Research and Practice in Higher Education

Designing Effective Quantitative Studies

A cultural orientation toward examining student dynamics in higher education would yield substantial advantages relative to some current approaches, particularly in quantitative research. Most quantitative articles published in the top higher education journals employ multiple regression analyses and other advanced statistical techniques to examine the relationships between numerous predictor variables and dependent variable(s) (Hutchinson & Lovell, 2004). In the case of studying student outcomes, these analyses use a host of background characteristics, which can include race, gender, age, income, and parental education. Much of the time, these characteristics are used simply as control variables; that is, the authors' primary interest is the relationship between other constructs or experiences and the dependent variable. In other cases, the authors are interested in exploring disparities that occur across social categories, such as race, gender, and social class. Through multiple regression models, the authors can determine, to some degree, what factors account for various gaps by race, gender, or class.

However, someone taking a cultural perspective would be interested in not only between-group differences and factors that account for these differences, but also to what degree the effects of relevant experiences vary across socio-cultural groups. For example, in Chapter 4, I examined interactions between college experiences and first-generation status. Some of these findings are readily explicable through a cultural lens. For example, in Model 3, the level of in-class challenge is positively related to all six dimensions of PWB. However, when interaction terms were added, in-class challenge was either unrelated or negatively related to most dimensions of PWB for first-generation students. Since first-generation students may be prone to view pointed debate and questioning as confrontational (Oldfield, 2007), it makes sense that these interactions are

not beneficial for first-generation students. From these findings, the clear implication is that colleges with large proportions of first-generation students should be very careful in employing these educational practices. However, if I had not taken a cultural perspective (whether explicitly or implicitly), then I would have not conducted the additional analyses. As a result, what would have been one of the key implications for practice (i.e., in-class challenge is beneficial, since it boosts PWB for everyone) would have actually been counterproductive for some students and at some institutions.

More specifically, it seems that psychological well-being may serve as a fruitful and important area for future higher education research. Chapter 4 demonstrated that a number of college experiences can have a meaningful impact on PWB. Given the role of PWB in promoting future life satisfaction, social support, and health outcomes (Kitayama & Bowman, 2008; Ryff, 2008), the development of PWB can be beneficial as a means of improving life after college. In addition, it may be the case that PWB has important effects on transition to college and engagement in college activities, which would subsequently affect graduation rates. In other words, PWB may be one important "noncognitive" factor for predicting academic achievement and persistence. Clearly, the potential for PWB as a predictor of college success is purely speculative at the moment, but this possibility certainly merits empirical attention.

Engaging in Culturally Effective Practices

In terms of practical applications, this dissertation suggests the importance of examining and considering cultural factors as they apply to the experiences and decision-making processes of first-generation college students. I would like to illustrate this point with the following example. It may be the case (and is probably true on many college

campuses) that first-generation college students are less likely to use the academic resource center at a particular college, even though these students may need the resources even more than non-first-generation students do. An initial reaction might be to disseminate information broadly about the myriad academic resources and options that are available at the center. Students would then be able to make choices about the options that they prefer. However, according to the cultural perspective described here, this strategy would probably not achieve the desired results. First, WC Americans tend to be self-reliant and generally reluctant to ask for help. Thus, to the degree that first-generation students fit this broader cultural norm, they are probably disinclined to seek help in this manner. Second, since people from WC backgrounds generally are less trusting of social institutions than people from MC backgrounds (Lareau, 2003), first-generation college students may be particularly unlikely to seek help from a center or program with which they are not familiar. Third, providing an array of choices and options would probably appeal primarily to students from MC backgrounds, who view this form of agency as empowering (Kusserow, 2004).

Thus, a cultural perspective would lead administrators and staff to a very different approach for targeting and working with first-generation students. First, from this perspective, the program should be conveyed not as providing "extra help," but as an integral component of one's education. This strategy would reframe the behavior as adhering to the dictates of an ambiguous authority, which is a more effective strategy for influencing WC than MC (Kohn, 1969; Kohn & Schooler, 1983). Second, the staff and students of the program could be portrayed as "family," using that exact word. Overall, when help is actually provided among American adults, WC are much more likely than

MC to rely on close and extended family for assistance (Rubin, 1992; Willmott, 1987). Invoking the word "family" may suggest that this behavior is relatively more acceptable for first-generation students. Furthermore, this framing would start to provide a framework for building trust, since WC have lower levels of general trust than MC do (Kusserow, 2004). Third, instead of providing a variety of options from which students can choose, an advisor could meet one-on-one with the student to recommend a course of action that is right for him or her. This would help foster a feeling of trust and caring, along with the suggestions provided by an expert authority. In sum, carefully considering and understanding cultural factors related to the intended population (in this case, first-generation students) is critical for designing effective programs and practices.

Performing Subtle Interventions with Large Results

The preceding example illustrated the need to frame and enact campus programs in a culturally sensitive manner. This hypothetical situation, though, contains a common assumption in higher education: Assistance with student adjustment and achievement should be provided through large-scale campus programs. That is, in the preceding example, an entire center on campus was devoted to providing academic support, and I argued that the subtle framing of the program could determine, in part, who would participate in this program. Although I would not suggest that such campus resources are unnecessary, recent psychological evidence has shown that some subtle interventions can have remarkable effects on student achievement. Some of this literature is well-known in psychology, but it has unfortunately received less attention in higher education circles. In order to provide a sense of the possibilities, I will briefly discuss a few of these studies here (for a more detailed account, see Nisbett, in press, Chapter 7).

Blackwell, Trzesniewski, and Dweck (2007) performed an intervention in which they convinced a group of poor minority junior-high students that their intelligence is largely under their own control and is largely the product of hard work. Subsequently, their teachers reported that these students worked harder in class and received higher grades than a control group who had not received this message. Moreover, as one might expect, this intervention was most effective for the students who had previously held the strongest genetic beliefs that intelligence is immutable. A similar intervention study among poor minority junior high students resulted in massive performance increases on standardized exams. Reading performance improved by more than half a standard deviation, male students' math performance increased by about 2/3 of a standard deviation, and female students' math achievement jumped up over a full standard deviation (Aronson, Fried, & Good, 2002).

Using a more elaborate intervention, Oyserman, Bybee, and Terry (2006) helped poor middle-school students (most of whom were students of color) to see themselves preparing to attend college. Specifically, in an 11-session classroom program, these students envisioned what it would be like to go to college, what they needed to do to get there, and what obstacles they might face along the way. Other students in the same school were randomly assigned to a regular homeroom. Relative to the control group that attended the regular homeroom, the intervention group performed substantially better on standardized tests (Cohen's $d = .36$) and were less likely to be held back in the following year ($d = .60$).

Perhaps the simplest intervention was conducted by Cohen and colleagues (Cohen, Garcia, Apfel, & Master, 2006). In a written classroom exercise toward the

beginning of the semester, teachers asked seventh-grade students from middle-class and working-class backgrounds to choose their most important values (e.g., relationships with friends and family, being good at art) and describe why these values were important to them. Control participants identified values that were not important to them. The entire interaction took a total of 15 minutes. However, the effects were substantial: This simple intervention reduced the Black-White gap in achievement by 40% for that semester's grades. The findings seem almost too good to be true, so they conducted the same experiment with the following year's students and found the same results.

These relatively simple interventions can affect college performance as well, even though the factors that affect college academic performance can be somewhat different. The deleterious effects of stereotype threat on college students' performance are well-established. That is, the presence of negative stereotypes about a group (e.g., "African Americans aren't smart") can cause decreased performance on difficult academic tasks; in the long term, this decreased performance may contribute to reduced identification with academics and a greater likelihood of dropping out of college (Steele, 1997; Steele & Aronson, 1995). Moreover, a study in France suggests that these effects may also occur for college students from lower-income backgrounds (Croizet & Claire, 1998). Once again, though, these pernicious effects may be reduced or eliminated through appropriate framing techniques. For instance, when controlling for SAT scores, African American students perform as well as Caucasian students when a difficult test is framed as non-diagnostic of intellectual ability (e.g., Steele & Aronson, 1995), and female math majors perform as well as their male counterparts on a difficult math exam if they are told that the test shows no gender differences (Spencer, Steele, & Quinn, 1999). In addition,

at the time this dissertation was published in 2008, there was an entire website devoted to finding and sharing ways to reduce stereotype threat (www.reducingstereotypethreat.org).

Interestingly, academic performance in college can also be improved by attending to non-academic factors. In a laboratory study, Walton and Cohen (2007) assuaged first-year students' concerns about social belonging by showing them videos of other students who that said they were worried about fitting in when they entered college, but that these concerns diminished over time. Relative to a control condition, Black students who received this affirming message reported a greater sense of fit in college and more studying in the week after the intervention. Moreover, at the end of the semester, they showed substantially greater improvements in their grades than did the control group of Black students (Cohen's $d = 1.10$).

None of these studies examined first-generation college students directly, but all interventions primarily improved outcomes for underrepresented students. Since first-generation students also face serious concerns about making social connections in college and negative stereotypes about their performance, such techniques may be useful for these students as well (see Croizet & Claire, 1998).

Conclusion

In sum, taking a psychological approach to studying issues of social class may be fruitful not only for understanding how psychological phenomena vary across socio-cultural groups, but also for designing effective programs for college students from working-class backgrounds. Moreover, the intentional use of brief, cost-effective interventions offers substantial promise for reducing social class and racial differences in college adjustment and achievement. These types of experimental and quasi-

experimental methods may constitute a highly productive step toward understanding and improving dynamics within the college environment. However, future research is needed to examine whether and how these sorts of interventions can be enacted on a broad scale for the entire campus.

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