Benefits of belonging:

Dynamic group identity as a protective resource against psychological threat

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ABSTRACT

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In the face of identity threat, how do people who belong to devalued groups protect themselves from negative outcomes, like poor health and performance? This research focuses on how devalued identities can be harnessed and used to combat vulnerability to poor outcomes. Social identities are central to psychological functioning, but, due in part to a focus on identity’s stable, trait-like features, past research on how devalued identities affect outcomes has produced mixed results. Conceptualizing identity as a dynamic, situation-responsive system, three studies test whether activating positive aspects of a threatened group protects against negative outcomes specifically in threatening situations. Study 1 establishes that affirming groups effectively buffers against underperformance resulting from stereotype threat and that some people choose to affirm the very group that is threatened. Study 2 tests whether affirming aspects of the threatened identity also allows one to maintain personal and collective self-esteem and whether effects depend on how one construes belonging to the group (i.e., unique group member, typical group member, unique individual). Whereas performance and personal self-esteem were equal across conditions, collective self-esteem was boosted after affirming oneself as a unique group member, suggesting that identity as defined and optimized by the individual confers benefits. Study 3 tests the situational-specificity of these protective effects and shows that highly-valued
identity knowledge predicted lower levels of distress and higher performance only when activated in response to discrimination and not to other situations. Across all three studies, measures of stable identification did not consistently predict outcomes in threatening or non-threatening situations. At the core of the approach adopted in these three studies is an interplay between person and situation in defining identity. This approach presents a fuller picture of the multi-faceted functional role of identity and demonstrates the utility of studying identity in context.
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CHAPTER 1

INTRODUCTION
In recent years, there has been contentious political discourse on the topic of same-sex marriage. Regarding this debate, the chairman of the Young Conservatives of California, Ryan Sorba, recently advised his fellow social conservatives to "stop using the word gay because…this term is grounded in an identity" (Resnick, 2011) in order to effectively oppose same-sex marriage. Continuing to use the term, he claimed, allows the gay and lesbian community to define the terms of the debate. Steeped in his point is the broader idea that identity is a powerful resource. What is gained by having an identity, especially one that is stigmatized or devalued in the broader society? Sorba discusses a collective advantage of having an identity in terms of intergroup relations, but belonging to a group may also confer benefits to its individual members by operating as psychological resource in times of stress.

People’s preference to affiliate with groups is pervasive across cultures, nationalities, gender, age, religion, class, creed, or any other category of people. Researchers have long studied the benefits of belonging to groups and have shown that belonging promotes survival and well-being. Isolated and lonely individuals have poor mental and physical health and higher mortality (Berkman & Syme, 1979; Cacioppo et al., 2002), and rather than feeling isolated, some people will even opt into corrupt groups (e.g., Sageman, 2004) or engage in behaviors they believe are wrong in order to be accepted by others (e.g., Purdie & Downey, 2000). Groups are represented as an important part of the self-concept and affect how people perceive, think, and act in the social world (Brewer, 1991; Forehand, Deshpande, & Reed, 2002; Smith, Coats, & Walling, 1999; Smith & Henry, 1996; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). The role of groups in human life is so great that it has led many to posit that belonging, affiliation, and acceptance comprise a basic, fundamental human need (e.g., Baumeister & Leary, 1995; Maslow, 1954). Supporting this idea, biological and neurological
bases of affiliative processes have been identified (e.g., Taylor, Klein, Lewis, Gruenewald, Gurung, & Updegraff, 2000). Perhaps because of its fundamentality, identity, which refers to those aspects of one’s self-concept that derive from the group (Tajfel, 1974), has generally been approached as a global, stable, and trait-like construct when in fact it is a dynamic, fluid, and situation-responsive. This sensitivity may in fact be critical to understanding how identities can benefit health and well-being even when they are discriminated against or otherwise devalued. This thesis focuses on how identity confers protection for people contending with identity threat by emphasizing its situation-sensitive features rather than its stable, trait-like features.

**Coping with Belonging to a Devalued Group**

Membership in stigmatized or devalued groups can increase expectations and/or experiences of discrimination that can negatively affect health (e.g., Sellers & Shelton, 2003; Williams, Neighbors, & Jackson, 2003) and performance in domains in which one’s group is negatively stereotyped (Steele & Aronson, 1995). However, people clearly demonstrate resilience to negative effects of belonging to a devalued group (Downey, Eccles, & Chatman, 2006) and can even become proud of their stigmatized identity and increase identification with the devalued group (Ellemers, Spears, & Doosje, 2002; see also Crocker & Major, 1989; Turner, Hogg, Turner, & Smith, 1984; cf. Allport, 1954; Cartwright, 1950; Cooley, 1956; Erikson, 1956; Lewin, 1948). What processes support resilience?

Racial groups, for example, are among the most commonly studied groups, and robust evidence links racial discrimination to poor health (e.g., Williams, Neighbors, & Jackson, 2003). Members of racial minority groups, however, underutilize health services, receive lower quality health care, and benefit less from mental health resources and explicit social support in times of stress (Smedley, Stith, & Nelson, 2003; Taylor, Welch, Kim, & Sherman, 2007; U.S. Department
Rather than relying on such external resources, people may be using internal resources to cope with stressful and threatening situations in which their group is devalued. This thesis proposes that devaluation of one’s group or identity creates psychological threat that arouses motivations to protect oneself and one’s identity; in response, focusing on or affirming positive aspects of that identity can direct how one thinks and feels in a way that confers protection from negative outcomes, like poor health or underperformance. By demonstrating how positive aspects of a social identity can serve as a resource specifically in psychologically threatening situations or contexts, this thesis aims to add to research on the beneficial role of groups and the measurement and conceptualization of social identity.

Using racial/ethnic identity\(^1\), the most commonly studied identity, the goals of this section are three-fold: 1) to demonstrate that identity is dynamic and situation-responsive despite past emphasis on its global, stable features; 2) to suggest how and why affirmation or activation of positively-valued aspects of identity can lead to benefits or protection against negative outcomes, uniquely in situations of identity threat; and 3) to outline a model of identity in context that can reconcile the existence of mixed findings in the ethnic identity literature and lead to a better understanding of when and why identity predicts outcomes.

**Conceptualization vs. Assessment of Identity**

Social identity has been defined and widely cited as "that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the emotional significance attached to that membership" (Tajfel, 1974, p. 64).

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\(^1\) *Racial identity* has been associated with intergroup relations, status differentials, and experiences of discrimination/prejudice whereas *ethnic identity* has been used to refer to a particular group’s traditions, practices, and a sense of belonging (Markus, 2008; Phinney, 1996). Both elements are of interest to this thesis so no such distinctiveness is made for the present purposes.
Tajfel also described what he meant when using the term "group": "a cognitive entity that is meaningful to the subject at a particular point in time [italics added] and must be distinguished from the way in which the term ‘group’ is used in much of the social psychological literature where it denotes an ‘objective’ (most often face-to-face) relationship between a number of people" (1974, p. 64). Social identity, then, refers to features of the group that the individual finds personally relevant and is emotionally connected to at a given point in time. Inherent to this definition is the idea that identity is a dynamic, multi-faceted, and even idiosyncratic construct. Much of the original research stemming from social identity theory utilized minimal group paradigms that assigned participants to mutually exclusive groups based on some shared, but arbitrary or novel characteristic. As such, measures of that novel identity were suitable to capturing the meaning of that group to the individual at that point in time (the time participation in the study). Some of identity’s situational sensitivity was lost, however, when researchers studied more enduring, developed, and culturally relevant social identities, like ethnic or national identity, and ascribed social identities, like gender and racial identities.

Some re-conceptualizing of identity and its assessment was necessary in order to account for the complexities of these identities that are negligible among minimal group-based identities. Regarding ethnic identity, some researchers focused on its formation and development and proposed various stage models of ethnic identity based on models of ego identity formation (Erikson, 1968; Marcia, 1966) that concluded with an achieved identity (e.g., Phinney, 1990). An achieved identity is the result of a crisis, a period of exploration or experimentation, and finally a commitment to or incorporation of one’s ethnicity. Correspondingly, the Multiethnic Identity Measure (MEIM; Phinney 1992; revised by Phinney & Ong, 2007), a self-report measure which dominates the literature with well over 1300 citations, consists of two factors
capturing exploration (e.g., "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs") and commitment or attachment (e.g., "I have a strong sense of belonging to my own ethnic group"). Prior to developing the MEIM, Phinney (1990) correctly noted that the literature had been mixed and inconclusive in terms of the effects of ethnic identity on psychological functioning. She attributed the difficulty of drawing general conclusions about identity’s effects to the use of a variety of assessment tools that were specific to ethnic groups. The MEIM was therefore developed to identify common elements and provide a general assessment of ethnic identity that could be used across ethnic groups. Scores on the MEIM and other identity assessments usually reflect strength of positive attitudes about one’s group and identity and are often referred to as identification. In part because of its roots in developmental psychology and psychoanalytic tradition, items of this and similar measures strongly emphasize stable features of identity. Though it often cites Tajfel’s (1974) definition of social identity, which emphasized the power of the situation, the ethnic identity literature became increasingly focused on effects of stable individual differences in identification while overlooking or downplaying aspects of the ethnic group that are "meaningful to the subject at a particular point in time."

The field responded to the idea suggested by Phinney’s approach that ethnic identity is a broad and basic construct with multiple dimensions and elements. Since then, a variety of cognitive and affective elements of identity have been identified and included in subsequent measures of ethnic and social identity (see Ashmore, Deaux, & McLaughlin-Volpe, 2004; Leach et al., 2008). Though there is consensus that identity is multi-dimensional, the specifics of those dimensions vary across models and measures. With the development of more multidimensional tools, researchers have focused on their preferred elements, but this again fractures the literature
because outcomes often depend on which element is the focus of a study and on which measure is used. However, if ethnic identity is in fact a general construct with only basic, stable elements, then results should not depend on which identity measure is used or which element is studied, and results should not vary as widely as they have across methods that are aimed at capturing the same construct. The existence of mixed findings undermines the idea that ethnic identity is a broad, general, and stable construct. Taken together, this suggests a shift in conceptualization and assessment of identity is needed, particularly one that gives credence to the dynamics of self and identity (e.g., Forehand et al., 2002; Hong, Ip, Chiu, Morris, & Menon, 2001; Markus & Wurf, 1987; Yip, 2005; Yip & Fuligni, 2002).

The lack of attention to situations and contexts in which ethnic identity is activated is problematic because it discounts situational variability in identity (Yip, 2005). Recent research suggests that rather than direct links between ethnic identity and psychological and performance-related outcomes, buffering effects of ethnic identity depend on the context or situation in which it is operating (e.g., Simons, Murry, McLoyd, Lin, Cutrona, & Conger, 2002; Yip, 2005; Yip & Fuligni, 2002). Just as the founders of modern social psychology considered the influence of the situation on an individual (e.g., Lewin, 1936), many researchers hold the idea that the effects of identity may be moderated by situation or context. Still, models and measures of identity, particularly ethnic identity, still deviate from this point. Ashmore et al. (2004) summarize the issue succinctly: "the general idea that individual thought, feeling, and behavior depend on social context is widely shared, though it is seldom fully exploited by social psychologists concerned with identity" (p. 103; see also Kinket & Verkuyten, 1997; 1999). This view has led to a call by researchers to update models of identity to include situations and contexts in analyses of identity.
Interestingly, the history of assessment tools and empirical research in ethnic identity somewhat parallels the history of the field of personality in the 1960s which faced a similar dilemma of focusing on global features while discounting the relevance of situations and contexts; in response, Mischel (1973) led an effort to reconceptualize personality and its assessment. Like in the field of personality, the purpose of accounting for situation and context when studying ethnic identity is not to hail them as dominant to stable individual differences, but rather to integrate them into study to better account for inconsistencies in past research and better understand the dynamic role of ethnic identity on psychological functioning and outcomes.

**Identity as a Dynamic, Responsive Construct**

Reviews of the literature have delineated a variety of elements of ethnic identity (Phinney, 1990; Ashmore et al., 2004) that tend to focus on global or stable features; however, each of these elements can be subject to situational or contextual cues. *Self-categorization* is the most basic element and involves identifying oneself as a group member (Ashmore et al., 2004), but a label (e.g., Asian American, Chinese American, Chinese, or American) can be a complex decision process that varies across contexts and individuals (Deaux & Major, 1987; Phinney, 1990; Turner, Oakes, Haslam, & McGarty, 1994). *Attachment* is arguably the most important element of identity (Phinney & Ong, 2007), but definitions of it have varied from "emotional involvement felt with the group and the degree to which the individual feels at one with the group" (Ashmore et al., 2004, p.83), to the "degree to which the fate of the group is perceived as overlapping with one’s personal fate" (Ashmore et al., 2004, p. 90), and "a personal investment in a group" (Phinney & Ong, 2007, p. 272). However, attachment has been prone to being
considered a distinctly stable feature, but its inclusion of various aspects defined above makes attachment situation-sensitive. *Content*, or group characteristics that are self-descriptive, is another key element of identity. Though available content might depend on one’s history with the group, accessible content can depend on individual differences and activated content can depend on one’s interaction with his environment or context (for a review of knowledge activation, see Higgins, 1996). As just one example, stereotype threat, which refers to concern over being viewed as confirming a negative stereotype about one’s group when that stereotype is made relevant, can lead to activation and focus on these stereotypes (Steele & Aronson, 1995); in threat-free environments, these stereotypes may be available but not activated or readily accessible. Other elements of identity, like *evaluation* of one’s group including *public* (judgments about others’ attitudes towards one’s group) and *private regard* (own judgments about own group), and *centrality or importance* of the group to one’s overall self-concept also emphasize stability in attitudes by focusing on global endorsements rather than on what is meaningful to the subject at a particular point in time, as emphasized in Tajfel’s definition of identity (1974). Because each of these elements can be subject to situational and contextual cues, traditional approaches that focus on global, stable features of these identity elements deviate from the more dynamic and fluid conceptualization of social identity.

Elements can vary across situations because social cognition is posited to have motivational underpinnings that vary across individuals and situations that in turn have important implications for information-processing, judgments, and behavior (see, e.g., Bodenhausen, Macrae, & Hugenberg, 2003). In other words, situation-activated motivations should affect how one thinks about one’s group and identity at a given time which, in turn, should affect one’s outcomes in a given context. Broadly categorized, these motivations include *epistemic* motives
to understand oneself and one’s social world, defensive motives to maintain views of oneself as a worthy person, and social-adjustive motives pertaining to the need for acceptance by and approval from others (Bodenhausen et al., 2003), each of which are likely to be relevant in psychologically threatening situations in which one’s group is rejected or devalued. Regarding identity, motivations can change the "emotional significance attached to [group] membership" and aspects of the group that are "meaningful to the subject" in that situation or context. For example, motivations to protect self-worth (Steele, 1988; Tesser, 1988) and defend the group (Sherman, Kinias, Major, Kim, & Prenovost, 2007) may become paramount in discriminatory situations and affect how one thinks of one’s identity, possibly leading to the activation of knowledge, values, or beliefs derived from the group that can be affirmed as a way to protect against the threat. Situational variability in identity, then, may have important and direct consequences on outcomes like mood, health, and performance, particularly in threatening situations in which one uses the group as a resource.

The cognitive-affective system theory of personality (CAPS; Mischel & Shoda, 1995) and its direct follow-ups regarding race (Mendoza-Denton & Goldman-Flythe, 2009) and culture (Hong & Mallorie, 2004) offer a framework for understanding a "situated person" by emphasizing how situation-induced activation and interaction of cognitive affective units (CAUs) direct behavior and outcomes. CAUs are basic mental representations of goals, beliefs, knowledge, values, and so forth that are organized within a connectionist network. Situations activate these CAUs which then direct action and inform outcomes. In other words, a situation can elicit goals or motivations within an individual that interact with associated knowledge, in turn affecting how one processes information and one’s subsequent attitudes, emotions, and behavior. For example, when one’s group is devalued or rejected, this creates a situation of
psychological threat that may arouse basic motivations to protect oneself and reestablish a sense of belonging. These motivations can then interact with identity elements to affect how one will think and feel about the identity that, in turn, affects how one will perform and feel in response to threat. This suggestion is based on the assumption that people are motivated to protect self-worth and integrity (e.g., Steele, 1988; Tesser, 1988) and to belong to groups (Baumeister & Leary, 1995) that are viewed positively (Tajfel & Turner, 1986) while also feeling like a valued individual (e.g., Brewer, 1991).

**How Motivations Affect Identity Elements**

Identity might adapt to threat because of the motivations aroused in situations of identity threat. These motivations fall under the three general categories – epistemic, defensive, and social-adjustive (Bodenhausen et al., 2003) – and include a motivation to identify with groups that are valued within a society (Tajfel & Turner, 1979), a motivation to maintain self-worth or integrity (Steele, 1988; Tesser, 1988), and a motivation to feel distinct from others (Brewer, 1991; Snyder & Fromkin, 1980) while also belonging to groups (Baumeister & Leary, 1995; Brewer, 1991; Maslow, 1954). These motivations in turn affect how one feels about a group and one’s membership in that group at a particular point in time, thereby affecting elements of identity.

**Motivation to Identify with Positive Groups**

In response to belonging to a group that is devalued in a given context, one can adapt in ways that satisfy a general motivation to identify with positive groups (Tajfel & Turner, 1979). These strategies include leaving the group (Tajfel, 1974), mobilizing for collective action or activism on behalf of the group (e.g., Kelly & Breinlinger, 1996; Tajfel, 1974), making social comparisons to other low-status groups (Tajfel & Turner, 1979), selectively emphasizing the
importance of domains in which the ingroup has high status (Crocker & Major, 1989; Inzlicht & Ben-Zeev, 2000; Tajfel, 1978; Tajfel & Turner, 1979; see also Blanz, Mummendey, Mielke, & Klink, 1998) and devaluing domains in which the ingroup is stigmatized (Crocker & Major, 1989); or changing the meaning of certain identity aspects (Tajfel, 1974). Each of these behaviors affects one’s relationship to the group and aspects of the group that are meaningful at that point in time. For example, people may leave the group altogether which would sever any attachment, even if it was minimal at a stable level. Selectively valuing/devaluing domains or dimensions changes the evaluation of one’s identity content and its salience. Ultimately, one can adjust how one feels about particular aspects of one’s group when the group is devalued in order to continue to feel positively towards and connected with it.

**Motivation for Self-worth or Integrity**

This motivation is related to the motivation to belong to positive groups. Strategies to maintain integrity, an overall feeling of self-worth, adequacy, and competency (Steele, 1988), in the face of psychological threat include: shifting self-definitions from a group member to an individuated person (Ambady, Paik, Steele, Owen-Smith, & Mitchell, 2004; Turner et al., 1987) or shifting focus to another identity (Shih, Pittinsky, & Trahan, 2006), both of which affect self-categorizing and labeling; enhancing heterogeneity of the group (Doosje, Spears, & Koomen, 1995; Ellemers & van Rijswijk, 1997) to deflect the stigma and demonstrate that it cannot apply to all group members, which would affect the content of one’s identity as well as attachment or degree to which one feels at one with the group; and self-affirmation whereby an individual focuses on alternative valued aspects of the self (Steele, 1988), which reduces the importance of the threatened identity to the overall self-concept. In these ways, self-integrity or self-worth motives can affect identity elements.
Motivation for Optimal Distinctiveness.

People have simultaneous and competing needs to feel assimilated to and distinct from others (Brewer, 1991). When one is uniformly categorized with other group members, as might be the case when one is rejected or devalued for being a member of a particular group rather than for individual merits, a need to differentiate from others arises. In order to satisfy this need in a way that still allows one to belong to a group, one can, for example, enhance one’s own distinctiveness within the group by identifying with subgroups (Brewer, 1991; Hornsey & Jetten, 2004), highlight oneself as a loyal, but non-conforming group member (Hornsey & Jetten, 2004), or even self-stereotype (e.g., Pickett, Bonner, & Coleman, 2002). In this way, the motivation to feel optimally distinct (Brewer, 1991) can affect identity elements like self-categorization, content, and attachment or feeling at one with the group. For example, one can label oneself as Chinese American to distinguish oneself within a group of Asian Americans, but label oneself as Asian when a minority among another racial group.

Ultimately, these basic motivations only touch on the motivations that can affect how one thinks about and feels towards one’s group and identity at a time when that identity is threatened. Though motivations and goals are fundamental to understanding psychological functioning and human behavior, they have not received much attention in the ethnic identity literature. These motivated changes in identity, however, can affect outcomes like mood, health, and performance because activation of knowledge influences affect, information processing, and behavior (Bodenhausen et al., 2003; Higgins, 1996).

How Activation of Positive Identity Knowledge Affects Performance and Health-related Outcomes
The salience of an identity can influence affect and behavior (e.g., Forehand et al., 2002) because each identity carries with it a set of knowledge, beliefs, and expectations, or CAUs. The CAPS Theory (Mischel & Shoda, 1995) and principles of knowledge activation (Higgins, 1996) suggest that when motivations interact with CAUs in response to threat, outcomes like health and performance can be affected. Specifically, the activation of positive knowledge or beliefs should protect against negative health and performance effects of discrimination, and several lines of research support the idea.

In response to stereotype threat, self-affirming by focusing on positive self-knowledge, beliefs, and values has been shown to protect against underperformance on stereotype-relevant tasks. Those who self-affirm have better performance and related outcomes than their counterparts who do not self-affirm (e.g., Cohen, Garcia, Apfel, & Master, 2006; Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009; see Sherman & Cohen, 2006). In the absence of threat, however, those who self-affirm show no differences from those who do not self-affirm, suggesting that positive aspects of the self can function as a resource in times of stress. In research paralleling self-affirmation, making salient positive group characteristics, like values central to the group or dimensions on which the group excels, has also been shown to protect against negative effects of psychological threat, like biased information-processing and reduced motivation (Derks, van Laar, & Ellemers, 2006; Sherman et al., 2007).

Negative effects of threat are also mitigated when an identity that is positively associated with performance in a relevant domain is made salient. Shih, Pittinsky, & Ambady (1999) tested Asian American women, who carry identities negatively and positively associated with math performance – gender and ethnicity, respectively. Asian American women whose ethnic identity was activated performed better on a math test than Asian American women whose gender
identity was activated suggesting that the activation of positive knowledge or beliefs about a group can lead to better outcomes in otherwise threatening situations (see also Derks et al., 2006; Derks, van Laar, & Ellemers, 2009).

In the ethnic identity literature, studies considering the context in which ethnic identity operates offer insights into when identity will protect against negative outcomes. For example, one study looked at the effects of one’s community on the relation between ethnic identity and depressive symptoms (Simons et al., 2002). In this study, community ethnic identification scores were computed by averaging responses to the MEIM (Phinney, 1992) of all participants within a given community. While individual ethnic identification scores were unrelated to depressive symptoms, community ethnic identification scores were negatively correlated with depressive symptoms, suggesting that an individual can be protected against depressive symptoms when he is among others with a strong ethnic identity. Although this study did not test for effects across varying situations (e.g., threat vs. neutral), it demonstrates the importance of context in understanding effects of ethnic identity.

The relevance of person-context interactions in predicting outcomes is further demonstrated in studies integrating stable individual-level features of identity and situation-level factors. In looking at such an interaction, Yip (2005) found that strong positive judgments about one’s group (i.e., high private regard), measured with an emphasis on stability, was associated with fewer depressive symptoms and greater positive mood in situations in which ethnicity was salient (see also Yip & Fuligni, 2002). Meanwhile, simple correlations between private regard and depressive symptoms, positive well-being, anxiety, and self-esteem were nonsignificant. Similar results were found in other studies looking at an interaction between stable aspects of ethnic identity and context or situation-level factors, like composition of one’s environment, on
well-being (e.g., Mendoza-Denton, Pietrzak, & Downey, 2008; Sanchez & Garcia, 2009; Yip & Fuligni, 2002).

Together, these studies suggest that in situations that make one’s identity salient, positive thoughts and beliefs about the group and identity will protect against negative outcomes. Situations of identity threat or rejection make the identity salient and activate motivations, and in such cases, activating or making salient positive identity aspects may facilitate resilience. Protective effects of an identity can emerge when motivations direct perceptions, thoughts, and behavior to attune to positive knowledge about one’s group or identity; in neutral or unthreatening situations, positive identity knowledge should not consistently or uni-directionally predict outcomes. These differential effects highlight the importance of studying a person in context (Shoda, Cervone, & Downey, 2007) in order to better understand the effects of identity on outcomes.

Ultimately, considering the importance of situations in understanding effects of identity on psychological and performance outcomes is not meant to downplay the role of stable individual differences in these outcomes. Rather, the interplay is key. The intensity of the motivations activated in threatening situations and the availability and salience of positive group or identity knowledge, for example, can be affected by individual differences. Those with strong stable identification may be more likely to have this knowledge readily accessible and may be more likely to spontaneously recruit this knowledge when threatened. However, this thesis is meant to contribute to the literature by highlighting the importance of situations in understanding identity effects and, therefore, focuses on how positive knowledge that is activated or affirmed protects against negative outcomes uniquely in threatening contexts or situations in which one’s group or identity is devalued.
In identifying theoretical and empirical support for the utility of incorporating situation and context-level factors into the study of identity, the preceding sections have focused on ethnic identity. However, the process should be generalizable to other identities that are similarly threatened via devaluation, stigma, or rejection. This next section outlines a general model of identity in context, with a focus on threatening situations.

**Identity in Context**

Models of situated personality (Mischel, 1973; Mischel & Shoda, 1995) and social cognition (e.g., Bodenhausen et al., 2003; Higgins, 1996) that approach the self as a dynamic and situation-responsive construct (e.g., Markus & Kunda, 1986; Markus & Wurf, 1987) offer a framework for studying and understanding identity in context. Such a model would suggest that in a neutral situation, any given identity will have weak or indirect effects on outcomes because numerous other salient and important identities will also exert influence on perception, cognition, and behavior. Moreover, people have positive and negative views of their identities (Cross, 1991; Latrofa, Vaes, Cadinu, & Carnaghi, 2010) and in a neutral situation, no urgent motivation is directing what views of these identities will be active and what outcomes will result. Leach et al. (2008) also suggested the possibility that identity has diminished effects on functioning in non-threatening situations.

Discrimination or the threat of it on the basis on one’s group membership makes one’s identity salient and activates epistemic, defensive (or protective), and social-adjustive motives or goals. With it already made salient in this situation, identity may become a vehicle to satisfy these motives. Focusing on positive aspects of the identity may be particularly effective given the specific goals of protecting self-worth and belonging to positive groups, both of which rely on positive evaluations. Thus, affirming or activating positive aspects of one’s group or identity
can satisfy these motives and buffer against negative outcomes, whereas people who do not affirm may be vulnerable to negative outcomes in threatening situations.

**Overview of Studies**

This research aims to demonstrate that the "group" can be used as a protective resource against negative outcomes otherwise associated with belonging to a devalued group. Study 1 establishes groups as a protective resource. Study 2 focuses on a threatened group as a resource. Study 3 tests the effects of spontaneous activation of positive identity knowledge in response to discrimination. In each study, an identity-in-context approach is used by comparing threatened to unthreatened identities, ruling out stable identification as an explanation of the protection conferred by situation-activated positive identity knowledge, and/or comparing the effects of an identity on outcomes across situations.

Study 1 tests whether affirming any group that one values buffers against underperformance resulting from stereotype threat. Affirmation of one’s important groups is compared to affirmation of valued aspects of the individual self. To confirm that there is a cost to being under threat, affirmations are compared to a control condition in which threatened participants do not affirm. Each condition is also tested within an unthreatened group to demonstrate that the protective effects of affirmations emerge in situations of identity threat. In this case, affirming positive knowledge about one’s valued groups or about oneself should have no direct effect on performance, as outlined in a model of identity in context.

Study 2 tests how the effects of affirmations of different construals of belonging to a group compare to self-affirmations. In this study, participants were induced to experience stereotype threat and performance between conditions was compared. In addition, Study 2 tests
for a difference in identity and self-affirmations differ on collective self-esteem. Identity affirmations in particular should support positive identification with the group.

Study 3 tests whether positively valued aspects of one’s threatened identity protects against discrimination-induced distress and underperformance. In addition to a paradigm shift, this study involves moving from a "threat in the air" (Steele, 1997) situation to situations in which one actually experiences discrimination. Furthermore, whereas Studies 1 and 2 direct participants to affirm their group or, Study 3 focuses on spontaneous activation of participants’ positive identity knowledge and tests whether this protects against negative outcomes uniquely after experiencing discrimination, but not after experiencing a neutral or acceptance situation. This study examines one identity across three different situations (race-based discrimination, race-based acceptance, race-neutral) in an effort to better understand identity in context and the utility of studying situationally activated positive identity knowledge as a resource.

While the focus is on distress and performance outcomes, affirmations are tested using a variety of threatened groups – underrepresented Black Americans in an academic context, students who are American nationals whose identity has been threatened in a specific domain, and Asian Americans who have experienced discrimination. As such, the goal is to show that belonging to a group can be a protective resource against psychological threat regardless of what that group or identity is.
CHAPTER 2

STUDY 1
Groups to which people belong inform how people think of themselves and how they engage with the social world. From groups, people derive some sense of self-integrity, which refers to one’s overall sense of self-worth, adequacy, and competency (Steele, 1988), and gain specific sets of knowledge, beliefs, and expectations that affect how they think and act in the social world (e.g., Forehand et al., 2002; Turner et al., 1994). Given their prominence in the self-concept, valued groups may be a resource in times of stress. This study explores the role of groups in protecting against negative effects of psychological threat. Specifically, this study addresses whether activating and affirming positive elements of a group that one values protects against underperformance stemming from psychological threat in a college environment.

**Academic Underperformance and Protective Effects of Affirmations**

Above and beyond the demands of college that all students face, students belonging to underrepresented minority groups face an additional challenge to success because underrepresentation can subtly convey devaluation or rejection of their groups. For underrepresented students like Black American students, attending predominantly White universities can highlight the possibility of being viewed negatively by others (Cohen & Garcia, 2005; Leary & Baumeister, 2000; Steele, Spencer, & Aronson, 2002) and heighten concerns of confirming negative stereotypes about their group, like those about intellectual ability (Cohen & Garcia, 2005; Inzlicht & Ben-Zeev, 2000; Steele, 1997). This creates a situation of psychological threat that undermines one’s self-integrity as well as one’s sense of belonging to that institution (Sherman & Cohen, 2006; Cook, Purdie-Vaughns, & Cohen, 2011), two feelings that are closely linked (Leary & Baumeister, 2000; Gailliot & Baumeister, 2007). Because of concern over confirming a negative stereotype about the group, threatened students experience increased cognitive activation of negative racial stereotypes (Steele & Aronson, 1995; Cohen &
Garcia, 2005), and greater interference of stress on performance in test-taking situations (e.g., Bielock, Rydell, & McConnell, 2007; Osborne, 2007; Schmader & Johns, 2003; Schmader, Johns, & Forbes, 2008). The additional challenge that this psychological threat creates often manifests as a racial achievement gap in which Black students underperform relative to their White counterparts (Jencks & Phillips, 1998). Because past performance affects current and future performance, depressed academic achievement can set into motion a recursive cycle of underperformance (Cohen et al., 2009) that can limit students’ goal attainment and threaten their self-integrity.

To contend with psychological threat, self-affirmation theory (Steele, 1988) posits that people can recruit internal resources to bolster self-integrity and restore general belonging needs. Research from multiple labs has shown that buffering effects emerge when those who are threatened are provided an opportunity to reflect on important self-aspects that are not directly related to the source of the threat (see Sherman & Cohen, 2006 for review). These internal resources are typically core personal values or beliefs, positive characteristics or qualities, prized skills, or those aspects that make one "who he is" that are highly important to one’s personal self-concept (Steele, 1988; Steele & Liu, 1983). Reflecting on or affirming these valued self-aspects protects students against underperformance (Cohen et al., 2006; 2009), a reduced sense a belonging (Cook et al., 2011), heightened neuroendocrine and psychological stress responses (Creswell, Welch, Taylor, Sherman, Gruenwald, & Mann, 2005), and an increased activation of group stereotypes (Cohen et al., 2006) and other threatening cognitions (Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999), presumably by bolstering self-integrity (Steele, 1988) and minimizing self-depleting processes that lead to underperformance (Schmeichel & Vohs, 2009). Affirming a valued, alternative, threat-unrelated aspect of the self, allows an individual to see
himself more broadly and see the "big picture" (Wakslak & Trope, 2009), which minimizes the implication of the threat to the self and allows one to transcend the negative effects of threat.

Extending self-affirmation theory to groups, researchers have begun studying the role of groups in buffering against threat effects. Although this body of work has used the term group affirmation, it lacks a central definition and operationalization. Some studies have stated that group affirmation involves reestablishing positive distinctiveness of the group (Glasford, Dovidio, & Pratto, 2009) and enhancing social identity (Derks et al., 2009; 2006); some have operationalized group affirmation as affirming a value central to the group (Glasford et al., 2009; Sherman et al., 2007) and others have used manipulations that convey or emphasize the threatened group’s higher status in an alternative domain (Derks et al., 2009). For example, after telling participants that their personal and their group’s performance falls below average in a purportedly relevant domain, Derks et al. (2009) affirmed the group by telling participants that their group’s performance is above average in an alternative domain. Past studies on group affirmation have essentially activated or made salient some positive aspect of the group and have found this to protect against typical threat effects, like defensive and biased processing of information (Sherman et al., 2007), feelings of dissonance (Glasford et al., 2009), and reduced motivation in threatened domains (Derks et al., 2009).

By comparing participants’ use of group pronouns (e.g., we, us, our) and singular self pronouns (e.g., I, me, mine) across self and group affirmation conditions, Derks et al. (2009) concluded that group affirmation facilitates focus on one’s social self-concept. Accordingly, the effectiveness of group affirmation is moderated by stable elements of identity such that it only protects those who feel at one with the group and have high attachment or commitment to the group (Derks et al., 2006; 2009; Glasford et al., 2009; Sherman et al., 2007). High overlap of
mental representations of the group and the self-concept helps ensure that those values or characteristics of the group that are affirmed are personally relevant and "meaningful to the subject" (Tajfel, 1974, p. 64). When these activated or salient group characteristics are self-relevant, they can affect how one functions in one’s environment and confer protection from threat when these characteristics are positive.

Though the current study similarly explores the role of groups within a threatening context, this study has a slightly different focus: affirmations of self-defined important groups. This slight variation allows people to affirm groups and aspects of those groups that they deem valuable and important rather than having both of these factors externally imposed by the paradigm. This variation allows an exploration of which groups people find important, whether people choose to affirm their threatened group, and whether affirming a threatened group can protect against underperformance, a highly consequential outcome that has not been studied.

**Valued Groups as a Resource to Restore Self-integrity and Belonging**

In environments that convey devaluation of one’s group through underrepresentation, as predominantly White universities might for Black students, one’s groups may be in a prime position to serve as an affirmation resource. Rejection threatens one’s self-integrity and belonging needs, but focusing on sources of acceptance can attenuate the negative impact of rejection (Leary, 2010). Recent research suggests that when people feel excluded, they experience increased accessibility of their groups and rate these groups as important and meaningful (e.g., Knowles & Gardner, 2008), which may represent a motivation and effort to restore belonging and self-integrity or worth. Because groups offer members a source of self-worth (e.g., Tajfel & Turner, 1986), security (e.g., Phinney, 1992), and acceptance, focusing on
or affirming one’s groups may confer protection in threatening situations by bolstering self-integrity and belonging, similar to how self-affirmations operate.

People may in fact prefer to use groups as a method to restore self-integrity and belonging. In self-affirmation research, people consistently choose to affirm the value of family and friends (see Sherman & Cohen, 2006), which is a significant source of acceptance in many people’s lives. Moreover, feeling connected to others has been shown to mediate the relation between self-affirmation and attenuation of threatening information (Crocker, Niiya, & Mischkowski, 2008). Not only are groups a primary source of feeling connected to others, but these relationships strongly predict how important and how highly one values a group (Seeley, Gardner, Pennington, & Gabriel, 2003), suggesting that stable level of group identification should predict which group is chosen to be affirmed. Together, this suggests that reflecting on a group that one deems important should override threats to one’s self-integrity and belonging and, with these needs bolstered, attenuate underperformance, activation of negative stereotypes, and stress interference on tests.

**Affirming the Threatened Group**

Any protective effects conferred by affirming valued important groups should not be limited to groups unrelated to the threat. In other words, affirming one’s racial group should be just as effective as affirming a threat-unrelated group because this group, in the broader context of one’s life, offers the same benefits of self-worth, security, and acceptance as other groups that people deem important. Though focusing on the racial group may heighten the salience of race and its associated knowledge (Steele & Aronson, 1995), affirmation of positive aspects of belonging to the group may override negative effects of negative stereotype activation.
Though identification, an index of stable identity elements like attachment and commitment, should predict the group one chooses to affirm, these stable elements alone should not predict protection. Considering a model of identity in context, when one is under threat, affirmations of groups should satisfy aroused individual motivations to belong and to maintain self-integrity and should lead to positive effects on thoughts and behavior in a way that confers protection from underperformance. When unthreatened, a variety of personal and social identities will influence how one functions and therefore any one group or identity will have weak or indirect effects on outcomes like performance. In this study, Black students, who experience psychological threats at predominantly White universities, are compared to White students who, as a group, are not threatened. Focusing on the positive aspects of groups to which they belong and value should protect Black students’ academic performance but have no direct effect on White students’ performance.

**Study Overview**

Integrating self-affirmation theory with studies on the benefits of belonging when experiencing rejection, this study tests whether valued groups can protect performance among those experiencing psychological threat in the academic domain and whether group affirmation will be as effective as self-affirmation in conferring protection. This study is based on the assumption that mental representations of the self and group overlap such that the group forms a part of the self (Smith & Henry, 1996; Smith, Coats, & Walling, 1999; Tajfel & Turner, 1986). In the context of the academic domain, affirmations should protect Black students at a predominantly White university from underperforming; thus, they should have higher performance than Black students who do not affirm and may show no difference from White students. Moreover, threatened Black students who choose to affirm their racial group should be
no less protected than those who choose another group to affirm because all valued groups should bolster self-integrity and belonging thereby attenuating threat. In line with a model of identity in context, focusing on positive aspects of a group when one is threatened should predict protected performance, but racial identification measured with an emphasis on stable, trait-like features should alone not consistently predict performance outcomes.

Performance will be measured in two ways: 1) performance on math tests administered in the lab and 2) actual university grade point averages (GPA). For the latter, effects of affirmations were tested on GPA in the term of study participation and change in GPA for the term following participation. If affirmations protect GPA in the term of study participation, a change of zero for the term following would suggest sustained protective effects of affirmations on GPAs.

In addition to the math tests, a word-completion task was administered to test if affirmations reduce cognitive activation of race and associated negative stereotypes. In line with previous research (Cohen et al., 2006), those who affirm should be less concerned with racial stereotypes elicited by threatening environments. Moreover, those who affirm their racial group may show no difference when compared to those who affirm the self or another group if affirming positive aspects of the group overrides preoccupation with negative stereotypes.

While stress levels for everyone may be high due to normative responses to test taking, any interference of stress on performance should be mitigated among Black students who affirm under threat since they are not preoccupied with confirming a negative stereotype. Therefore, stress felt during the tests should not predict performance for Black students who affirm.

**Method**

**Participants**
The sample consists of 92 students (49% male; $M_{\text{year in school}} = 2.67, SD = .87$), 60 of whom were Black, 32 of whom were White, attending a predominantly White university. Participants who were of other racial groups were excluded from analyses\(^2\). Participants were compensated $15 for the approximately 75 minute duration of the study.

**Materials and Procedure**

Participants were run individually and told that the study was about problem solving. After signing the consent form, participants were randomly assigned to one of three affirmation conditions (self-affirmation, group affirmation, or control/no affirmation). This manipulation was described to participants as a values exercise and followed procedures similar to those validated in past research (McQueen & Klein, 2006; see also Cohen et al., 2006; Fein & Spencer, 1997).

**Self-affirmation condition.** Participants in the self-affirmation condition were given a list of values and asked to select the one that was most important to them. Values included athletic ability, creativity, relationship with family and friends, religious values, sense of humor, and music and art. They were then asked to describe in free response form why that value is important to them. As a manipulation check, participants then rated on a six-point scale (1=strongly disagree; 6=strongly agree) the extent to which they endorsed each of four items capturing the personal importance of that value (e.g., "This value is an important part of who I am"; $\alpha = .79$, $M = 5.73$, $SD = .38$).

**Group affirmation condition.** In the group affirmation condition, participants were given a list of groups and asked to select the one that was most important to them. Groups

\(^2\) All analyses with a sample in which participants were categorized as either negatively stereotyped in the academic domain (Black, Latino/Hispanic) or not (White, Asian), based on 105 participants, followed the same patterns as findings reported with Black and White participants.
included musical or choir group, racial/ethnic group, athletic group, church group, online community/club, and fraternal group, and paralleled as closely as possible the values listed in the self-affirmation condition. They wrote about why the group was important to them and then used the same six point scale as in the self-affirmation condition to rate their attitudes on four items about the personal importance of the group (e.g., "This group is an important part of who I am"; $\alpha = .71, M = 5.34, SD = .62$).

**Control (no affirmation) condition.** The control condition mirrored the self-affirmation condition in that participants were given the same list of values given to participants in the self-affirmation condition but were asked to select the value that was least important to them and describe why that value might be important to someone else. Participants used the same six-point scale as in other conditions to rate their endorsement of each of four items capturing whether the value is important to other people (e.g., "This value is important to some people"; $\alpha = .81, M = 5.62, SD = .49$).

**Math tests.** After the affirmation manipulation, participants completed three math tests separated by two filler tasks. Each test consisted of 12 items and all participants received the tests in the same order. Filler tasks between the first and second test and between the second and third test involved participants describing and then drawing their route from their residence to their classes. Performance for each of the three tests was measured by computing the ratio of the number of questions answered correctly out of the number of questions attempted (e.g., Steele & Aronson, 1995; Shih, Pittinsky, & Ambady, 1999). Exploring the distribution of the accuracy scores revealed one outlier, which was dropped from analysis of test performance (composite of all three tests: $M = 86.92, SD = 10.43$).

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3 Results are similar when analyzed as number of correct responses out of total administered.
After completing the math tests, participants completed a measure of racial stereotype activation, and questionnaires including ones regarding stress and stable racial identification.

**Racial Stereotype Activation.** In line with past research on stereotype threat and self-affirmation, a word completion task aimed at capturing activation of racial stereotypes was administered (Cohen et al., 2006; Cohen & Garcia, 2005; Steele & Aronson, 1995). For example, one stimulus was "B-L-__-C-K" which could be completed either as "BLACK" or "BLOCK." There were 49 stimuli, nine of which had race-related alternatives. Completion of the word as "BLACK" suggests greater accessibility and activation of constructs related to race. The number that was completed with race-associated words was recorded (Black participants: $M = 2.27$, $SD = 1.16$; White participants: $M = 1.97$, $SD = .97$). See Appendix A for the task.

**Stress.** Participants completed a measure of stress after taking all three math tests that consisted of seven items like "Overall, I thought the tests were stressful." Responses (1= "not at all true"; 7 = "very true") were averaged across items ($\alpha = .82$, $M = 2.83$, $SD = .90$).

**Stable Racial Identification.** Participants completed a measure of stable racial identification capturing stable racial identity elements of attachment, belonging, pride, commitment, and centrality to one’s self-concept. This measure included items like "My race is an important part of who I am" to which participants responded using a 1-6 scale (1= "strongly disagree"; 6= "strongly agree") (Black participants: $\alpha = .86$, $M = 3.82$, $SD = .92$; White participants: $\alpha = .73$, $M = 2.42$, $SD = .71$).

**Grade Point Averages (GPAs).** Finally, participants were asked whether or not they would release their transcripts to investigators for further research. For participants who released their transcripts, GPAs were recorded for the term prior to participation, the term in which they participated ($M = 3.45$, $SD = .47$; $n = 86$), and the term following participation ($M = 3.39$, $SD =$
GPA in the term of participation was collected to test for an affirmation effect on actual academic performance. To test whether an affirmation effect was sustained, a change score in which participation term GPA was subtracted from post-participation term GPA was computed ($M = .03$, $SD = .48$); one outlier was dropped from analysis involving change in GPA. If affirmations protect performance, a change score of zero would suggest a sustained effect. GPA in the term prior to participation ($M = 3.37$, $SD = .46$; $n=84$) was collected to use as a covariate in all analyses because performance is strongly predicted by past performance (e.g., Cohen et al., 2006; 2009).

Results

Data Analytic Considerations

Analyses of math test performance is based on 91 participants because one participant did not properly complete the third math test. Analysis of GPA in the term of participation is based on 84 participants who have a pre-participation term GPA, which was used as a control in all analyses. Participants who chose not to release transcripts did not differ from those who did on math test performance, activation of racial stereotypes, or stress (all $p\geq .79$). Due to changes in enrollment at the university (e.g., students who have graduated or dropped out), analysis of GPA in the term following participation is based on 67 participants for whom there is data.

For all analyses regarding test performance and GPA, prior academic performance (GPA in the term preceding participation) was used as a control. Because Black participants had a lower average GPA than White participants prior to participating in the study, $F(1,84) = 13.83$, $p \leq .001$, GPAs were standardized on racial group means, with the score representing the number of standard deviations away from one’s group’s mean GPA for that term; this score was used as a control in all analyses involving performance. Interactions between racial group and condition
were hypothesized such that affirmations would protect math test performance and GPAs of Black, but not White, participants.

To test whether the effects of group affirmation differed by whether people affirmed their (threatened) racial group, dummy codes were assigned to Black participants who affirmed their racial group (dummy code=1) to compare them to Black participants who affirmed another group (dummy code=0). Analyses tested whether, relative to choosing other groups, choosing to affirm the racial group differentially predicted outcomes.

**Groups and Values Chosen**

The observed percentages of participants who chose each value or group in each condition and the results of chi square tests are reported in Table 1. In addition, a near equal number of Black participants in the group affirmation condition chose to affirm the racial group as those who chose another group, $\chi^2(1) = .17, p \leq .68$, which suggests that people do not distance themselves from the threatened group and choose to affirm the group under threat.

Racial group was the most popular group chosen among Black participants in the group affirmation condition; moreover, whereas 46% of Black participants in the group affirmation condition chose their racial group as their most important group, 0% of White participants in the same condition chose their racial group. Relationship with family and friends was the most popular value chosen among participants in the self-affirmation condition (91% of White participants and 63% of Black participants).

**Effects of Affirmations on Math Test Performance**

A repeated measures analysis with test number as a within-subjects factor and condition and racial group as between-subjects factors showed that there was a significant effect of test number on performance, $F(2, 150) = 8.34, p \leq .001, \eta^2_p = .18$, with no moderation by racial
group or condition (all $ps \geq .48$). Within-subjects contrasts showed that there was a significant linear trend in performance across the three tests, $F(1, 75) = 16.19$, $p \leq .001$, $\eta_p^2 = .18$, not significantly moderated by racial group or condition ($ps \geq .55$). The three-way interaction of test, racial group, and condition was also not significant ($p \leq .19$). Though it was expected that affirmations would mitigate declining performance for Black participants, this finding suggests that there is an overall trend such that performance on the math tests in this study declines for all participants over time. To explore in another way whether affirmations attenuate this downward trend for Black students, the self- and group affirmation conditions were collapsed. In this analysis, the significant linear trend across the three tests, $F(1, 77) = 15.15$, $p \leq .001$, was somewhat moderated by an interaction of racial group and (collapsed) affirmation conditions, $F(1, 77) = 3.41$, $p = .07$, but the significance of this interaction was marginal (see Figure 1).

Because test number was the only significant within-subjects effect and it was not significantly moderated by racial group or condition, test performance was indexed by averaging performance on all three tests and subsequent analyses focused on the between-subjects factors’ effects on average performance on all three tests. There was a significant main effect of race on this performance index, $F(1, 75) = 6.42$, $p \leq .05$, $\eta_p^2 = .08$, but no significant main effect of condition ($p \leq .76$) on test performance. As expected, there was a significant interaction between condition and race, $F(2, 75) = 3.50$, $p \leq .05$, $\eta_p^2 = .09$.

Within the control condition, Black participants ($M = 78.80$, 95% CI: 73.59, 84.02) performed less well than White participants ($M = 93.71$, 95% CI: 87.33, 100.07), $p \leq .001$. However, there was no significant performance gap between racial groups in either affirmation conditions ($ps \geq .67$).
Because the main focus of the study is on a buffering effect of affirmations for Black students, condition effects were tested for within each racial group. Among Black participants, those in the self-affirmation condition ($M = 87.38$, 95% CI: 82.31, 92.44) performed significantly better than those in the control condition, $p \leq .05$ (95% CI for mean difference: 1.26, 15.89). Those in the group affirmation condition ($M = 87.21$, 95% CI: 82.92, 91.50) also performed better than those in the control condition, $p \leq .05$ (95% CI for mean difference: 1.65, 15.17), and there was no significant difference between group and self-affirmation conditions, $p \leq .95$ (95% CI for mean difference: -6.80, 6.47). Figure 2 depicts mean accuracy on the three math tests for each racial group in each condition. The effectiveness of group affirmation on math test performance among Black participants was not affected by choosing racial group as one’s most important group ($p \leq .35$). There were no differences in test performance by condition among White participants (all $ps \geq .28$).

**Effects of Affirmations on GPAs**

**Participation Term GPA.** Similar to math test performance, it was hypothesized that there would be an interaction between racial group and condition on participation term GPA. Controlling for standardized GPA in the term preceding participation, there was a significant main effect of race, $F(1, 77) = 30.65, p \leq .001$, $\eta^2 = .29$, on participation term GPA, but no main effect of condition ($p \leq .25$). As expected, there was a significant interaction between condition and race, $F(2, 77) = 3.40, p \leq .05$, $\eta^2 = .08$.

In the control condition, Black participants had lower GPAs than White participants ($M = 3.70$, 95% CI: 3.51, 3.89), $p \leq .001$. In the self-affirmation condition, this gap was eliminated ($p \leq .21$), but in the group affirmation condition, a gap still existed ($p \leq .001$). In other words, though self-affirmations eliminated a racial achievement gap, a gap persisted despite Black
participants group-affirming. However, the main hypothesis concerns a buffering effect of affirmations within each racial group.

Among Black participants, those in the self-affirmation condition \( (M = 3.45, 95\% \text{ CI: } 3.30, 3.60) \) had significantly higher GPAs than those in the control condition \( (M = 3.15, 95\% \text{ CI: } 2.99, 3.30) \), \( p \leq .05 \) (95% CI for mean difference: .09, .51). Those in the group affirmation condition \( (M = 3.34, 95\% \text{ CI: } 3.22, 3.46) \) also had higher GPAs than those in the control condition, \( p = .05 \) (95% CI for mean difference: .00, .39). There were no significant differences in Black participants’ GPAs between the group and self-affirmation conditions, \( p \leq .26 \) (95% CI for mean difference: -.30, .09). Figure 3 depicts GPAs in the term of participation for each racial group in each condition. Relative to choosing other groups, affirming the racial group did not differentially predict GPA \( (p \leq .52) \). There were no differences in GPAs by condition among White participants (all \( ps \geq .12 \)).

**Post-Participation Term GPA Change.** There was a significant main effect of race on change in GPA from term of participation to term following, \( F(1, 57) = 6.07, p \leq .05, \eta_p^2 = .10 \), but no main effect of condition \( (p \leq .66) \). There was a significant interaction between condition and race, \( F(2, 57) = 3.38, p \leq .05, \eta_p^2 = .11 \). For Black participants in the self \( (M = -.11, 95\% \text{ CI: } -.34, .14) \) and group \( (M = .13, 95\% \text{ CI: } -.11, .37) \) affirmation conditions, change did not significantly differ from zero, suggesting that the effect of affirmations on performance was sustained and that affirmations buffered against declining GPA, a pattern documented among Black participants in similar environments. However, unexpectedly, Black participants in the control condition showed an increase in GPA \( (M = .39, 95\% \text{ CI: } .13, .65) \). Relative to choosing other groups, affirming the racial group did not differentially predict change in GPA \( (p \leq .23) \).

**Racial Stereotype Activation**
Among Black participants, affirmations were expected to reduce cognitive activation or preoccupation with race and associated negative stereotypes. For the sum of items that were completed with race-associated words, there was no main effect of race \((p \leq .14)\) and a marginally significant main effect of condition, \(F(1, 86) = 2.77, p \leq .07, \eta_p^2 = .06\). The interaction between condition and race was marginally significant, \(F(2, 86) = 2.47, p \leq .09, \eta_p^2 = .05\). Among only Black participants, for whom the affirmations were targeted and to whom the stereotypes are relevant, those in the self-affirmation condition \((M = 2.21, 95\% \text{ CI}: 1.73, 2.69)\) had marginally significantly less activation of racial stereotypes than those in the control condition \((M = 2.82, 95\% \text{ CI}: 2.31, 3.33, p \leq .09 \text{ (95}\% \text{ CI for mean difference: } -.09, 1.31)\).

Those in the group affirmation condition \((M = 1.92, 95\% \text{ CI}: 1.49, 2.35)\) had significantly less activation than those in the control condition, \(p \leq .01 \text{ (95}\% \text{ CI for mean difference: } -1.57, -.24)\). There were no significant differences between affirmation conditions, \(p \leq .36^4\). Those who affirmed their racial group did not differ in activation from Black participants who affirmed another group \((p \leq .97)\). Though activation did not directly affect math test performance for Black participants in any condition \((\text{all } ps \geq .29; \text{ see also Cohen et al., 2006})\) or GPA outcomes \((\text{all } ps \geq .79)\) or interact with racial group and/or condition to predict any of these outcomes \((\text{all } ps \geq .11)\), group affirmation in particular led to lower activation of race and negative stereotypes even among those who affirmed their racial group, which alludes to one cognitive process affected by affirmations.

Of the nine items that could be completed with constructs related to race, two were content-specific and relevant to academic performance – "dumb" and "lazy." However, the

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\(^4\) These patterns also hold when controlling for prior academic performance and performance on the math tests.
activation of "dumb" and "lazy" should be related specifically to race to be of relevance to this study. An additional analysis was run to test for the effect of condition on the activation of these two stereotypes among Black participants who also activated their race (i.e., activated "Black"). Among Black participants who activated "Black," there was a main effect of condition on the activation of both "dumb" and "lazy," $F(2, 32) = 5.39, p \leq .05, \eta_p^2 = .25$. Those in the group affirmation condition ($M = .39, 95\% \text{ CI}: .15, .62$) had significantly less activation than those in the control condition ($M = .83, 95\% \text{ CI}: .59, 1.08$), $p \leq .05$ (95% CI for mean difference: -.79, -.11). Those in the group affirmation condition also had less activation than those in the self-affirmation condition ($M = .90, 95\% \text{ CI}: .63, 1.17$), $p \leq .01$ (95% CI for mean difference: -.88, -.16). Those who affirmed their racial group did not differ in activation of these stereotypes from Black participants who affirmed another group ($p \leq .47$). Again, activation of these stereotypes did not directly affect any of the performance outcomes of this study (all $p$s $\geq .41$).

**Stress**

Post-test ratings of stress experienced during the test did not differ between Black ($M = 2.86, 95\% \text{ CI}: 2.63, 3.10$) and White ($M = 2.76, 95\% \text{ CI}: 2.44, 3.08$) participants ($p \leq .59$), perhaps due to normative responses to testing. But, it was hypothesized that stress would interfere less with math test performance for Black participants who self- or group affirmed. To test this hypothesis, linear regression was used to compare the slopes of stress on performance for the different groups, with stress centered on the grand sample’s mean. Controlling for standardized prior academic performance, simple slopes revealed that among Black participants, the effect of stress on performance was significant in the control condition ($b = -8.74, t(46) = -3.93, p \leq .001$). Though it was unexpectedly significant in the self-affirmation condition as well ($b = -7.32, t(46) = -2.14, p \leq .05$), the effect of stress on math test performance was effectively
reduced in the group affirmation conditions ($b = -1.30, t(46) = -0.53, p \leq 0.59$). Relative to choosing other groups, affirming the racial group did not differentially predict the effect of stress on test performance (interaction term $p \leq 0.14$).

**Stable Racial Identification**

It was hypothesized that a measure of identity emphasizing its trait-like, stable features alone would not confer protection. In accordance with this hypothesis, controlling for prior performance, stable racial identification did not predict Black participants’ math test performance or GPA in the semester of participation (all $p$s $\geq 0.80$). However, it did predict change in GPA in the term following participation such that higher racial importance predicted an increase in GPA for Black participants ($b = 0.27, t(38) = 2.11, p \leq 0.05$). Further examination revealed that this effect was limited to Black participants who either self- or group affirmed ($b = 0.33, t(26) = 2.44, p \leq 0.05$) and not those who were in the control condition ($b = 0.02, t(9) = 0.20, p \leq 0.84$).

**Discussion**

This study builds on previous self-affirmation research by identifying an additional resource to combat psychological threat and racial achievement gaps. Affirming the importance of one’s valued group was as effective a means of buffering against minority underperformance as self-affirmation, even when the group affirmed was the racial group under threat. This study therefore contributes to the ways in which belonging to a group can confer benefits, particularly when one is experiencing identity threat and adds to the growing literature showing that people can benefit even from devalued identities (Downey et al., 2006; Mendoza-Denton et al., 2008; Shelton et al., 2006).
Replicating past research (Cohen et al., 2006), this data shows that past performance is a strong predictor of current and future performance. Though these affirmation interventions protected Black students’ performance, an earlier intervention would be critical if implemented in academic contexts in order to reduce racial achievement gaps at the start and minimize the undermining effects of psychological threat on setting students’ academic trajectories.

**Groups that People Choose to Affirm**

Unlike past work on group affirmation, this manipulation gives participants an opportunity to affirm an identity of their choosing. Even among those who chose the same group, participants were able to represent in their own ways the group’s importance in their own lives. Past studies that selected a value or domain of the group to affirm did not protect those who did not see the particular group aspect that was affirmed as central to their own representation of their group and their own identity. This method therefore better captures one’s group and identity because it allows people to write about what aspects of the group they value and the ways in which the group is meaningful to them at that particular point in time (see Tajfel, 1974).

Recent research suggests a difference in motivation and effects between affirming belonging and affirming valued nonsocial aspects of self (Knowles, Lucas, Molden, Gardner, & Dean, 2010). In this context of underrepresentation, there should be no difference because, for them, both belonging and self-integrity are threatened (Cook et al., 2011). Buttressing self-integrity via self-affirmations has been shown to be effective in protecting belonging (see Sherman & Cohen, 2006) and buttressing feelings of belonging or acceptance has been shown to lead to higher self-worth, a construct related to self-integrity (Gailliot & Baumeister, 2007). These needs are particularly intertwined in the context of this study and, thus, both affirmations
of the social and nonsocial self should protect performance as long as they support self-integrity or belonging. Accordingly, there were no differences in above reported findings when affirmations are categorized by social (group affirmation and self-affirmation of family and friends), nonsocial self-affirmations, and no affirmation (control). However, people overwhelmingly choose relationships with family and friends as their most important value (in this sample, 90% of White participants and 60% of Black participants in the self-affirmation condition) suggesting that people may prefer to affirm the social self over the nonsocial personal self, particularly in situations in which self-integrity and belonging are intertwined.

From this paradigm, we also learn that people choose to affirm their threatened group and that racial groups are a significant source of value for people even when that racial group is devalued or stigmatized within a context. This study therefore contributes to work on affirmations by demonstrating that a threatened aspect of the self (i.e., threatened identity) can effectively be affirmed to transcend the implication of the threat to the self and group. Perhaps because it was already salient and available in the environment in which it was underrepresented, the racial identity was chosen by most of the participants within the group affirmation condition and these participants showed no differences in outcomes from participants who affirmed other groups. Racial group affirmation also protected against activation of racial stereotypes, even when the group affirmed was the racial group. This finding contrasts the idea that activating the group within a threatening context increases the salience of negative stereotypes and vulnerability to negative consequences (Steele & Aronson, 1995); racial group affirmation may instead shift focus from negative stereotypes to valued positive aspects of the group.

**Processes Involved in Group Affirmation**
The benefits of racial group affirmation in the academic context fits with research showing that positive judgments of one’s racial/ethnic group is associated with positive outcomes (e.g., positive mood, fewer depressive symptoms) in contexts in which race/ethnicity is salient (Yip, 2005). Group affirmation in general may override concern with negative stereotypes by shifting cognitive construal to a higher level (Wakslak & Trope, 2009) allowing one to see the bigger picture and mitigating the effects of this stress on one’s performance. Support for this comes from results showing that stress had a nonsignificant effect on performance in the group affirmation condition for Black participants. Furthermore, the effect of stable identification on change in GPA following participation for Black participants in the affirmation conditions might suggest that those who transcended threat by affirming positive aspects of themselves and their group were able in the long run to benefit from belonging to the group when that group was important to them. In the control condition, participants did not transcend the threat and therefore did not necessarily benefit from having the racial group as an important aspect of their self-concept. If so, this would be in line with findings showing that among those who anxiously expect racial discrimination at a predominantly White university, those who are highly identified with their racial/ethnic group do not experience any reliable benefits in terms of long-term change in GPA; on the other hand, those who are less concerned with the possibility of racial discrimination experience benefits of belonging such that their GPA increases when they are highly stably identified with the group (Mendoza-Denton et al., 2008).

In addition, the affirmation intervention may have taught or made accessible a strategy to cope with threat for those who self- or group affirmed. Participants in these conditions may have felt or noticed immediate and subsequent benefits and learned to pair the stressor with a coping strategy involving affirmation. Thus, when encountering threat later on, they may again access
their important value or group. In other words, participants may have learned to affirm when under threat. When threat is transcended via affirmations and the group is no longer a source of ambivalence or negativity, stable identification may lead to benefits.

As is common among self-affirmation studies, a mediator of the relation between condition and outcome among threatened participants was not found (see Sherman & Cohen, 2006). Scores from various scales (e.g., self-integrity, belonging to the institution) were tested as statistical mediators, but none were significant. However, clues on mechanisms involved in the protective effect may lie in the pattern of activation of racial stereotypes. Activation of race and related stereotypes did not predict performance outcomes, but the effect of condition on activation among Black participants suggests one cognitive process affected by affirmation. Group affirmation led to significantly lower activation of race-related constructs and negative stereotypes than the control condition and the self-affirmation condition, even when the group affirmed was the racial group. One possibility is that group affirmation reduces preoccupation with race and negative stereotypes by inhibiting, suppressing, or unpriming (Sparrow & Wegner, 2006) them. Group affirmation may facilitate focusing on positive aspects that override or counteract preoccupation with negative stereotypes. Self-affirmation, on the other hand, may not lead to reduced activation of negative race and performance-relevant stereotypes, but may reduce their implication to the self. Even if these stereotypes are active, focusing on positive aspects of the self that are unrelated to the threatened group may override the threat these stereotypes pose to the individual. Such an account fits with the idea that self-affirmations facilitate "broader picture" thinking and transcending the threat (Crocker et al., 2008; Wakslak & Trope, 2009).

Wyer, Sherman, & Stroessner (1998) have shown that motivated stereotype suppression in one context can lead to later activation and use of those stereotypes. Though their research
was on stereotyping others and not oneself, the motivation framework makes it noteworthy for the present study’s context in which students may be particularly motivated to suppress negative stereotypes about their group’s academic performance. The affirmations’ effect on GPA was sustained through the next semester, but other contexts were not tested. It is possible that motivated inhibition or suppression of stereotypes led to the activation of stereotypes in other domains, like social life on campus. Future research should rule out suppression more definitively and test for the effects of group affirmations in response to academic threat on other aspects of student life.

Unexpectedly, change in GPA from term of participation to term following participation increased for Black participants in the control condition. One possible explanation that would affect this specific group is the election of President Obama during the post-participation term. It is possible that Obama’s campaign and election increased the salience of an ingroup member’s achievements thereby reducing concerns with being negatively stereotyped in the academic context (Purdie-Vaughns, Cook, Garcia, & Cohen, 2011) and improving performance (Marx, Ko, & Friedman, 2009) uniquely for Black American students; in other words Obama may have served as an affirmation source for Black students (Purdie-Vaughns et al., 2011). Black participants in the self- and group affirmation conditions had already affirmed self-integrity and/or belonging and transcended the threat, so Obama’s election may not have provided them additional boost.

**Relation to Self-Affirmation Theory**

In his seminal writing on self-affirmation theory, Steele (1988) proposed that when one’s most important self-aspect is threatened, the only route to restoring integrity may be to adapt to the threat. He provides an example of a tennis professional who loses a match and who has no
equally important identities or self-aspects and suggests that his only means to bolster self-integrity is to focus on adaptations that address the loss (e.g., he needs more practice or a rematch; he rationalizes the loss). Findings from Study 1 suggest that when one’s most important group is under threat (i.e., racial group), one can focus on the benefits of belonging to the group as a means of affirming self-integrity rather than focus on a need to study more, to disengage from competitive domains, or to make attributions or rationalizations for underperformance or anxiety stemming from threat.

Though this study shows that a racial group can confer protection when it is affirmed even though psychological threat stems from it, it does not shed light onto how people are thinking about belonging to this group in a way that makes it a resource rather than a vulnerability. Other than knowing that participants write about why the group is important to them and presuming they are writing about positive group characteristics and values, little else is known. In order for the affirmation to be effective, affirmed group characteristics should be a part of one’s self-concept, but in what way? When threatened, people may enhance intragroup heterogeneity (Doosje et al., 1995; Ellemers & van Rijswijk, 1997) or write about how they are unique and different from most others in the group (e.g., Hornsey & Jetten, 2004) as a way to deflect the stigma and protect themselves. In order to test that affirmations will be protective if incorporated into the self-concept and to rule out the possibility that they will be effective only when one distances oneself from the threatened group, Study 2 compares group affirmations from different perspectives of belonging to the group – either as a typical group member or a unique group member.

Affirmations of important aspects of the group, in addition to protecting their performance, may also protect people’s positive identification with the group when the group is a
devalued or a target of threat. Study 2 tests this hypothesis.
CHAPTER 3

STUDY 2
Groups that are devalued within an environment or domain can be an affirmation resource for those experiencing identity threat. Study 1 showed that focusing on the importance of belonging to one’s racial group buffers against underperformance that typically results from race-based stereotype threat. This current study is aimed at further examining the role of a threatened identity as a resource and shifts focus from a racial identity to an experimentally induced threatened national identity.

In recent years, there has been negative attention directed at the American public education system and its weaknesses in preparing students for careers in math and science. Notably, other Western and developing nations have secured spots in the top ranks of student performance in math and science, which has led to domestic concern over America’s future fitness in competing with these nations in a world market. In response, government funding initiatives, like President Obama’s Educate to Innovate program, were created to improve U.S. ranking, support quality teaching in the fields of science, technology, engineering, and mathematics (STEM), and cultivate a future workforce fit to compete with those of other nations.

The current study highlights world rankings to induce threat to American identity and test whether an identity that is not typically subject to threat in American society can be a resource when that identity is under threat. Because people are not prone to thinking about their American identity due to its relatively low salience in everyday life in this culture, this study will shed light on whether protection conferred by activating positive knowledge about a threatened identity is a general effect or one limited to culturally salient identities that are more regularly prone to threat.

Study 1 showed that group affirmation was as effective as self-affirmations in protecting performance in a threatening domain even when the group affirmed was the one under threat. In
Study 1, participants reflected on an important group membership, but because mental representations of important groups overlap with representation of one’s self-concept, it is probable that participants in the group affirmation condition were affirming their identity, or self-aspects that were derived from group membership. This suggestion would be consistent with research showing that group affirmation leads to using collective, self-inclusive pronouns (e.g., "we" and "us"; Derks et al., 2009). If this is the case, then the effectiveness of group affirmation may not necessarily depend on one’s stable level of identification with the group but rather on whether the aspect of the group that is affirmed is one that the individual endorses as self-relevant. In Study 1, participants chose groups that were highly important to them and, accordingly, high stable identification predicted which group was chosen to be affirmed. Allowing participants to choose and affirm values they have actually derived from belonging to a group should override effects of stable identification on effectiveness of group affirmation. In other words, in this case, there should be no moderation by group identification on group affirmation effectiveness and affirmation should be effective for all members. To test whether self-relevance of the affirmed group characteristic or value is necessary for this type of affirmation to be effective, affirmation prompts were modified to ask about values one holds as a unique individual, a unique group member, or a typical group member.

This modification also allows a test of differences in how people construe belonging to a group when the group is devalued. Study 1, while showing that group affirmation is effective for contending with psychological threat, does not explain how one is thinking about oneself in relation to the group. It may be that those who experience threat focus on features that make one different from typical group members as a way to deflect the threat to others in the group. However, a surface review of the affirmation essays in Study 1 did not suggest this.
Furthermore, how one configures his belongingness should not affect protection that affirmation confers as long as the affirmed aspect is incorporated into one’s self-concept.

**Optimal Distinctiveness Theory and Affirmation**

Optimal distinctiveness theory (Brewer, 1991) offers theoretical support for hypothesizing that all three affirmation conditions should protect against threat. This theory states that people have simultaneous but competing needs to individuate and assimilate to groups, regardless of the group’s status. Equilibrium is reached when there is some balance between these two needs and results in a positive self-concept. A scenario like identity threat in which group members are uniformly categorized according to some negative stereotype or attitude is likely to make one feel deindividuated and arouse a need to differentiate. When this need is satisfied, protection may be conferred. In support of this, individuation in response to stereotype threat has been shown to protect against underperformance (Ambady et al., 2004).

Affirming oneself as a unique individual should satisfy differentiation needs by allowing one to emphasize the personal self and break away from the group. The group can also be a means to satisfy differentiation needs and achieve optimal distinctiveness (Brewer, 1991). With an intragroup focus, optimal distinctiveness theory suggests people can differentiate themselves by highlighting themselves as unique, as opposed to typical, group members.

Almost counterintuitively, optimal distinctiveness can also be achieved by making oneself more prototypical (Brewer, 1991; Codol, 1975; Hornsey & Jetten, 2004). Making oneself a typical group member also allows one to achieve group distinctiveness such that being part of the group allows one to be distinct from all outgroup members. The idea that a positive self-concept stems from equilibrium suggests that satisfaction of the competing needs can protect against negative effects of psychological threat. In these ways, optimal distinctiveness theory
offers theoretical support that all three forms of affirmations (unique personal self, unique group member, typical group member) will be protect against threat.

**Identity Affirmation and Positive Identification with the Threatened Group**

Though self and identity affirmations should not differ in terms of their effects on performance, there should be differences in their effects on how positively one judges one’s own group, feels about being a member of the group, and thinks about the group’s importance to one’s own self-concept at a given time. Positive identification in the face of threat may be important for engaging in collective action to further the status of one’s group and its members and dispelling negative stereotypes (Kelly & Breinlinger, 1996). Group or identity affirmation represents a collective-level threat management strategy (Blanz et al., 1998) that involves defending the identity and improving the group’s status or outcome. Such affirmations may facilitate maintaining positive identification with the group. Despite threatening information, affirming an aspect of one’s identity might not only protect performance but also facilitate feeling positively about belonging to the group even though it is the basis of the psychological threat. Furthermore, given that optimal distinctiveness results in a positive self-concept, it may be that affirmation of oneself as a unique group member will lead to the best results in terms of positive feelings about the group (i.e., membership, private, and importance subscales of collective self-esteem; Luhtanen & Crocker, 1992), henceforth referred to as CSE. Affirming oneself as a typical group member may not show the same pattern in terms of CSE because optimal distinctiveness in this case may be achieved by comparing one’s ingroup to an outgroup, a feature that is not assessed in collective self-esteem measures; so, even if one feels better about one’s group relative to other groups, this would not be captured with collective self-esteem. Though affirming one’s identity should allow for positive identification with the group, it should
not lead one to dismiss the threatening information and react defensively. As such, judgments of how others evaluate their group, referred to as public collective self-esteem (Luhtanen & Crocker, 1992), should not vary by affirmation perspective and should not increase after affirming one’s identity. Because self-affirmation represents an individual-level threat management strategy (Blanz et al., 1998) that focuses on protecting the self rather than the group’s status or outcomes, affirming personal uniqueness should not affect collective self-esteem.

Finally, a boost in positive identification or a buffer against losing positive identification should not come at a cost to personal self-esteem. In other words, all affirmations should protect personal self-esteem.

**Study Overview**

This study compares affirmations from different perspectives to better understand whether protection is conferred because the affirmed aspect is a part of one’s identity, and therefore part of one’s self-concept (Tajfel, 1974), and to eliminate the possibility that protection emerges by distancing oneself from the group prototype when affirming. Furthermore, this study tests which kinds of affirmations facilitate positive identification with the group. American nationals will be induced into a state of identity threat by reading about their low test scores in math and science domains and its potential consequences. After either not affirming (control) or affirming a value important either to their personal self, status as a unique American, or status as a typical American, participants will complete a science test. It is hypothesized that all three types of affirmations will protect against underperformance.

Collective self-esteem, which refers to positive attitudes towards one’s group and its role in one’s life, should be boosted or protected when the identity is affirmed (unique group member
and typical group member conditions, respectively). Affirmation of one’s personal uniqueness should have not boost collective self-esteem. Each type of affirmation should protect personal self-esteem. However, if people are not reacting defensively to threatening information targeting their group, this should not be the case for public collective self-esteem, and it should not vary across affirmation conditions. To test these hypotheses, collective and personal self-esteem will be measured.

**Method**

**Participants**

Participants were recruited via fliers on campus to participate in a psychology study that paid $10 for approximately 1 hour. The sample consisted of 92 participants ($M_{age} = 20.97$, $SD = 3.08$; 73.6% female) who were U.S. citizens.

**Materials and Procedure**

Upon coming to the lab, participants were greeted by an experimenter and asked to complete a demographics form. National identity was primed by asking them the country in which they live, were born, and carry citizenship. Participants completed various questionnaires, including a nationality-specific collective self-esteem scale and a personal self-esteem scale to establish baseline values. Participants also responded to one question ("How strongly do you think of yourself as American?") meant to capture their stable identification as an American using a 1 ("very weakly") to 5 ("very strongly") Likert scale ($M = 3.72$, $SD = 1.19$). All participants were then asked to read an abridged article written by Maria Glod for the Washington Post (December 5, 2007) describing how US students were trailing behind their counterparts around the world in terms of math and science test performance and how this would make it difficult for them and America to compete in a world economy. Participants then rated
the extent to which they felt threatened. Following the article, participants were randomly assigned to complete one of three affirmation essays or a no affirmation (control) essay, described below. After writing the essay, participants completed a 12-item science test. They then again responded to various questionnaires, including the nationality-specific collective self-esteem scale.

**Nationality-specific Collective Self-Esteem Scale (CSE).** Paralleling other group-specific CSE scales (e.g., race-specific, Crocker, Luhtanen, Blaine, & Broadnax, 1994), a nationality-specific CSE scale was adapted from the original CSE (Luhtanen & Crocker, 1992) to direct participants to think specifically about their nationality (i.e., American). A sample item is "I feel good about the nation I belong to" and participants rated their endorsement of each item using a 7-point Likert scale (1="strongly disagree"; 7="strongly agree"). Some items were reverse-coded so that higher values reflect higher CSE. Because each of these types of judgments are of interest in positive identification under threat, ratings on subscales capturing one’s own judgments about the group (private CSE), importance of group to self-concept, and how worthy one feels as a member of the group (membership CSE) were averaged to obtain a single score\(^5\) (pre-manipulation CSE: $\alpha = .89$, $M = 4.85$, $SD = .98$; post-manipulation CSE: $\alpha = .93$, $M = 4.89$, $SD = .93$). A change in CSE was computed by subtracting pre-manipulation CSE from post-manipulation CSE ($M = .04$, $SD = .40$).

If participants are processing the information in the article, then they should understand that America is not viewed positively by others in terms of math and science performance. Therefore, public CSE was computed separately because it should not increase and should not vary as a function of condition (pre-manipulation public CSE: $\alpha = .89$, $M = 4.79$, $SD = 1.08$; post-manipulation public CSE: $\alpha = .87$, $M = 4.65$, $SD = .95$). Patterns reported in Results hold when this index equals an addition of these subscales rather than their average.
post-manipulation CSE: $\alpha = .93, M = 4.67, SD = 1.06$). A change in public CSE was computed by subtracting pre-manipulation public CSE from post-manipulation public CSE ($M = -.12, SD = .70$).

**Personal Self-Esteem (Personal SE).** To test that affirmations protect personal SE and that any boost in CSE does not come at a cost to personal SE, the Rosenberg self-esteem scale (1965) was modified to ask about the participants’ feelings in that moment (e.g., "At this moment, I am satisfied with myself"). Participants rated on a 6-point scale ($1 = "completely disagree"; 6 = "completely agree") the extent to which they endorsed each item, some of which were reverse-coded so that higher values indicate higher personal SE (pre-manipulation personal SE: $\alpha = .92, M = 4.95, SD = .93$; post-manipulation personal SE: $\alpha = .94, M = 4.85, SD = .97$). A change in personal SE was computed by subtracting pre-manipulation personal SE from post-manipulation personal SE ($M = -.10, SD = .53$).

**Threat.** Participants rated the extent to which they felt threatened by the article by responding a 4-item questionnaire used in previous research (Davies, Steele, & Markus, 2008) that included questions like "Do you find the article troubling?" Participants rated their endorsement of each item on a 7-point Likert scale, with 1 corresponding to "not at all" and 7 corresponding to "completely" ($\alpha = .75, M = 5.12, SD = 1.12$) with higher values representing higher levels of threat.

**Affirmation Manipulations.** Participants were randomly assigned to one of four essay-writing conditions. In the *unique individual* condition, participants were asked to "write about a value that is most important to you as a unique individual" and to describe "how this value makes you a unique individual and how it has shaped your life." In the *unique group member* condition, participants were asked to "write about a value that is most important to you as a
unique American" and to describe "how this value makes you a unique American (e.g., not ‘typical’) and how it has shaped your life." They were told that the value could be "something that you developed because you are an American, but does not have to be a value shared by all Americans." In the typical group member condition, participants were asked to "write about a value that is most important to you as an American" and asked to describe "how this value makes you a prototypical American and how it has shaped your life." They were told that the value should be "one that is shared by most Americans." In the control condition, participants were asked to "write about a value that is least important to you, but that might be important to someone else" and to describe "how or why this value might be important to someone else." Participants were not given a limited time to write the essays ($M = 7.83$ minutes, $SD = 3.16$).

**Science Test.** After writing the essay, participants were given a 12-question science test (questions reprinted from Goldberg, 2007). Questions centered on topics of biology, genetics, physiology, and other areas of science and participants were asked to correctly answer as many as they could. A pilot of this test on 25 participants ($M_{age} = 19.36$, $SD = 1.22$) pooled from the same population of students as the Study’s sample showed that mean performance on this test was $.37$ ($SD = .13$). Time on the test was not limited ($M = 5.45$ minutes, $SD = 1.78$). Like in Study 1 and in past research (e.g., Steele & Aronson, 1995; Shih et al., 1999), performance was measured by computing the ratio of the number of questions answered correctly out of the number of questions attempted ($M = .46$, $SD = .16$)\(^6\).

**Results**

General linear models were used to analyze the data except where otherwise stated. It was hypothesized that the affirmation conditions would have significantly higher test

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\(^6\)Results are similar when analyzed as number of correct responses out of total administered.
performance than the control condition, with no difference between affirmation conditions. Regarding CSE, it was hypothesized that CSE would increase in the unique group member condition but not in the typical group member condition or in the unique individual condition. Public CSE was not expected to increase in any condition and personal SE were not expected to vary by condition.

**Preliminary Analysis**

In this study, identity threat was induced among American nationals in the math and science domain. However, negative stereotypes exist for women and certain racial groups in this domain as well. To ensure that findings are due to threat stemming from American nationality and not gender or racial group, preliminary analyses were conducted to ensure that there were no effects of gender or racial group in this sample.

There were no differences by gender in test performance or change in CSE and no differential effects of condition by gender on test performance or change in CSE (all $p$s $\geq .15$). Parallel analyses were conducted for racial groups in which race was dummy coded (e.g., Asian=1, all others=0) and compared each racial group to all others. These analyses revealed that condition significantly interacted with being Asian American, $F(3,84) = 2.77, p \leq .05, \eta^2_p = .09$, such that Asian American participants ($M = .21, 95\% \text{ CI}: .06, .36$) did significantly less well than all other Americans ($M = .45, 95\% \text{ CI}: .38, .53$) in the unique group member condition ($p \leq .01, 95\% \text{ CI for mean difference: -.41, -.07}$). Condition did not significantly interact with any other race (all $p$s $\geq .18$). Being Asian American did not interact with condition to significantly predict change in CSE ($p \leq .15$). Because Asian American participants performed differently than other Americans, subsequent analyses were conducted only on non-Asian American
participants (n = 81; $M_{age} = 20.90, SD = 3.17; 71\%$ female) and speculation on Asian American performance is addressed in the Discussion.

**Test Performance**

There was no effect of condition on test performance, $F(3, 80) = .36, p \leq .78, \eta^2_p = .01$. As expected, pairwise comparisons showed that there were no significant differences between the personal self ($M = .45, 95\%$ CI: .38, .52), unique group member ($M = .45, 95\%$ CI: .37, .53), and typical group member ($M = .49, 95\%$ CI: .42, .56) affirmation conditions (all $p$s $\geq .38$). However, performance in the control condition ($M = .48, 95\%$ CI: .41, .55) did not differ from performance in the affirmation conditions. Because their performance was significantly higher than performance in the pilot sample, which was pooled from the same population and did not differ in demographics, one explanation may be that participants in this condition spontaneously engaged in protective strategies. This possibility is further explored in secondary analysis, results of which are reported later.

Performance results did not depend on level of identification as neither pre-manipulation CSE ($p \leq .85$) nor a one-item measure of American identification ($p \leq .75$) significantly interacted with condition.

**Change in CSE**

Controlling for change in public CSE, which was not expected to increase or differ by condition, there was a significant main effect of condition, $F(3, 76) = 3.36, p \leq .05, \eta^2_p = .12$). CSE increased in the unique group member condition ($M = .27, 95\%$ CI: .10, .45) and did not change in the typical group member condition ($M = -.09, 95\%$ CI: -.26, .07). For those in the unique individual condition, CSE did not change ($M = .01, 95\%$ CI: -.14, .16). There was also
no change in CSE in the control condition ($M = -.02$, $95\%$ CI: -.18, .13). Change in the unique group member condition was significantly higher than in all other conditions (all $ps \leq .05$).\(^7\)

To ensure that the increase in CSE was not a result of participants in the unique group condition dismissing or defensively reacting to the threatening article, public CSE was tested alone. If participants processed the threatening article, then they should be aware that others do not view their group positively and there should not be a boost in public CSE. Accordingly, change in public CSE did not vary by condition ($p \leq .36$) and it did not differ from zero in this unique group member ($M = .13$, $95\%$ CI: -.22, .49) or any other condition. Results did not depend on pre-manipulation CSE or on the one-item measure of American identification. Neither measure significantly interacted with condition to predict post-manipulation CSE (all $ps \geq .16$).

CSE results also hold when controlling for change in personal SE. Moreover, change in personal SE did not differ by condition ($p \leq .70$) and did not reliably differ from zero in any condition, suggesting that all affirmations protect personal SE.

**Secondary Analyses of Test Performance in the Control Condition**

Performance in the control condition did not differ from performance in the other conditions, which does not resemble patterns in research on stereotype threat and self-affirmation that show that unaffirmed participants perform less well than affirmed participants when threatened. Because participants in the control condition were threatened and then not given much guidance or restrictions on writing the essay, participants may have engaged in spontaneous protective or defensive strategies when writing their essays. Or, participants may have been able to affirm important values and remind themselves of personal resources when

\(^7\) Adding Asian American participants to the sample does not change the pattern of any of the above reported findings.
responding to questionnaires about self-esteem and CSE (Steele, 1988). In fact, participants in the control condition ($M = .48, SD = .14$) did perform significantly better than participants in the pilot sample, $t(45) = 2.79, p \leq .01$. Because of the availability of additional data, follow-up analyses were performed.

**Test Performance – non-U.S. citizens.** In order to test our hypothesis that performance was facilitated in the control condition in some way, data from our American participants were compared to data from non-U.S. citizens who were admitted into the study ($n=25$) who would not have been threatened by reading the article. First, non-US citizens should report lower levels of threat in response to the article. Furthermore, if affirmations or other protective strategies enhanced performance on the test, then non-U.S. citizens’ performance should be lower than Americans’ performance. In accordance with this hypothesis, non-U.S. citizens were less threatened by the article ($M = 4.67, 95\% CI: 4.26, 5.08$) than our American sample ($M = 5.20, 95\% CI: 4.98, 5.42$), $F(1, 103) = 5.12, p \leq .05, \eta^2_p = .05$. Moreover, there was a main effect of citizenship on performance, $F(1, 103) = 6.60, p \leq .05, \eta^2_p = .06$, such that non-US citizens ($M = .38, 95\% CI: .32, .45$) had lower performance than US citizens ($M = .47, 95\% CI: .43, .50$). There was no significant interaction between condition and citizenship ($p \leq .48$) and there was no significant difference in performance across conditions for non-US citizens (all $p$s $\geq .29$).

**Individuation in the Control Condition.** The essay prompt for the control condition may have inadvertently cued expressing uniqueness as a coping strategy, and the materials prior to the essay (e.g., nationality-specific CSE scale) may have made American identity salient. Together, this may have led participants to express the uniqueness of their American identity to stress the heterogeneity of the group (Doosje et al., 1995; Ellemers & van Rijswijk, 1997) and deflect the threat to prototypical group members. Such a strategy would also allow them to re-
establish self-integrity and optimal distinctiveness after reading an article that stressed group homogeneity about poor math and science performance.

To test whether affirming American uniqueness protected performance among those in the control condition, one reader, blind to condition, coded each essay for the extent to which the participant "distinguish[ed] (individuate) themselves as an American (i.e., this person expresses that he or she is a unique American, different from Americans in general)" as well as the extent to which the participant "distinguish[ed] (individuate) themselves as an individual (i.e., this person expresses that he or she is a unique person)" (1="not at all"; 5= "very much"). First, as can be expected due to the nature of the prompt, there was a main effect of condition on expressing American uniqueness, $F(3, 77) = 28.09, p \leq .001, \eta_p^2 = .52$, such that it was significantly higher in the unique group condition ($M = 3.24, 95\% \text{ CI: } 2.82, 3.65$) than in the personal self ($M = 1.00, 95\% \text{ CI: } .64, 1.36$), typical group ($M = 1.11, 95\% \text{ CI: } .71, 1.50$), and control conditions ($M = 1.23, 95\% \text{ CI: } .86, 1.59$), all $ps \leq .001$, while the other conditions did not significantly differ from each other (all $ps \geq .37$).

Linear regression was used to test the slope of American uniqueness, centered around the grand sample’s mean, on performance in each condition. Because no participants in the unique individual condition expressed American uniqueness (all essays in this condition received a coding score of 1), this condition was dropped from the analysis. Simple slopes revealed expressing American uniqueness predicted higher test performance significantly in the control condition ($b = .09, t(52) = 2.07, p \leq .05$), but not in the unique ($b = .02, t(52) = .60, p \leq .55$) or typical group conditions ($b = -.13, t(52) = -1.07, p \leq .29$). Expressing individual uniqueness did not predict test performance in any condition (all $ps \geq .46$) and patterns for expressing American uniqueness hold when controlling for expressing individual uniqueness. This suggests that some
in the control condition did spontaneously use their identity as a resource and this facilitated their performance. Others in this condition may have engaged in other protective strategies, like devaluing the math and science domain, devaluing competition, stressing the importance of art over science, among other options.

**Discussion**

This study suggests that affirmations of one’s threatened group can protect against threat when those aspects are self-relevant. However, because participants in the control condition performed at the same level as participants who affirmed, interpretation of the effects of affirmations relative to the control condition are tenuous. However, participants induced into experiencing identity threat on the basis of the American citizenship who then affirmed some aspect of their personal or social self did have higher performance than both the pilot sample and the non-US citizen sample. Those in the control condition showed no difference from those in the affirmation conditions perhaps because they engaged in a range spontaneous defensive or affirmation strategies when completing the scales (see Steele, 1988) or when writing their essays. This speculation was explored in secondary analysis which showed that they had higher performance than the pilot and non-US citizen samples and that expressing uniqueness as an American predicted higher performance in the control condition. Further study is needed to establish the effectiveness of such affirmations on performance under threat, the effectiveness of inducing a threat to the American identity in the given context, and/or the cues that facilitate spontaneous affirmation.

Affirmations protected CSE, and the effects of the affirmations did not depend on one’s stable level of identification. Neither baseline CSE nor a one-item measure of identification significantly interacted with condition to predict post-manipulation CSE. Most noteworthy,
those who affirmed their identity as a unique group member experienced a boost in CSE. This condition allows one to use the group as a means to achieve optimal distinctiveness. By focusing on the group, one can consider the ways in which he or she is a unique member and this allow one to focus on one’s value to the group as a member and feel good about the group. Once one has satisfied distinctiveness needs that were threatened, one can continue to focus on the group and its consider its positive influences in one’s own life, which would lead to an increase in CSE. In addition to facilitating positive identification when the group is threatened, the boost in the unique group member may be important for mobilizing and engaging in collective action to further the status of the group. It is possible that such a boost is needed to go above and beyond other group members and lead one’s group.

Affirmations of oneself as a typical group member did not lead to the same boost. Distinctiveness theories suggest how focus on oneself as a typical member can lead to optimal distinctiveness via an intergroup focus. The CSE scale does not have items regarding how one feels about one’s group relative to other groups. Theoretically, however, scores on a scale that did include such items should show a boost in the typical group member condition, but not necessarily in unique group member condition. Future research can test for such differences.

Collective self-esteem did not decrease in the unique individual affirmation condition, suggesting that affirming the personal self can also protect CSE. Perhaps because self-integrity was theoretically bolstered, self-affirmations did not lead to defensively disidentifying with the group. However, given the nature of individual-level threat management strategies of not showing concern for the group, turning attention away from an identity whenever it is under threat may, over time, lead to that identity becoming less important or less valued, especially if that identity is a common source of threat in one’s culture or environment. Future research can
study the effects of repeated personal self-affirmations in response to a specific identity threat on group identification. Ethier and Deaux (1994) showed that decreasing CSE can lead to reduced identification with the group and that weak identification can lead to perceiving more threat in certain environments. In their study, those who had higher CSE increased identification with their group, which may be an important factor for determining use of support services that target one’s group (e.g., counseling services; Ethier & Deaux, 1994). As such, protecting and boosting CSE in the face of threat may lead to better outcomes downstream by providing a sense of security and acceptance, protecting against heightened sensitivity to threat cues, and by encouraging use of support services to sustain positive outcomes.

**Reactance to Threat and Response by Asian Americans**

The unique American affirmation condition was not effective for Asian Americans; in fact, this condition depressed their performance. Insights of past research may help clarify this finding. Asian Americans experience *intersectional invisibility* (Purdie-Vaughns & Eibach, 2008) among other Americans because they do not fit the prototype of being American and are aware of this (Cheryan & Monin, 2005; Devos & Banaji, 2005). Writing from the perspective of a unique American may have highlighted this invisibility, threatened or marginalized their "Americanness," and aroused needs to assimilate to the American ingroup and express Americanness. Despite not feeling less American themselves, Asian Americans experience situations in which they are not recognized as American or are judged to be less American than others (Cheryan & Monin, 2005). Because of their desire to share the group identity, in response to identity denial, they endorse American cultural practices to a greater extent than other Americans as a way to express their "Americanness" (Cheryan & Monin, 2005). Expressing cultural knowledge is fairly benign, but people may be willing to engage in behaviors that are
costly to the self in order to have their identity recognized and to maintain status within the group. Recent work shows that when one is rejected from a group or when one’s status within the group is threatened, those who most value gaining acceptance will engage in behaviors that benefit the group but are costly to the self in order to regain acceptance (Romero-Canyas, Downey, Reddy, Rodriguez, Cavanaugh, & Pelayo, 2010).

Furthermore, when one’s ingroup status or prototypicality is threatened, those who value the ingroup demonstrate willingness to behaviorally engage in negative self-stereotyping and this is particularly likely when self-enhancement needs are satisfied (Pickett et al., 2002), as should have been from writing the affirmation essay. In other words, Asian American participants may have satisfied self-esteem maintenance needs when affirming a value that was important to them as a unique American, but this process may have aroused the need to assimilate to Americans. Given that Americans were stereotyped as having poor math and science skills, performing poorly may have allowed them to engage in negative self-stereotyping that then satisfied their assimilation needs and allowed them to display or express "Americanness." Support for this comes from data that their personal and collective self-esteem did not suffer in this condition. Depressed performance in this condition was not found among other racial groups because those groups do not regularly contend with situations of identity denial (Cheryan & Monin, 2005) or endorse the belief that "American=White" (Devos & Banaji, 2005) and therefore may not have interpreted the experimental manipulation as a threat to their "Americanness."

It may be that the particular threat employed in this study and the affirmation that was made available to Asian American participants was a poor fit for them. The differential pattern of response among Asian Americans, however, raises the question of whether the protective effects of identity or group affirmation are limited to particular groups. Asian Americans,
because of their collectivist culture and preferences, may not benefit from affirmations of their own particular identity and may only benefit from affirmations of their group prototype or their personal self, or, they may not benefit from affirmations that highlight their bicultural identity.

To test whether Asian Americans can also benefit from identity affirmation and that its effectiveness is not limited to particular racial groups (e.g., Black Americans in Study 1), Study 3 compares affirmations of one’s personally-constructed Asian American identity to affirmations of Asian American group characteristics that are not necessarily self-relevant. This design also allows a test of whether affirmations must implicate the self-concept in order for them to be effective in protecting against threat. More broadly, Study 3 moves from paradigms involving threat of confirming a negative stereotype to one involving experiences of actual discrimination in order to test whether the protective identity process outlined in this thesis can be applied to other situations in which one’s group is devalued. Study 3 tests whether protective benefits of one’s identity can mitigate negative effects of discrimination on performance and mental health-related outcomes that are relevant to the Asian American population.
CHAPTER 4

STUDY 3
Studies 1 and 2 showed in discrete situations that identity can protect against negative effects of threat. Study 3 extends the examination of devalued identity by focusing on experienced discrimination, rather than on stereotype threat, and advances a model of identity-in-context by focusing on a single group across varying situations. Study 3 focuses on Asian American identity and spontaneous activation of positive identity knowledge in response to race-related and race-neutral situations. Perhaps due in part to unique discrimination experiences, like the greater interpersonal discrimination they experience from their peers and close others as compared other groups (Greene, Way, & Pahl, 2006; Rosenbloom & Way, 2004; see also Chan & Mendoza-Denton, 2008), Asian Americans as a group are more vulnerable to depression and anxiety relative to most other ethnic minority groups in the U.S (Okazaki, 1997; 2002; see also Gee, Spencer, Chen, Yip, & Takeuchi, 2007). Internal resources, however, may be effective in buffering Asian Americans against depression and anxiety.

Separate lines of research support the idea that internal resources may be recruited in response to discrimination. First, reporting racial discrimination comes with costs, such as being evaluated less favorably and being seen as a complainer, regardless of whether actual discrimination took place (Kaiser & Miller, 2001), particularly when the individual must continue to interact with others in the rejecting environment (e.g., Crosby, 1984; see also Haslett & Lipman, 1997; Ruggiero & Taylor, 1995; Shelton & Stewart, 2004). To avoid such costs, people may enlist internal coping resources. Second, despite Asian Americans underutilizing health services (U.S. Department of Health and Human Services, 1999), avoiding seeking explicit social support and benefitting less from such support (Taylor et al., 2007), some demonstrate resilience in the face of discrimination, suggesting that people may be using internal psychological resources rather than external resources like health and support services.
Activation or affirmation of positive identity knowledge in the face of discrimination may be one such internal resource that can protect against depressed and anxious mood, or distress.

In response to discrimination, people may activate positive aspects of their devalued identity as a way to protect themselves. For example, participants who were given negative feedback about a valued identity were faster than unthreatened participants at using positive characteristics of that group to describe themselves (Gollwitzer & Wicklund, 1985). Similarly, Dion (1975; Dion & Earn, 1975) showed that after experiencing discrimination from confederates they believed to be highly prejudiced, participants strongly endorsed traits as self-descriptive when those traits were positive and related to their group. Whether these endorsements led to protection from negative effects of discrimination was not tested. Studies 1 and 2 suggest that as long as the positive aspect that is affirmed is self-relevant, protection can be conferred. As such, positive characteristics that are derived from one’s group should protect against negative effects of discrimination whereas group characteristics that are not self-relevant should not.

**Protective Effects of Identity Constructed in Context**

Though mental representations of the self and one’s group are overlapping (Smith & Henry, 1996), knowledge about the group can exist independent of one’s own self-concept. For example, one can have a trait (e.g., family-oriented) and qualify it as a trait that one has as a unique individual (personal identity) or as the result of being a member of a group (social identity; e.g., "because I am Asian American, I am family-oriented") perhaps, but not necessarily, derived from some broader knowledge or belief about the group prototype (e.g., "Asian Americans are family-oriented"). In order to better test the possibility that only group characteristics that are personally relevant will confer protection, a separate assessment of group
and identity is needed. This is particularly important in situations in which the group is devalued because people can strategically change the relation between themselves and their group by distancing themselves from the group prototype or by seeing themselves as loyal but non-conforming (Hornsey & Jetten, 2004). Past assessments tend to conflate thoughts and attitudes about the self as a group member (i.e., identity) and about the group as a whole, but such assessments cannot adequately capture how one’s relation to the group might change in threatening situations.

This thesis has proposed that the situation in which identity is activated is a key factor to understanding effects of identity on health and performance outcomes and has encouraged a person-in-context approach to studying identity as a protective resource. Thus, Study 3 is aimed at better demonstrating the utility of this suggestion by studying one identity (i.e., Asian American) across different situations – race-based discrimination, race-based acceptance, and race-neutral situations – that people have actually experienced. Study 3 therefore aims to extend the findings from stereotype threat to discrimination, which is important to understanding how identity operates generally in situations in which one’s identity is devalued.

To test the hypothesis that positively-valued aspects of one’s identity will protect against discrimination-induced distress and underperformance, a thought sampling measure can be employed. This classic method (Kuhn & McPartland, 1954) can be adapted to capture situation-activated aspects of one’s identity while also accounting for idiosyncrasies and variability in identity at the individual-level (Cacioppo, Merluzzi, & Glass, 1979; Cacioppo & Petty, 1979). For the purposes of this study, this task can separately ask people about the content of their ethnic identity, what knowledge they have about their group overall, and how they feel about each thought listed. This method would, thus, capture both cognitive and affective elements of
identity while allowing respondents to endorse what aspects are meaningful to them at a given
time. In line with Studies 1 and 2, positive knowledge about one’s identity should buffer post-
discrimination distress.

Based on the idea that the relation between one’s group and oneself as a group member
can change under threat (Hornsey & Jetten, 2004), further hypotheses can be made. First,
measures assessing stable elements of identity cannot account for these changes or the
motivations that arise under threat and therefore should not be able to consistently predict
outcomes. Furthermore, because individuals can re-negotiate their relation to the group, positive
group knowledge should not be associated with positive knowledge about oneself as a group
member in discrimination situations. In unthreatening situations, however, social identity theory
suggests that the two will be correlated due to overlapping mental representations. Finally,
positive group knowledge should not predict post-discrimination distress because these aspects
are not incorporated into the self-concept.

In line with past self-affirmation research and the findings of Studies 1 and 2, highly
valued aspects, rather than the number of positive aspects listed, should confer protection. These
past studies showed that writing about a single value or positive characteristic in the face of
threat was protective. Accordingly, the quality or value of the positive aspects one activates (i.e.,
lists in a thought sampling task) should predict protection against discrimination whereas the
quantity will not.

**Overview of Studies**

In line with Studies 1 and 2, aspects of the group that are positively-valued and
incorporated into the self-concept (*identity aspects*) should protect Asian Americans against
outcomes associated with their discrimination experiences – that is, depressed and anxious mood,
or distress. Moreover, those aspects that are specifically about the group and not necessarily incorporated into the self-concept (group knowledge) should not buffer against distress, and this hypothesis is tested in Study 3a. In Study 3b, in addition to studying distress, performance on a language-associated task, a possibly threatening task for Asian Americans (Chan & Mendoza-Denton, 2008; Cheryan & Monin, 2005; Sue, Bucceri, Lin, Nadal, & Torino, 2007), was also tested to see whether positive identity aspects protect against underperformance. Both studies test whether measures of identification focusing on stable features of group and identity are in fact inadequate for predicting outcomes in discriminatory situations.

To test the context-specificity of protective effects, three situations are examined – a race-based discrimination, a race-based acceptance, and a race-neutral experience – using a re-living (recall) task to capture situations that people have actually experienced as discriminatory or rejecting, accepting, or neutral. Whereas discriminatory situations that threaten one’s identity and group arouse certain motivations, race-neutral and race-based acceptance situations pose no threat to the self or group and would not motivate one to engage in protective processes, like affirmation of identity. Just as self-affirmations in the absence of threat have been shown to have null effects on outcomes (Study 1; see also Sherman & Cohen, 2006), there should be no significant effect of positive identity aspects on outcomes in these control conditions.

In both studies, self-concept clarity, which refers to the extent to which self-knowledge is clearly and confidently defined (Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996), was assessed because social rejection experiences, such as discrimination, can cause a loss in self-concept clarity (Ayduk, Gyurak, & Luerssen, 2009) and low self-concept clarity is associated with depression (Campbell et al., 1996; Lavallee & Campbell, 1995; Nezlek & Plesko, 2001). Self-concept clarity can also influence identity elements, like feeling at one with
the group (Mullin & Hogg, 1998; Reid & Hogg, 2005; Schwartz et al., 2010). State self-concept clarity is therefore controlled in analyses to help isolate the relation between positive identity aspects and distress.

**Study 3a**

**Method**

**Participants**

Participants were 79 Asian American students (including East Asian, South Asian, Southeast Asia, and Pacific Islander) who indicated USA or Canada as their country of residence (63% female; $M_{age}=20.76$ years, $SD=2.69$). Participants were run individually and compensated $10.

**Procedure**

Participants first reported various demographics, including their ethnicity and country of residence. They then completed a task, detailed below, in which they relived one of three experiences that they had once actually had. After writing about this experience, participants completed a thought sampling measure to capture their identity aspects and group knowledge. Finally, they completed measures including distress, stable identification with the ethnic group, and state self-concept clarity, which was used as a control in analyses.

**Materials**

Re-living task. In a task adapted from Pickett, Gardner, & Knowles (2004), participants were asked to recall one of three types of memories: a race-based discrimination experience, a race-based acceptance experience, or their walk/commute to school, a presumably neutral experience. Participants were instructed to focus on what happened as well as the thoughts and feelings that they had at the time. In the discrimination condition, participants were asked to
follow the instructions on the following prompt: "write about a time when you felt intensely rejected because of your race – a time that you felt as if you did not belong because of your race." After 4 minutes of time to think about and remember the details of the experience, the experimenter gave participants paper on which they were to write about the experience for 10 minutes. After 10 minutes, participants were asked to finish their last sentence, if they had not already.

_Ethnic Identity Thought Sampling Measure._ After the re-living task, participants were asked to respond to two prompts with open-ended statements: 1) "Because I am Asian American, I am _______" (identity aspects) and 2) "Asian Americans tend to be _______" (group knowledge). The first prompt was aimed at capturing one’s ethnic identity – those aspects of the self-concept that were derived from knowledge about and experience with the group. This approach is in line with classic definitions of social identity (e.g., Tajfel, 1974) while being sensitive to situational influences on identity and to idiosyncrasies in individual representation of identity (see Cacioppo et al., 1979; Cacioppo & Petty, 1979). The second prompt was aimed at capturing group knowledge or representation of the group prototype that included aspects of the group that were not incorporated into one’s own self-concept. The two prompts were separated to disambiguate thoughts and attitudes about one’s own identity from those about one’s group, since the relation between the two types of attitudes can fluctuate across situations (Hornsey & Jetten, 2004).

After writing as much as they wanted, participants were asked to rate on a continuous scale the valence of each thought (-3 = "very negative," 0 = "neutral," 3 = "very positive") based on how they personally felt towards each thought and not what people might generally think. This allows participants to rate the emotional significance of the thought at that given point in
time (Tajfel, 1974). To represent the value assigned to the thoughts, positivity and negativity were calculated by computing the mean ratings for all positive and negative items, respectively, for each prompt (identity aspects: $M_{\text{positivity}} = 2.20, SD = .69; M_{\text{negativity}} = -1.40, SD = .88$; group knowledge: $M_{\text{positivity}} = 1.89, SD = .88; M_{\text{negativity}} = -1.87, SD = .65$). The number of positive ($M_{\text{identity aspects}} = 4.80, SD = 2.98; M_{\text{group knowledge}} = 3.58, SD = 2.80$) and negative thoughts ($M_{\text{identity aspects}} = 3.28, SD = 3.13; M_{\text{group knowledge}} = 3.58, SD = 2.80$) was also counted. For a sample of a participant’s response to these two prompts, see Appendix B.

**Multiethnic Identity Measure.** To contrast the thought sampling measure of situated ethnic identity with a measure focusing on stable elements of ethnic identity, participants completed the Multiethnic Identity Measure (MEIM; Phinney, 1992). The MEIM consists of 12 items that tap into ethnic identity exploration, attachment, and commitment. A sample item is "I have a strong sense of belonging to my own ethnic group." Participants responded with a four-point scale (1 = "strongly disagree"; 4 = "strongly agree"). Ratings for the items were averaged to obtain a total MEIM score ($\alpha = .88, M = 2.95, SD = .58$). One participant did not complete this measure properly.

**State Self-Concept Clarity.** Because state fluctuations in stable personality traits can be assessed by modifying a measure’s instructions (Fleeson, 2001; see Ayduk et al., 2009), the Self-Concept Clarity scale (Campbell et al., 1996) was modified to ask about the participants’ feelings in that moment (e.g., "At this moment, I don’t know who I am"). Participants rated on a 6-point scale (1 = "completely disagree"; 6 = "completely agree") the extent to which they endorsed each item, some of which were reverse-coded so that higher values indicate higher state self-concept clarity ($\alpha = .89, M = 3.97, SD = 1.04$).
Distress. Because depression and anxiety are outcomes relevant to Asian Americans, state measures of depressed and anxious mood were collected and indexed into distress. Depressed mood was measured by modifying items on the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) to capture endorsement of each statement in the moment as opposed to how often participants experienced a symptom of depression in the past week (e.g., "Right now, I feel depressed"; 1 = "strongly disagree"; 5 = "strongly agree"). Some items were reverse-coded so that higher values indicate higher depressed mood. Ratings from the items were averaged to obtain a single score of depressed mood (α = .88, M = 1.93, SD = .81). Anxious mood was assessed with the state part of the State-Trait Anxiety Index (Spielberger, 1983; e.g., "At this moment, I am jittery"). Participants indicated how much they felt each of 20 feeling states using a 4-point scale (1 = "not at all"; 4 = "very much so"). Some items were reverse-coded so that higher values indicated more anxiety (α = .95, M = 1.84, SD = .65). Anxious mood was re-scaled to a 1-5 scale and averaged with depressed and anxious moods (M = 2.12, SD = .76), which were highly correlated with each other (r = .78, p ≤ .001), to form an overall distress index.

Results

Data Analytic Considerations

Linear regression was used to analyze data. Dummy codes for the neutral (neutral condition= 1, other conditions= 0) and acceptance conditions (acceptance condition= 1, other conditions= 0) were entered into the model. Each dependent variable was regressed onto predictor variables and controls that were centered on their respective means (Aiken & West, 1991).

Relation between Group and Self as a Group Member
Overall, positivity assigned to identity aspects was correlated with positivity assigned to group knowledge \((r(77) = .40, p \leq .001)\). However, simple correlations within each condition reveal that the correlation is strong in the neutral condition \((r(21) = .75, p \leq .001)\), trends towards significance in the acceptance condition \((r(28) = .30, p \geq .11)\), but is uncorrelated in the discrimination condition \((r(24) = .08, p \geq .69)\). These effects hold when controlling for MEIM scores of stable identification and hold for those high and low in identification as determined with a median split on MEIM scores. These patterns suggest that people can negotiate their relation to their group and can think of and evaluate them separately particularly in times of threat.

**Distress**

First, there was no effect of condition on distress \((all.ps \geq .22)\) as might be expected if people demonstrate resilience by activating positive identity aspects prior to completing the distress measures.

To test the main hypothesis that positivity of identity aspects buffers against post-discrimination distress, effects of positivity of identity aspects on distress in the discrimination condition were compared to its effects in the neutral and acceptance conditions. Therefore interactions between positivity of identity aspects and conditions were hypothesized, and when a significant interaction was found, simple slope analyses tested for effects of positivity in each condition. In order to isolate the effects of positivity on distress and to demonstrate that group knowledge does not account for protection after discrimination, these analyses control for state self-concept clarity, number of positive identity aspects, number of positive thoughts about group knowledge, positivity of group knowledge, and interactions between positivity of group knowledge and conditions.
There were significant interactions between positivity and the neutral condition ($b = .80, t(67) = 2.10, p \leq .05$) and between positivity and the acceptance condition ($b = 1.05, t(67) = 2.78, p \leq .01$). Simple slope analysis revealed that positivity significantly predicted lower distress in the discrimination condition ($b = -.72, t(67) = -2.38, p \leq .05$), but not in the neutral ($b = -.08, t(67) = .33, p \leq .74$) or acceptance conditions ($b = .32, t(67) = 1.54, p \geq .13$). Figure 6 depicts predicted values of distress in each condition for people high and low in positivity.

There was also a significant interaction between group knowledge positivity and the neutral condition ($b = -.68, t(67) = -2.21, p \leq .05$) such that group positivity marginally significantly predicted lower distress in the neutral condition ($b = -.52, t(67) = -1.91, p \leq .06$), but not in any other condition (all $p$s $\geq .32$). Paired with the high correlation between evaluation of identity aspects and evaluation of group knowledge in the neutral condition, this finding suggests that when one is not experiencing identity threat, the group can serve as a basis for self-evaluation, as suggested by social identity tradition theorists (Turner et al., 1987), and that positive evaluation may lead to somewhat better outcomes (see Phinney, 1992).

Number of positive identity or group thoughts did not affect distress, and including negativity and number of negative thoughts about identity and group in the model did not affect the patterns reported.

**Stable Identification (MEIM)**

A parallel analysis using a stable measure of identification (MEIM) as the predictor rather than (all) variables from the thought sampling measure of distress was not significant (all $p$s $\geq .45$). Furthermore, the effects of identity aspects on distress hold when controlling for MEIM scores. While stable identification might be expected to predict the activation of a coping
response, MEIM scores did not predict positivity of identity aspects in the discrimination condition \( (p \geq .90) \) or in any other condition \( (all \ ps \geq .45) \).

**Discussion**

Study 3a showed that highly positive identity aspects of a threatened identity buffer against post-discrimination distress. Though distress in the discrimination condition was no greater than distress in the other conditions, positivity of identity aspects uniquely predicted lower distress in the discrimination condition, such that those with high positivity had lower levels of distress post-discrimination than those with low positivity. The quality, rather than the quantity, of these positive identity aspects that acted as a buffer – that is, highly positive identity aspects were protective whereas the number of positive identity aspects was not. This finding parallels work on self-affirmation showing that a highly-valued aspect of the self protects against threat effects as the self-affirmation manipulation typically involves writing about one’s most important value (McQueen & Klein, 2006).

In contrast to past research on group affirmation, however, this finding did not depend on one’s level of identification with the group. Measures of identification used in the past may have captured the extent to which an individual incorporated the group into one’s self-concept, such that when high identifiers affirm their group, they have a higher likelihood of affirming an aspect of their own identity. In contrast, low identifiers do not incorporate much about the group into their self-concept, so affirming an aspect of the group has little or no implication to the self. In this study, however, participants activated and affirmed those aspects about the group that were incorporated into their self-concept, making level of stable identification irrelevant in threatening situations.
Positivity of group knowledge did not protect against threat. Social identity theories posit that generally feeling positive towards one’s group and identifying with the group has a number of benefits, including feeling positively. In line with this idea, there was a marginally significant effect of positivity of group knowledge predicting lower levels of distress in the neutral condition. However, the relation between attitudes about the self and attitudes about the group can change (Hornsey & Jetten, 2004); Study 3a suggests that while under neutral conditions, positivity ratings of identity aspects and group knowledge are highly correlated ($r = .75$), the relation is severed when under threat ($r = .08$ in the discrimination condition). Participants may protect themselves when under threat by upholding their own identity while distancing from the group prototype.

Stable identification did not predict distress in any condition and did not significantly reduce the buffering effect of positivity of identity knowledge, which suggests that there is added value in using sensitive measures of identity that account for individual differences in conceptualization and situational influences on identity elements. MEIM scores also did not predict positivity of identity aspects; however, activating positive identity aspects is not the only coping response or internal resource available, and it is possible that MEIM scores predict some other response in this sample.

The lack of condition effects on distress could support our argument that those who cope by affirming the identity are protected, but this null effect could be indicative of other issues, particularly given our reliance on a recall/memory task. It may be that those who have already coped with the discrimination experience in some other way prior to participating in the study show lower levels of distress and that high positivity is simply a residual of that coping mechanism. In other words, those who have coped in some way may not actually be as
negatively affected as others by re-living the experience. Study 3b adds a manipulation check to ensure that the re-living task was eliciting different experiences, and that all participants in the discrimination condition were feeling rejected as a result of re-living their race-based rejection experiences. Rejected mood was assessed immediately before and after the re-living task to test that the discrimination condition increases rejected mood and that this increase would not be related to how positive they later rated their identity aspects in a way that suggests that people with high positivity do not feel as rejected after re-living the task than people with low positivity.

Participants may have coped with their discrimination experiences prior to re-living the experience in the lab. One possible resource for coping with discrimination or rejection that might affect positivity ratings is self-esteem. People who have high trait self-esteem may be most motivated to protect themselves, and assigning high positivity may simply be an effect of having high trait self-esteem. In investigating the role of trait self-esteem in response to rejection, Sommer and Baumeister (2002) found that participants high in self-esteem responded to social rejection primes by appraising themselves more positively (and less negatively). In light of this finding, affirmation of identity might be a side effect of high self-esteem, the true protective mechanism. Though people with high self-esteem will have more positive aspects of the self to draw upon as a resource against threat, the effectiveness of self-affirmation interventions in past research does not seem to depend on level of self-esteem; when given the means to affirm, self-affirmation mitigates effects of threat for people regardless of their self-esteem. Similarly, just as quantity of positive identity aspects did not predict buffering post-discrimination, it is expected here that having highly positive identity aspects, even one, is a sufficient buffer against discrimination’s effects. This possibility is tested in Study 3b by
examining whether trait self-esteem predicts high positivity of identity aspects and whether it accounts for positivity’s conditional effects on distress.

**Study 3b**

In addition to aiming to rule out the possibility that Study 3a’s findings reflect how participants resolved or coped with their discrimination experiences, Study 3b assesses another performance on a word search task as an outcome in addition to distress. Study 1 and past research has shown that identity threat is associated with underperformance when there is a negative stereotype about one’s group in the performance domain (Steele & Aronson, 1995). Asian Americans contend with a particular negative stereotype of having lower competence in English than other Americans regardless of their generational status (Chan & Mendoza-Denton, 2008; Cheryan & Monin, 2005; Sue et al., 2007), which may lead to lower performance particularly when they relive a discrimination experience that highlights negative views about their group. Study 3b tests whether highly positive identity aspects buffers against lowered performance uniquely in the discrimination condition. Sommer and Baumeister (2002) also found primed rejection actually slightly improved performance among those with high self-esteem and led them to persist on an anagram task longer than those with low self-esteem.

Because self-esteem may affect task performance when under threat, Study 3b also tests for effects of self-esteem on performance and whether any buffering effect is due to high self-esteem and not high positivity of identity aspects.

**Method**

**Participants**

Participants were 73 Asian American students (including East Asian, South Asian, Southeast Asia, and Pacific Islander) who indicated USA or Canada as their country of residence
Participants were run individually and compensated $15.

**Procedure**

Prior to coming into the lab, participants completed a measure of trait self-esteem. At the lab, participants followed the same general procedure as in Study 3a. In addition, participants completed a word search task either before or after the distress measures, with the order counterbalanced to control for possible fatigue effects and any effect of making distressed mood salient, which may affect performance (see Austin, Goodwin, & Mitchell, 2001). Participants also completed a mood measure that included feeling rejected before and after the re-living task as a manipulation check.

**Materials**

**Ethnic Identity Thought Sampling Task.** Some participants may have rated identity aspects as "neutral" in Study 3a when they were actually ambivalent towards the aspect. Thus, the neutral point was removed from the thought sampling task in Study 3b so that participants were forced to choose a valence for each listed aspect. In addition, the task only asked about identity aspects and not about group knowledge. Positivity and negativity were calculated by computing the mean ratings for all positive and negative items, respectively, for each prompt ($M_{\text{positivity}} = 2.08, SD = .43; M_{\text{negativity}} = -1.84, SD = .56$). The number of positive and negative identity aspects was counted ($M_{\text{positive}} = 8.89, SD = 3.81; M_{\text{negative}} = 6.15, SD = 3.82$).

**MEIM.** As in Study 3a, participants completed the MEIM as a measure emphasizing stable elements of identity ($\alpha = .87, M = 2.89, SD = .56$).

**State Self-Concept Clarity.** State self-concept clarity was measured as a control in the same way as in Study 3a ($\alpha = .91, M = 3.59, SD = 1.06$).
Rejected Mood. Participants rated how "rejected" they felt (1 = "very slightly or not at all"; 5 = "extremely") immediately before ($M = 1.28$, $SD = .61$) and after ($M = 1.36$, $SD = .65$) the re-living task.

Distress. As in Study 3a, participants completed measures of depressed mood ($\alpha = .89$, $M = 1.98$, $SD = .78$) and anxious mood ($\alpha = .92$, $M = 1.90$, $SD = .51$), which were highly correlated ($r = .80$, $p \leq .001$). Anxious mood was re-scaled and averaged with depressed mood to yield an index of distress ($M = 2.18$, $SD = .67$).

Word Search Task. Participants were asked to complete a word search task in which the goal was to find as many words as possible within five minutes. Words had to be at least four letters with successive letters being adjacent or having touching corners and used only once per word. When participants indicated that they understood the instructions and were ready to start, they were given an 8x8 matrix of letters. All participants were given the same matrix ($M = 13.99$, $SD = 9.02$); two outliers were dropped from analysis of this task.

Trait Self-esteem. Participants completed the Rosenberg self-esteem scale (1965) online prior to coming into the lab ($\alpha = .84$, $M = 4.40$, $SD = .84$).

Results

First, like in Study 3a, condition did not predict distress (all $p$s $\geq .56$). Similarly, there were no effects of condition on performance on the word search task (all $p$s $\geq .18$). Again, if people effectively cope with discrimination by using identity aspects, then no difference would emerge.

Rejected Mood

To ensure that people were actually being affected by the re-living manipulation, effects of condition on rejected mood were tested. Controlling for pre-manipulation rejected mood,
post-manipulation rejected mood was highest in the discrimination condition ($M = 1.66, SD = .87$). The neutral ($M = 1.22, SD = .52$) and acceptance conditions ($M = 1.16, SD = .37$) had significantly lower rejected mood than the discrimination condition (neutral vs. discrimination: $b = -.44, t(68) = 2.55, p \leq .05$; acceptance vs. discrimination: $b = .50, t(68) = 2.99, p \leq .01$), with no difference between the acceptance and neutral conditions ($b = -.06, t(68) = -.38, p \geq .70$).

Moreover, participants who later rated identity aspects with high positivity did not experience the discrimination as less rejecting; controlling for pre-manipulation rejected mood, there was no difference in rejected mood within the discrimination condition by level of positivity ($b = -.08, t(21) = -.69, p \geq .49$).

**Distress**

Analysis of outcomes paralleled Study 3a’s approach, but trait self-esteem, centered on its mean, was included as an additional control to rule out the possibility that self-esteem accounts for effects of positivity of identity aspects.

There was a significant interaction between positivity and the neutral condition ($b = .84, t(63) = 2.07, p \leq .05$) and a marginally significant interaction between positivity and the acceptance condition ($b = .74, t(63) = 1.94, p \leq .06$). Simple slope analysis revealed that positivity significantly predicted lower distress only in the discrimination condition ($b = -.62, t(63) = -2.26, p \leq .05$), but not in the neutral ($b = .22, t(63) = .76, p \geq .45$) or acceptance conditions ($b = .12, t(63) = .44, p \geq .66$). Figure 7 depicts predicted values of distress in each condition for people high and low in positivity.
There were no significant effects of trait self-esteem or number of positive identity aspects on distress. Including negativity and number of negative identity aspects in the analysis did not affect the reported findings.

**Task Performance**

In addition to the controls listed above, the order in which participants completed this task – before or after completing distress measures – was also controlled because depression and anxiety can affect performance on tasks.

There was no significant interaction between positivity of identity aspects and the neutral condition \((b = -8.30, t(60) = -1.22, p \geq .23)\), but there was an interaction between positivity of identity aspects the acceptance condition \((b = -12.77, t(60) = -2.00, p \leq .05)\), so follow-up simple slopes analysis were conducted. Positivity of identity aspects significantly predicted finding more words in the discrimination condition \((b = 9.52, t(60) = 2.04, p \leq .05)\), but not in the neutral condition \((b = 1.21, t(60) = .26, p \geq .80)\) or acceptance conditions \((b = -3.25, t(60) = -.76, p \geq .45)\). Figure 8 depicts predicted values of number of words found in each condition for people high and low in positivity.

There were no significant effects of task order, trait self-esteem, or number of positive identity aspects on finding words. Including negativity and number of negative identity aspects in the analysis did not affect the pattern of reported findings.

**Stable Identification (MEIM)**

A parallel analysis using MEIM scores as the predictor rather than (all) variables from the thought sampling measure of distress was not significant (all \(ps \geq .13\)). Furthermore, the effects of identity aspects on distress hold when controlling for MEIM scores.
In terms of task performance, a parallel analysis using MEIM scores as the predictor rather than any of the variables from the thought sampling measure revealed a significant main effect of MEIM ($b = 5.34$, $t(61) = 2.09$, $p \leq .05$) and significant interactions with conditions (all $ps \leq .01$). When controlling for MEIM scores, patterns of effects of identity aspects on task performance hold, but the interaction between positivity and the acceptance condition is marginally significant ($p \geq .07$).

Finally, MEIM scores predicted positivity of identity aspects in the discrimination condition ($r(23) = .53$, $p \leq .01$), but not in the acceptance or neutral conditions (all $ps \geq .86$). This suggests that stable individual differences in identification might be associated with the activation of motivations to protect oneself and engage a coping response when one’s identity is threatened.

**Discussion**

The protective effect of positivity on distress found in Study 3a and was replicated and Study 3b extended this buffering effect to performance on a word search task.

Study 3b rules out the possibility that high positivity of identity aspects is a reflection or result of high self-esteem. Self-esteem was unrelated to positivity of identity aspects in all conditions. Furthermore, self-esteem did not account for protective effects against discrimination. When it was included as a control in our models, the conditional effects of positivity on distress and performance held.

In addition, participants in the discrimination condition showed increases in rejected mood regardless of their later ratings of identity aspects. This suggests that even if participants had coped with their discrimination experience prior to coming to the lab, they were not re-living their experiences with dampened mood. Furthermore, positivity of identity aspects did not vary
by how rejected the participants felt in a way that would suggest that people who feel less rejected would make higher positivity ratings.

Together, these studies demonstrate that the positive knowledge about one’s identity can protect against situations in which one’s group or identity is devalued, whether in a stereotype threat situation or in a situation in which one experiences rejection or discrimination. These studies also offer more convincing evidence that identities should be studied in context. In these studies, one identity (i.e., Asian American) was assessed and its effects were compared in different situations – race-based discrimination, race-based acceptance, and a race-neutral situation. Only in threatening situations (i.e., discrimination) did positive knowledge about one’s identity confer protection. Positive knowledge about one’s group in general did not confer protection and stable identification was unable to account for distress and performance or for the effectiveness of affirming identity aspects.

Whereas Study 2 showed that identity affirmations depressed Asian Americans’ performance, Study 3 shows that their performance can be protected, perhaps because, while the task may have been threatening, an issue of identity denial in this study may have been mitigated by allowing participants to affirm themselves as Asian Americans, as opposed to "unique" Americans in Study 2.
CHAPTER 5
DISCUSSION
This thesis has addressed one advantage of belonging to a group by demonstrating the power of an identity in contending with discrimination or devalued status in a given context. In situations of identity threat, activating or affirming positive knowledge about one’s identity can protect against negative effects of threat, like underperformance and distress, while facilitating positive identification with the group. For unthreatened identities or situations that are non-threatening, no such direct benefits of positive identity knowledge is observed. This contextualized effect speaks to the importance of accounting for situations when studying identity.

The psychological threat that is created when one’s group is devalued can motivate cognition, emotion, and behavior and inform outcomes. In the absence of threat, these motivations are dormant and therefore do not direct cognition, emotion, and behavior in the same way that produces protection in the threatening situation. Accounting for situations in identity processes addresses recent calls by researchers to consider the dynamics of identity. Past research, particularly in the area of ethnic identity, has produced mixed and fragmented findings that make it difficult to cohesively understand identity processes. Aggregating across situations can misrepresent the dynamics of identity and lead to null effects on outcomes, which can result when identity’s more direct effects on outcomes in threatening situations are mixed with identity’s weak or indirect effects in non-threatening situations. This becomes evident only when a "situated person" is addressed. Focusing on the interaction between person and situation, or context, rather than on on main effects of identification or identity elements, reveals a fuller and picture of the functional role of identity and elucidates how protection can be conferred.

The methods used in this research allowed individuals to define their own identities and represent their own groups. Thus, this approach to identity captures what is personally relevant
and meaningful to an individual at a given point in time. This point is important because it follows closely the definition of identity by social identity theories (Tajfel, 1974; Tajfel & Turner, 1986) that is widely cited and that spurred much of the research on specific identities, like ethnic identity. Identity is "that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the emotional significance attached to that membership" where a group is "a cognitive entity that is meaningful to the subject at a particular point in time" (p. 64, Tajfel, 1974), and the emphasis is on an individual’s construction of his identity and on situation-influenced features of group and identity. Appropriately, this research allowed participants to choose which group is most meaningful and write about its importance to their own lives (Study 1), choose which aspect of a given group to which they belong is important (Study 2), and name and evaluate the content of an identity after re-living a situation (Study 3).

This approach demonstrates first that people resoundingly choose to affirm social groups, like family and friends. When listed as a personal value, participants in the self-affirmation condition choose to affirm the importance of family and friends, which speaks also to the fundamental importance of belonging to groups in human life. While non-social aspects of the self also protect against threat, people strongly prefer to affiliate with others. In addition to bolstering self-integrity and belonging needs, in times of threat or stress, focusing on groups to which one belongs may also serve as a source of implicit support (Leary, 2010).

Given people’s preferences in ranking the importance of their values, it becomes clear that people value the groups to which they belong and represent these groups in their own ways. It is therefore important that measures of identity be sensitive to idiosyncrasies in the ways in which people construct their identities and avoid treating these idiosyncrasies as noise. Allowing
participants to describe their own construction of their own identities reveals that a moderating role of stable identification on group affirmation’s effectiveness (Derks et al., 2009; Glasford et al., 2009; Sherman et al., 2007) is significantly diminished. That is, affirmations were effective for everyone, not just those high in stable identification. This point may be especially important for low identifiers of ascribed groups. When facing discrimination because of physical characteristics that link them as members of the group, even though they do not identify with the group, they too must cope with the threat. However, they may not be likely to use resources like health services targeted to the group. This research suggests that these individuals can still protect themselves by activating positive, self-relevant identity, even if this identity knowledge is not typical of other group members.

**Implications for Identity Assessment**

The findings of the presented research also brings up important points about the conceptualization and assessment of identity. Measures of stable identification (e.g., MEIM) tend to conflate knowledge and attitudes about the group with those about the self. While these two representations tend to overlap to greater extent among those high in stable identification (Smith et al., 1999; Smith & Henry, 1996), representations are situation-responsive. This is illustrated by a finding in Study 3 showing that attitudes about the self as a group member and the group in general are highly correlated in neutral situations but uncorrelated in threatening situations. In essence, one can effectively feel good about belonging to the group while not feeling like the group prototype is self-relevant. Thus, measures that average or equally weight judgments about the group and the self as a group member discount the role of the situation in the relation between the two. In order to best understand an individual’s identity processes, the two should be disentangled.
Measures typically assess multiple elements and either encourage keeping the distinct
elements separate (e.g., Luhtanen & Crocker, 1992) or averaging responses to form an index of
identification (e.g., Phinney, 1992). When elements are addressed separately, the coherence of
the identity as a single construct is muddled and unifying the literature can be difficult because of
the many proposed elements. They should perhaps be thought of as potentially interacting CAUs
within a connectionist network of identity. Averaging across elements is also inadequate
because the weight or significance of the elements can vary across individuals and contexts or
situations. For example, the extent to which one engages in ethnicity-related practices may not
be as relevant to an individual in contexts that devalue one’s group and identity. Rather, identity
knowledge that self-relevant and highly valued, like personal characteristics that one has learned
or acquired as a result of belonging to a group, may become activated in threatening situations.
An approach that gives equal weight to identity elements also does not easily fit with a fluid
conceptualization of identity, like Tajfel’s (1974) emphasis on what aspects of the group are
important and meaningful to an individual at a given point in time (e.g., when under threat). The
social identity theory tradition emphasizes sensitivity of identity and better fits into models of
systems that account for variability across and within people and situations (e.g., Mischel, 1973;
Mischel & Shoda, 1995).

Incorporating a person x situation interaction into self-encodings has been shown to
influence emotion regulation, such that those who encode self-relevant traits in if...then patterns
(e.g., "I am smart when I study") rather than global traits (e.g., "I am smart") tend to show less
extremity in their mood in response to failure or success (Mendoza-Denton, Ayduk, Mischel,
Shoda, & Testa, 2001). The very endorsement of identity as a global, trait-like aspect of the self
rather than a dynamic, situation-responsive construct may affect how individuals think of
themselves and react to identity-relevant situations. Thus, assessments of identity that are sensitive to person (e.g., idiosyncrasies) and situation, like one that allows people to identify \textit{if…then} terms of their identity or self-aspects, may be most suitable to understanding identity and how it can mitigate threat.

\textbf{The Role of Stable Identification in Conferring Protection}

Though the focus of this research was on expounding the role of context or situation-sensitive features of identity on determining outcomes, stable individual differences are of critical importance as well because they can affect what groups one will most value, as demonstrated in Study 1, as well as the availability and accessibility of positive knowledge about one’s identity and the activation of a coping response, as shown in Study 3b. Studies 1 and 2 instructed participants to affirm the importance of or an aspect of their group, but Study 3 was able to test for individual differences in the spontaneous activation of identity aspects and their ratings. Study 3b provided support that high stable identification predicted higher ratings of positivity. Moreover, this effect was found only in the discrimination condition. This suggests that high stable positive identification may act as an alarm that arouses defensive and social-adjustive motivations and engages a coping response in which the identity itself is used as a resource. In threat-free environments, positive knowledge does not urgently interact with such motives and has no direct effect on outcomes.

Stable individual differences can affect various identity processes. While threat was salient and unambiguous in this research, particularly in Study 2 that highlighted Americans’ low status and in Study 3 that asked participants to recall a time they experienced discrimination, individual differences are known to affect perception of threat. For example, people low in identification may detect more threat in new environments that make their identity salient (Ethier
& Deaux, 1994). People high in race-, gender-, sexuality-, or any other identity-based rejection sensitivity may also detect more threat in their environments. Rejection sensitivity is a cognitive-affective processing dynamic (Downey & Feldman, 1996) that makes an individual sensitive to cues of rejection based on one’s identity and more likely to interpret ambiguous cues as rejecting (London, Downey, Romero-Canyas, Rattan, & Tyson, 2011; Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002; Pachankis, Golfried, & Ramrattan, 2008). When these individuals are also high in stable identification, a coping response may be more likely to be activated such that protection against negative effects be conferred (Mendoza-Denton et al., 2008). Factors that lead someone with a lower threshold for perceiving threat to activate or affirm positive identity knowledge in response to threat is worth further investigation.

**Relation to Self-Affirmation Theory and Social Psychological Perspectives on Identity**

The data presented in this thesis supports self-affirmation theory as originally outlined (Steele, 1988). In the wake of cognitive consistency theories, self-affirmation theory offered a compelling alternative to dissonance reduction. Rather than directly resolving the inconsistency that poses a threat to one’s self-integrity, Steele (1988) proposed that one could flexibly engage in self-affirmation by focusing on some alternative self-aspect that affirms self-integrity. Rather than responding to threat by disidentifying with the targeted group or disengaging from the academic (or another threatened) domain, affirmation of valued personal characteristics (e.g., one’s musical talent) allows one to maintain a sense of general self-integrity. The novelty of this notion, especially in contrast to cognitive dissonance approaches, spurred a field of research on the benefits of self-affirmation for transcending threat effects in a variety of domains.

The current research shows that affirming the positive features of belonging to the threatened group allows one to avoid negative performance effects and maintain or even boost
racial collective self-esteem, even though doing so does not resolve the inconsistency. Steele (1988) does in fact outline a scenario in which the threat-relatedness of the affirmation matters: when the most important self-aspect is threatened such that there are no equally important alternative self-aspects to affirm, then self-affirmations that address the provoking threat should be effective. Using an example for a tennis player who loses, he suggests that self-affirmations that address the loss would include thoughts like needing more practice or a rematch that would allow the player to maintain a sense of adequacy. Thus, in a way, affirmations of aspects of a threatened group should be expected to protect those for whom that group is most important, but because of the novelty of threat-unrelated aspects in conferring protection, this prediction of self-affirmation theory has been overlooked. Study 1 speaks to this prediction by showing that those with stably high racial identification who affirmed their racial group were protected against experiencing underperformance without having to engage in a dissonance reduction process.

Steele (1988) also discusses that the motive for self-integrity involves adaptive and moral adequacy in addition to positive self-regard, and that motives to control or predict one’s environment, one element of self-integrity, may at times be more important than motives for self-regard. In such circumstances, one can affirm a negative self-concept that would bolster self-integrity by increasing sense of control but decreasing positive self-regard. The affirmations of focus in this thesis suggest that one can affirm a self-concept that is stigmatized or judged negatively in a given context (e.g., racial identity under stereotype threat) while also maintaining positive personal and collective self-esteem. Self-efficacy or other indicators of a sense of control were not tested, but performance did improve under such identity or group affirmations suggesting that affirming a self-concept that is viewed negatively does not necessarily have negative effects. In other words, re-framing a self-concept that is negatively judged as one that is
positive can buffer from negative effects of threat without resolving the inconsistency itself (e.g., does not actively attempt to discredit the negative stereotype). In this way, this research contributes to and builds on self-affirmation theory.

This research emphasized the importance of situation and context on identity processes and demonstrated situation-dependent effects of one identity process – the activation of positive knowledge in response to threat. However, within a given context or situation, specific cues can signal identity threat or safety. When a group is underrepresented, for example, this situation can cue members to attune to social identity contingencies, which are possible judgments, attitudes, thoughts, beliefs, or treatment that are tied to one’s identity to determine if their identity will be valued or devalued (Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby, 2008; Steele, Spencer, & Aronson, 2002). For example, messages that diversity is valued even though one’s group is underrepresented can signal an identity-safe environment (Purdie-Vaughns et al., 2008). Identifying identity contingencies is necessary to better understand how situations influence identity elements and processes.

In addition to discrete situations and their demands on identity, it may be important to study more durable changes, or life transitions, and how they affect identity processes. As Ethier and Deaux (1994) point out, individuals may find it necessary to re-construe or re-orient themselves in some way during life transitions and the new environments, opportunities, and demands that they present. Thus, identity adaptation may involve more than discrete responses to situational demands, and impress fundamental changes in identity elements, like content, attachment, and esteem. Understanding adaptive re-negotiations of identity during these transitions will help elucidate the dynamic and multi-faceted role of identity on psychological functioning and related outcomes.
The approach of this research may be able to contribute to other areas as well, like self-stereotyping. Though they agree that mental representations of the self and group are linked, researchers have debated the direction of linkage and whether it is a results from an attributing ingroup characteristics to the self (deduction to the self) or whether there is a self-anchoring process involved in overlapping mental representations (induction to the ingroup; see Latrofa et al., 2010). Moreover, empirical research has been mixed. Latrofa et al. (2010) investigated the role of status within the ingroup as a predictor of the basis and found that while low status group members engage in deduction to the self for stereotypical traits, high status group members engage in an induction to the group process for characteristics. Perhaps giving attention to the situations in which one is engaging in self-stereotyping would also help clarify the directionality issue. For example, in line with the correlations between self and group ratings in Study 3a, in neutral situations, people may engage in a deduction to the self process but they may engage in an induction to the group process in times of threat. Accounting for situations or contexts may help further explain the mixed literature.

**Future Directions**

This work aimed to support the idea that situations and contexts must be considered in order to best understand identity’s effects on outcomes. As first steps, threatened identities were compared to unthreatened identities (Studies 1 and 2) and the effects of a single ethnic identity compared across situations (Study 3). This line of research would benefit from a study of within person variability in identity by employing an experience sampling or daily diary method. Such a method would best allow a further examination of identity variability and its function in daily life. Furthermore, the extent of intra-individual variability could be examined in order to establish an ideal level of identity’s situation-responsiveness. While the current work claims that
its sensitivity is adaptive because it acts as a buffer against threat, too much variability may be maladaptive and represent an unstable self- or identity concept, which may leave on vulnerable to depression and other poor psychological outcomes (e.g., Campbell et al., 1996).

In this work, it was assumed that certain needs that have been presumed to be fundamental (e.g., for self-integrity/worth, optimal distinctiveness) are disturbed in situations of identity threat and that it is because of the arousal of these motivations that identity experiences changes or adaptations that lead to differential outcomes across situations. Future work should test arousal of these motives and for its effects beyond the individual. For example, motivation may affect a threatened individual’s intergroup behavior, activation (or inhibition) and application of outgroup stereotypes, and ingroup bias or outgroup derogation (see Kunda & Spencer, 2003; Stroessner & Scholer, 2008). Further understanding the motivations that are relevant to identity processes and which motivations take dominance when may help identify additional protective responses that fulfill motivations. Thus, future work can test for possible individual differences in the extent to which motives are aroused under identity threat and in the organization or hierarchy of these motives within a connectionist network in order to better understand how motivation affects identity processes.

Future research can also focus on establishing if...then signatures that underlie identity processes within the CAPS framework, like the activation of positive identity knowledge in response to threat. Such work can examine how CAUs are structured within an identity system and how hierarchies are formed that then establish response patterns. The developmental perspective of past ethnic identity literature may be particularly useful in informing how signatures are established. For example, from past experiences with discrimination or identity threat, particularly during the search or exploration phase (Phinney, 1990), one can develop lead
rejection sensitivity or learn to activate adaptive coping responses. Understanding further the interaction between individual motivations, stable identity elements, and the context or situation in which they are operating will be essential to understanding behavioral signatures.

Ultimately, the work presented in this thesis demonstrates how belonging to a group, even a devalued one, can confer benefits when one is experiencing psychological threat. This work represents a first step in developing a model of identity in context by demonstrating the utility of accounting for situation and context in identity processes and outlining the reasons underlying situational variability in identity. Understanding identity in context can better elucidate the multi-faceted role of identity on psychological experience.
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Appendix A

Below is the task used to test for activation of race and related constructs in Study 1.

**WORD COMPLETION**

Directions: Fill in the missing letter to complete each of the following words. There are many possible correct answers. Complete the item with whatever word comes to mind first.

Example: _ A K E = _ A K E

1. C L E A _

2. W H I _ E

3. S W E _ T

4. _ I T

5. _ I C E

6. S _ A Y

7. _ O O R (POOR)

8. B A _

9. _ A N D

10. _ I G H T

11. T A _ E

12. O V E _
13. _ _ _ E R I O R
24. _ A I L

14. _ U M B (DUMB)
25. _ A N

15. T E N _
26. B _ K E

16. M I _ E
27. P A R T _

17. _ A D
28. W O R _

18. _ L O W N
29. B L _ C K (BLACK)

19. S T E A _
30. S A _

20. _ O _ D E R
31. S H A _ _

21. H O _ S E
32. C O U _ T

22. B E A _
33. _ O R E

23. C O _ _ _ (COLOR)
34. _ O O K
35. _ _ _ E
   (RACE)

45. _ _ _ _

36. _ _ _ D

46. _ _ _ E
   (RACE)

37. _ _ _ S

47. _ _ _
   (SKIN)

38. L _ _ _
   (LAZY)

48. _ _ _ K

39. _ _ _ K

49. _ _ _

40. _ _ _ D

41. _ _ _ E

42. _ _ _ S

43. B _ _ S
   (BIAS)

44. _ _ _ O

45. _ _ _ D L E

46. _ _ _ E

37. _ _ _ S

47. _ _ _

38. L _ _ _

48. _ _ _ K

39. _ _ _ K

49. _ _ _

40. _ _ _ D

41. _ _ _ E

42. _ _ _ S

43. B _ _ S
   (BIAS)

44. _ _ _ O
Appendix B

Below is a re-creation of a participant’s responses to the Ethnic Identity Thought Sampling measure used in Study 3a and is provided as a sample. Each prompt was actually listed on a separate page. Twenty rows followed each prompt after the colon, but only the amount used by the participant is displayed.

1. Sometimes we may feel that certain aspects of our selves or personality are things that we have acquired, inherited, or learned because of our culture. This question is about listing some of these things. Please be as specific as possible. For example, rather than listing “stereotypes,” list the specific stereotypes you are referring to. Please complete the sentence in as many ways as you can think of. But please only write one thought or sentence per box. You may ignore the scales to the right your statement.

Because I am Asian American, I am:

<table>
<thead>
<tr>
<th>Response</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>of brown skin</td>
<td>-3</td>
</tr>
<tr>
<td>inspired to be a doctor</td>
<td>-3</td>
</tr>
<tr>
<td>from a big family</td>
<td>-3</td>
</tr>
<tr>
<td>close to my family</td>
<td>-3</td>
</tr>
<tr>
<td>needing to work extra hard to succeed</td>
<td>-3</td>
</tr>
<tr>
<td>Asian Americans tend to be:</td>
<td></td>
</tr>
<tr>
<td>smart</td>
<td>-3</td>
</tr>
<tr>
<td>interested in gossip</td>
<td>-3</td>
</tr>
<tr>
<td>late</td>
<td>-3</td>
</tr>
<tr>
<td>judgmental</td>
<td>-3</td>
</tr>
<tr>
<td>forceful</td>
<td>-3</td>
</tr>
<tr>
<td>hospitable</td>
<td>-3</td>
</tr>
<tr>
<td>fun to be with</td>
<td>-3</td>
</tr>
</tbody>
</table>
Table 1. Percentage of participants in each racial group who chose the listed value or group. Chi square test statistics that assumed equal distribution across values or groups are reported.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>VALUE</th>
<th>White Ps %</th>
<th>Black Ps %</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELF</td>
<td>athletic ability</td>
<td>9.1</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>creativity</td>
<td>0</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>relationship with family and friends</td>
<td>90.9</td>
<td>63.2</td>
</tr>
<tr>
<td></td>
<td>religious values</td>
<td>0</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>sense of humor</td>
<td>0</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>music and art</td>
<td>0</td>
<td>5.3</td>
</tr>
</tbody>
</table>

$\chi^2(1) = 7.36, p \leq .01$  \hspace{1cm} $\chi^2(5) = 27.50, p \leq .01$

<table>
<thead>
<tr>
<th>GROUP</th>
<th>White Ps %</th>
<th>Black Ps %</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP</td>
<td>musical or choir group</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>racial/ethnic group</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>athletic group</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>church group</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>online community/club</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>fraternal group</td>
<td>20.0</td>
</tr>
</tbody>
</table>

$\chi^2(4) = 6.00, p \leq .19$  \hspace{1cm} $\chi^2(5) = 29.95, p \leq .01$

<table>
<thead>
<tr>
<th>VALUE</th>
<th>White Ps %</th>
<th>Black Ps %</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL</td>
<td>athletic ability</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>creativity</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>relationship with family and friends</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>religious values</td>
<td>63.6</td>
</tr>
<tr>
<td></td>
<td>sense of humor</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>music and art</td>
<td>0</td>
</tr>
</tbody>
</table>

$\chi^2(3) = 9.00, p \leq .05$  \hspace{1cm} $\chi^2(3) = 6.29, p \leq .09$
Figure 1. Black participants’ performance on math tests by affirmation condition in Study 1. Error bars represent standard errors.
Figure 2. Mean math test performance by racial group and affirmation condition in Study 1. Error bars represent standard errors.
Figure 3. GPA in terms of study participation by racial group and affirmation condition in Study 1. Error bars represent standard errors.
Figure 4. Estimated marginal means of test performance accuracy in each condition in Study 2. Error bars represent standard errors. Dashed line represents pilot sample performance and shaded area represents standard error.
Figure 5. Estimated marginal means of change in collective self-esteem in each condition in Study 2. Error bars represent standard errors.
Figure 6. Predicted values of distress in each condition for those high and low in positivity of identity aspects in Study 3a. Error bars represent standard errors.
Figure 7. Predicted values of distress in each condition for those high and low in positivity in Study 3b. Error bars represent standard errors.
Figure 8. Predicted values for number of words found in each condition for those high and low in positivity in Study 3b. Error bars represent standard errors.