

Ego-Social Identity Profiles during Emerging Adulthood

by

Melinda Gonzales-Backen

A Dissertation Presented in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

Approved April 2012 by the  
Graduate Supervisory Committee:

Larry Dumka, Chair  
Hyung Chol Yoo  
Roger Millsap  
Mark Roosa

ARIZONA STATE UNIVERSITY

May 2012

## ABSTRACT

Identity theorists have emphasized the importance of integration across identity domains for psychosocial well-being. There remains little research, however, on associations across identity domains, group differences across identity profiles, and the joint association of multiple identity domains with academic outcomes. This dissertation includes two studies that address these limitations in the identity literature. Study 1, examined the ego-social identity profiles that emerged from ethnic identity exploration and commitment, American identity exploration and commitment, and ego identity integration and confusion among an ethnically diverse sample of emerging adults using latent profile analysis ( $N = 8,717$ ). Results suggested that an eight-profile solution was the best fit for the data. The profiles demonstrated differences in identity status and salience across identity domains. Significant ethnic, sex, nativity, and age differences were identified in ego-social identity membership. Study 2 focused on the ego-social identity profiles that emerged from the same identity domains among biethnic college students of Latino and European American heritage ( $N = 401$ ) and how these profiles differed as a function of preferred ethnic label. The association of ego-social identity profile with academic achievement and the moderation by university ethnic composition were examined. Results indicated that a two-profile solution was the best fit to the data in which one profile included participants with general identity achievement across identity domains and one profile included individuals who were approaching the identity formation process in each domain. Ego-social identity profile membership did not differ

based on preferred ethnic label. Individuals who had a more integrated identity across domains had higher college grades. University ethnic composition did not significantly moderate this association. Taken together, these two studies highlight the intricacies of identity formation that are overlooked when integration across identity domains is not considered.

## DEDICATION

This dissertation is dedicated to Chris, my rock, and to Jarid, my light. Also, to Mom and Grandma: I would say that I wish you were here to see me walk, but I know that you are.

## ACKNOWLEDGMENTS

The road to the completion of my PhD has been paved with the most wonderful times and the most difficult moments in my professional and personal life. There are several individuals who I am grateful to for helping me face each challenge and for being there to celebrate each success. My deepest thanks go out to my family. Their unwavering support and unconditional love have provided me with much needed strength during the toughest times. In addition, I would like to extend my sincerest gratitude to Dr. Larry Dumka for taking a chance on me and for believing in me when many others did not. I would also like to acknowledge my dissertation committee, Dr. Larry Dumka, Dr. Mark Roosa, Dr. Roger Millsap, and Dr. Brandon Yoo for the time and work they dedicated to serving on my dissertation committee and for their constructive comments and support. I also wish to acknowledge Dr. Seth Schwartz and the rest of the MUSIC collaborators for allowing me to use the MUSIC data for this dissertation. Thank you to Stella Torres and the rest of the Maricopa ACE Program team for supporting me for the past two years and always believing in me. Finally, and perhaps most importantly, I would like to thank all of my colleagues and friends who supported me throughout my graduate career. Many of these women also served as mentors when I needed them the most. I am truly blessed to have each of you in my life.

## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	viii
LIST OF FIGURES .....	ix
INTEGRATIVE STATEMENT .....	1
STUDY 1: IDENTIFYING EGO-SOCIAL IDENTITY PROFILES	
USING LATENT PROFILE ANALYSIS .....	6
Introduction .....	6
Ego Identity .....	7
Social Group Identity: Ethnic Identity and American	
Identity .....	10
Associations across Identity Domains .....	11
Group Differences in Ego-Social Identity Profiles .....	14
Research Questions .....	15
Method .....	15
Participants .....	15
Procedure .....	16
Measures .....	17
Ego Identity .....	17
Ethnic Identity .....	17
American Identity .....	18
Results .....	19
Latent Profile Analysis .....	19

	Page
Group Differences and Covariates of Profile Membership .....	23
Ethnic Differences .....	24
Sex Differences .....	25
Nativity Differences .....	26
Age Differences .....	26
Discussion .....	27
Ego-Social Identity Profiles .....	27
Ethnic Differences .....	32
Sex Differences .....	36
Nativity Differences .....	38
Age Differences .....	39
Limitations and Future Directions .....	40
 <b>STUDY 2: EGO-SOCIAL IDENTITY PROFILES AND ACADEMIC</b>	
<b>ACHIEVEMENT AMONG BIETHNIC YOUNG ADULTS .....</b>	
Introduction .....	43
Ego Identity .....	45
Social Group Identity .....	47
The Role of Identity in Psychosocial Adjustment .....	50
Research Questions .....	53
Method .....	54
Participants .....	54
Procedure .....	55

	Page
Measures .....	55
Ego Identity .....	55
Ethnic Identity .....	56
American Identity .....	56
Preferred Ethnic Label .....	57
Ethnic Composition of College .....	58
Academic Achievement .....	58
Results .....	58
Latent Profile Analysis .....	59
Differences by Preferred Ethnic Label .....	60
Ego-Social Identity Profile and Academic Achievement .....	61
Role of Ethnic Composition of University .....	62
Discussion .....	62
Ego-Social Identity Profiles .....	63
Preferred Ethnic Labels .....	66
Identity Profiles and Academic Achievement .....	69
Limitations and Future Directions .....	71
REFERENCES .....	75



LIST OF TABLES

Table	Page
1. Cronbach’s Alpha of Study 1 Measures by Ethnicity, Sex, and Nativity .....	83
2. Correlations of Study 1 Variables (Sample Size in Parentheses) .....	84
3. Study 1 Model Fit Statistics for Latent Profile Solutions for Total Sample .....	85
4. Descriptive Statistics for Latent Profiles for Study 1 .....	86
5. Frequency of Subjects Categorized in each Ego-Social Identity Profile by Ethnicity, Sex, and Nativity .....	87
6. Age Differences by Ego-Social Identity Profile .....	88
7. Correlations of Study 2 Variables (Sample Size in Parentheses) .....	89
8. Study 2 Model Fit Statistics for Latent Profile Solutions .....	90
9. Descriptive Statistics for Latent Profiles for Study 2 ( $N = 396$ ) .....	91
10. Ego-Social Identity Profile Membership by Preferred Ethnic Label .....	92
11. University Ethnic Composition Predicting College Grades by Ego-Social Identity Profile .....	93

## LIST OF FIGURES

Figure		Page
1.	Estimated Means of Indicators of Latent Ego-Social Identity Profiles from Study 1 .....	94
2.	Estimated Means of Indicators of Latent Ego-Social Identity Profiles from Study 2 .....	95

## **Integrative Statement**

Ego identity formation is a critical developmental task during adolescence (Erikson, 1968) that extends through early adulthood (Archer & Waterman, 1983; Arnett, 2000). Failure to achieve a stable identity that integrates central identity domains during this period is posited have negative implications for later developmental stages such as the formation of meaningful adult relationships and can ultimately lead to negative psychosocial outcomes. Early identity theorists focused on ego identity, a global sense of the self that includes characteristics, values, and beliefs of an individual that are consistent across time and situation (Erikson, 1968; Marcia, 1966). Scholars have also acknowledged that ego identity encompasses many identity domains including occupational, religious, gender, and ethnic identities, and that integration of these domains is critical for positive psychosocial adjustment (Marcia, 1994).

Despite the implications of identity integration across domains for psychosocial adjustment, there has been little research examining multiple identity domains in context of one another, and none that has explored latent identity profiles based on a set of ego identity and social identity domains. One social identity domain that has been identified as being important among ethnic minorities is ethnic identity (Branch, 2001) such that ethnic identity has been repeatedly found to have a positive association with psychosocial outcomes (Smith & Silva, 2011). Given the salience of ethnic identity among ethnic minorities, compared to European Americans, much of the ethnic identity literature is focused on ethnic minorities to the exclusion of their European

American counterparts. Although ethnic identity may not be a central identity domain for European Americans, American identity appears to hold promise as an important and comparable social identity domain for European American adolescents and young adults that has been largely unexamined. When it comes to ego identity, European Americans are overrepresented in the literature compared to ethnic minorities (Schwartz, Zamboanga, & Weisskirch, 2008). Thus, most of what we know about ego identity formation has been derived from European American samples. Furthermore, although some studies have examined how social identity domains and ego identity are associated with one another (Branch, Tayal, & Triplett, 2000; St. Louis & Liem, 2005), there have been no studies to date that have examined ego-social identity profiles using a person-centered approach. Finally, although studies have been conducted that focus on the preferred ethnic labels of biethnic individuals, no studies to my knowledge have been conducted that examined ego identity or American identity among biethnic individuals, and only one study that has examined ethnic identity among biethnic individuals (Spencer, Icard, Harachi, Catalano, & Oxford, 2000). Furthermore, few studies that have examined biethnic identification (i.e., preferred ethnic labels) have focused on a specific group of biethnic individuals. As such, the studies in this dissertation addressed four limitations in the current identity literature: (1) lack of research on ego identity among ethnic minorities, (2) lack of research on social group identity among European Americans, (3) lack of research exploring identity domains within the context of one another, and (4)

lack of research concerning ego identity and social group identity among biethnic individuals of Latino and European American heritage.

In the two studies I have begun to address some of the limitations that exist in the field of identity research. In Study 1 I examined ego-social identity profiles among an ethnically diverse sample of emerging adults using latent profile analysis. Specifically, I examined the identity profiles that emerged from the identity domains of ego identity, ethnic identity, and American identity. In addition, given research that suggests that there are significant ethnic differences in ego identity (Abraham, 1986; Lewis, 2003), ethnic identity (Branch et al., 2000), and American identity (Rodriguez, Schwartz, & Whitbourne, 2010), I examined ethnic differences between European American, African American, Latino, and Asian American young adults on ego-social identity profiles. Finally, because there is evidence of identity formation differences based on age (Berzonsky & Adams, 1999; Waterman, Geary, & Waterman, 1974; Branch, 2001; Umaña-Taylor, Gonzales-Backen, & Guimond, 2009), sex (Lewis, 2003; Umaña-Taylor et al., 2009), and generational status (Umaña-Taylor, Alfaro, Bámaca, & Guimond, 2009), I examined each of these characteristics as covariates of ego-social profile membership.

In Study 2, my focus turns to biethnic individuals of Latino and European American heritage and how their ego-social identity profiles are associated with academic achievement during college. Scholars of ethnic identity have suggested that biethnic individuals may struggle to negotiate and integrate their ethnic identity (Gibbs, 1987; Stonequist, 1937) and that an identity that acknowledges

and integrates both ethnic heritages is most adaptive for biethnic individuals (Gibbs, 1987; Poston, 1990; Root, 1999). Despite these notions, there are few empirical studies that have examined ethnic identity, and none to my knowledge that have examined ego identity or American identity, among biethnic individuals. As such, in Study 2 I examined the association of ego-social identity profiles with academic achievement among biethnic individuals. In addition, biethnic individuals are in the unique position to identify with multiple ethnicities in a way that is socially legitimate (Lopez, 2003). In other words, they can identify with their European American heritage, their Latino heritage, or as biethnic, and each of these labels is viewed as socially acceptable because biethnic individuals are a member of each group. Thus, the current study examined whether ego-social identity profiles differed based on preferred ethnic label (i.e., Latino only, European American only, or biethnic). Furthermore, the most salient identity domains are thought to hold importance for psychosocial outcomes, and ethnic salience has been shown to be linked to the ethnic composition of one's immediate environment (Kim-Ju, & Liem, 2003; Yip, 2005). As such, the association between ego-social identity profile and academic achievement may vary as a function of the ethnic composition of their college. Therefore, an additional goal of Study 2 was to examine the moderating role of the ethnic composition of one's college in the association between ego-social identity profile and academic achievement.

The studies in this dissertation contribute to the literature on ego identity and social group identity by taking a person-centered approach to examine these

identity domains in the context of one another. This approach enables us to examine the identity profiles that emerge from the data, rather than impose preconceived, and possibly inaccurate, notions about identity profiles on the data. This strategy gives scholars a more complete picture of the formation of identity domains in context of one another and how these domains are jointly associated with adjustment.

## **Study 1: Identifying Ego-Social Identity Profiles using Latent Profile**

### **Analysis**

Identity formation is a central developmental task for adolescents (Erikson, 1968) and emerging adults (Archer & Waterman, 1983; Arnett, 2000). Identity formation involves establishing autonomous values, beliefs, and personal characteristics in various identity domains including career, religion, gender, and ethnicity (Marcia, 1994). In addition, individuals must integrate identity domains that are central to their personality in a way that is consistent across time and context. Accomplishing these identity development milestones has been linked to positive psychosocial adjustment (Abu-Rayya, 2006; Waterman, 2007). Despite theoretical notions of the importance of identity integration across identity domains, little research has been conducted to examine multiple identity domains in context of one another, and none have explored the identity profiles that may emerge from a set of ego and social identity domains.

Important identity domains vary across individuals. In general, ego identity encompasses the general establishment of one's personal identity. This includes beliefs about the self, one's values, and personal conceptualizations about one's physical, psychological, and social characteristics and abilities (Erikson, 1968; Marcia, 1966). In addition to ego identity, individuals also navigate identity domains that are associated with their membership in social groups. Membership in marginalized social groups is thought to increase the salience of the identity domain associated with that membership (Tajfel, 1981). It follows that ethnic identity is a central identity domain among ethnic minorities.



Research has supported this notion, with ethnic minorities scoring higher on ethnic identity than their European American counterparts (Branch, Tayal, & Triplett, 2000). Conversely, national identity, in this instance American identity, appears to be more salient for European Americans than for ethnic minorities, and American identity appears to hold more significance for European Americans than ethnic identity (Rodriguez, Schwartz, & Whitbourne, 2010). Given that ethnic identity appears to be a central social identity domain among ethnic minorities, and that American identity represents a comparable social identity that appears to be salient among European Americans, the integration of these social identity domains with ego identity may hold significance for psychosocial outcomes.

A central goal of the current study was to use an empirical approach to identify the latent profiles that emerge from the three identity domains of ego identity, ethnic identity, and American identity among a sample of African American, European American, Latino, and Asian American college students. Given the empirical evidence for ethnic, sex, nativity, and age differences in identity formation and identity domain salience, differences based on these characteristics were assessed.

### **Ego Identity**

According to Eriksonian ego identity theory, identity formation takes place along two dimensions: exploration and commitment (Erikson, 1968). Individuals actively explore identity options and make commitments to beliefs, values, and personal characteristics which become the core of their ego identity.

Successful ego identity formation occurs when an individual has made identity commitments through the process of exploration. Individuals who have navigated this developmental task will have an identity that integrates various identity domains (e.g., ethnic identity and American identity) and that is consistent across identity domain and context.

Based on Erikson's (1959) notions of ego identity formation, Marcia (1966) proposed an ego identity typology using Erikson's notions of identity exploration and commitment. Specifically, Marcia proposed a two-by-two matrix that crossed identity exploration and commitment such that four identity statuses emerged. Individuals who score high on exploration and commitment are classified as having an achieved identity. This is suggested to be the most adaptive and mature identity status. Individuals who score high on exploration but low on commitment are in a state of identity moratorium. These individuals may still be in the process of arriving at an identity commitment and appear to be in in the crux of what Erikson (1968) referred to as identity crisis. Low levels of exploration and high levels of commitment are characteristic of individuals in identity foreclosure. Often, individuals with foreclosed identity have committed to an identity that has been socially assigned to them without first exploring other identity options or exploring the meaning the adopted identity. Finally, individuals who score low on exploration and commitment are classified as identity diffused. These individuals have not yet begun their identity work and are likely to be in pre-crisis in that they have yet to experience an event that causes them to evaluate their identity.

Marcia's (1966) ego identity typology has helped scholars of identity understand identity formation for the past several decades. Most empirical work on ego identity has applied Marcia's ego identity statuses to the data, rather than examining the identity profiles that emerge from the data. Applying these statuses without taking a person-centered approach can be limiting to our understanding of identity because there are theoretical arguments and empirical evidence that ego identity is more complex than is suggested by Marcia's ego identity typology. Archer and Waterman (1990) noted that a majority of adolescents and young adults fall into the less mature ego identity statuses of diffusion and foreclosure, and argued that there are within-status differences depending on the characteristics associated with each identity status. For example, the authors argued that some individuals are classified as ego identity diffused during a time when this is developmentally appropriate. For instance, depending on one's age, she may have not yet had an identity crisis. This individual might go on to explore identity, commit, and form an achieved ego identity at a developmentally appropriate age. Such an individual is likely to have a very different identity experience and resulting psychosocial adjustment than a person whose ego identity diffusion persists beyond young adulthood. As such, simply applying Marcia's ego identity typology may be limiting in the nuances that are likely to exist within each status.

Erikson's and Marcia's theories on ego identity are useful in giving researchers a framework from which to understand ego identity formation. It appears, however, that ego identity is more complex than these theories would

suggest when they are stringently applied to data. As such, one of the goals of the current study was to go beyond describing ego identity in terms of pre-determined identity statuses by taking a person-centered approach to examine the identity statuses that emerged from the data.

### **Social Group Identity: Ethnic Identity and American Identity**

A central dimension of identity is one's identity as a member of a social group (Tajfel, 1981). Membership in marginalized groups, such as ethnic minority groups, is theorized to be particularly salient. As such, ethnic identity is a salient dimension of identity for ethnic minority individuals. Research has supported this notion such that ethnic identity has been shown to be more salient for ethnic minority individuals than among their European American counterparts (Branch, 2001; Phinney & Alipuria, 1996).

Working from an Eriksonian framework, Phinney (1988) proposed that, like ego identity, ethnic identity can be viewed using two developmental components (i.e., exploration, and commitment). Similar to ego identity exploration, ethnic identity exploration involves exploring the role and meaning of one's ethnicity in their self-concept. Ethnic identity commitment refers to a stable internalization of the meaning that one attaches to his or her ethnic membership. Based on this framework, individuals can be categorized in Marcia's identity typologies with based on their ethnic identity exploration and commitment.

Like ethnic identity, American identity can hold importance in the social identity of youth and young adults in the United States. One study found that up

to 80% of adult respondents reported that being American was a central aspect of their identity (Huddy & Khatib, 2007). Huddy and Khatib also found that American identity is separate from political ideology, such that salience of American identity was unrelated to conservative or liberal political beliefs. Instead, American identity appeared to form in similar ways as other social identities, through experiences as a member of the group, regardless of differing beliefs among members of the group. In line with this finding, ethnic differences were not found in American identity. Findings regarding ethnic differences in American identity have been mixed, however. For example, Malin (2011) and Spencer (2011) suggested that ethnic differences in American identity are likely to exist, such that American identity may be more salient among European Americans than among ethnic minorities, due to ethnic minorities' experiences with American society (e.g., discrimination), and this notion has gained empirical support, such that European Americans reported feeling more American than did African Americans and Latinos (Rodriguez et al., 2010). Furthermore, American identity was positively associated with personal identity for European Americans only, whereas ethnic identity was negatively associated with American identity for African Americans and Latinos. As such, American identity appears to be an important identity domain for European Americans in particular and is associated with personal identity (i.e., ego identity) and ethnic identity in important ways among ethnic minorities.

### **Associations across Identity Domains**

Research has found associations between ego identity and ethnic identity. In addition, it appears that there are differences between ethnic minorities and European Americans in how ego identity and ethnic identity are associated. Branch and colleagues (2000) examined the association between ethnic identity and ego identity among adolescents from various ethnic backgrounds. Ethnic minorities scored higher than their European American counterparts on ethnic identity, but there were no ethnic differences on ego identity. Among Latinos and Asian Americans ethnic identity was negatively associated with total diffusion scores, such that the higher one scored on ethnic identity, the less likely he was to be categorized as ego identity diffused. Thus, it appears that ethnic identity achievement may serve a central role in ego identity achievement among Latinos and Asian Americans. Similarly, Miville, Koonce, Darlington, and Whitlock (2000) found a positive association between ego identity achievement and racial identity among African American college students and between ego identity achievement and cultural identity among Mexican American college students. Based on these studies, it appears that ego identity and social group identity are associated, and more specifically, that ego identity is associated with ethnic identity among ethnic minority individuals.

Scholars must strive to understand how these identity domains function jointly across ethnic groups because research suggests ethnic differences in how identity domains are associated with psychosocial outcomes. St. Louis and Liem (2005) examined the association between ethnic identity and ego identity status among an ethnically diverse sample of college students. Individuals who scored

as ego identity diffused scored lower on ethnic identity than did those who were classified as ego identity achieved, foreclosed, or moratorium. Ego identity was positively associated with psychosocial well-being regardless of ethnicity, but ethnic identity was associated with psychosocial well-being only among ethnic minorities. Among ethnic minority participants, ego identity moratorium was shown to be maladaptive, as it was associated with poor psychosocial adjustment. This study highlights the importance of ego identity formation for young adults' psychosocial well-being, regardless of ethnicity and the importance of ethnic identity for ethnic minority young adults' psychosocial well-being. Furthermore, it appears that the association between identity and psychosocial well-being varies as a function of ethnicity beyond differences in the salience of identity domains. Specifically, ego identity moratorium is viewed as one of the more adaptive and mature statuses of identity (Marcia, 1966); however, this study suggests that ego identity moratorium is maladaptive among ethnic minority young adults. St. Louis and Leim (2005) suggested that this finding may be related to the fact that ethnic minority college students are facing a new context in which their opportunities related to ego identity (e.g., job choices, personal beliefs and values) are restricted and the exploration of their identity is impeded. An alternative explanation is that personal ideologies that are derived in part from one's culture of origin can conflict in a particularly salient way when one enters college. As such, ethnic minority students in particular may be experiencing dissonance between their personal ideologies and the mainstream ideologies that they

encounter in college. Thus, the association and relative importance of ego identity and ethnic identity may be particularly complex among ethnic minorities.

### **Group Differences in Ego-Social Identity Profiles**

In addition to the evidence for ethnic differences within identity domains, theory and research suggests differences in identity structure and formation based on sex, nativity, and age. First, sex differences in identity structure and domain salience have emerged from the literature. Specifically, women are more likely to have an achieved ego identity and men are more likely to have a diffused or foreclosed ego identity (Archer, 1989; Lewis, 2003). In addition, scholars have suggested that identity may be more closely linked to social relationships for females than for males (Archer, 1989; Thorbecke & Grotevant, 1982). Females have also been shown to report higher levels of ethnic identity compared to males (Umaña-Taylor, Gonzales-Backen, & Guimond, 2009). Second, ego-social identity profiles may differ based on nativity given that generational status has been found to predict ethnic identity via familial ethnic socialization among Latino adolescents (Umaña-Taylor et al., 2009). Similarly, American identity may be less salient for individuals born outside of the U.S. than for those born within the U.S. because they may feel like outsiders due to experiences with discrimination or due to close ties to their country of origin. Finally, Erikson (1968) and Marcia (1966) suggested that identity formation is a developmental process that takes place over time. Empirical evidence supports the notion of ego identity (Kroger, Martinussen, & Marcia, 2010) and ethnic identity (Meeus, 2011)



as progressing toward more mature identity statuses over time. Therefore, ego-social identity profiles were expected to differ as a function of age.

### **Research Questions**

Given extant theory and research, the current study addressed the following research questions: (1) What are the ego-social identity profiles that emerge among young adult college students? and (2) Do ego-social identity profiles differ as a function of ethnicity, sex, age, or nativity? With regard to the first research question, it was expected that profiles would emerge in which specific identity domains were dominant. Regarding the second research question, the domains that were most salient were expected to depend on ethnicity, sex, nativity, and age. Specifically, it was predicted that ethnic minorities and foreign-born individuals were more likely to have ego-social identity profiles in which ethnic identity was most salient, compared to European Americans and U.S.-born individuals, respectively, and that American identity would be most salient among European Americans. Females were expected to be more likely than males to have ego-social identity profiles in which more emphasis was given to social identity than ego identity. Finally, older individuals were expected to have more mature ego-social identity profiles that were characterized by higher levels of exploration and commitment, and more integration across identity domains.

### **Method**

#### **Participants**

Data for the current study were from a larger study that included 10,573 college students from 30 universities across the U.S. (Zamboanga et al., 2010). Given the focus of the current study on identity among emerging adults, the current sample was restricted to participants who were between the ages of 18 and 25 years of age at the time of participation ( $n = 9,697$ ). In addition, participants who reported being of multiple ethnic heritages (based on participant reports of their parents' ethnicity;  $n = 813$ ) were excluded from the current study because their ethnic identity and American identity may develop and be related to one another in unique ways, making their ego-social identity profiles different in structure from those of their mono-ethnic peers. Those who identified as Middle Eastern ( $n = 97$ ) and those who did not specify an ethnic group ( $n = 70$ ) were excluded from the study due to small sample sizes. Thus, the final sample for the current study consisted of 8,717 emerging adults ( $M$  age = 19.77,  $SD = 1.61$ ). The majority of participants were female (72.6%;  $n = 6,327$ ), 27.1% ( $n = 2,359$ ) were male, and .4% ( $n = 31$ ) did not specify their sex. Participants were classified into an ethnic group based on their reports of their parents' ethnicities. The ethnic breakdown was as follows: 64.5% European American ( $n = 5,622$ ), 14.0% Asian American ( $n = 1,222$ ), 13.1% Latino ( $n = 1,142$ ), and 8.4% African American ( $n = 731$ ). Eighty-seven percent ( $n = 7,584$ ) of participants were born in the U.S.

## **Procedure**

Undergraduate college students at 30 U.S. universities were invited via printed, emailed, and in-class announcements to complete an online survey. Participants were directed to the online survey through the recruitment materials

and took the survey on their own time in a private setting. Data collection sites were diverse with regard to type of institution (e.g., large and small private universities and state universities) and setting (e.g., urban and suburban). The survey took approximately two hours to complete and participants received either course credit or entry into a drawing for a prize in compensation for participating.

## **Measures**

**Ego identity.** The identity subscale of the Erikson Psychosocial Stage Inventory was used to measure ego identity (EPSI; Rosenthal, Gurney, & Moore, 1981). The EPSI includes 12 items that assess ego identity integration (6 items; e.g., “I’ve got a clear idea of what I want to be.”) and ego identity confusion (6 items; e.g., “I change my opinion of myself a lot.”). Participants responded to statements on a 5-point Likert scale with end points of 0 (*strongly disagree*) and 4 (*strongly agree*). The subscales of ego identity integration and ego identity confusion were used as separate indicators of latent ego-social identity profiles and were coded such that higher scores indicated more ego identity integration and ego identity confusion, respectively. The EPSI has shown good reliability across ethnic groups (Rodriguez et al., 2010). In the current sample, the alpha coefficients for the EPSI subscales of integration and confusion were .81 and .79, respectively (see Table 1 for alpha coefficients for specific participant groups).

**Ethnic identity.** Ethnic identity was assessed using the exploration and commitment subscales of the Multi-group Ethnic Identity Measure (MEIM; Phinney, 1992). The MEIM assesses two components of ethnic identity: exploration (5 items; e.g., “I have spent time trying to find out more about my

ethnic group, such as its history.”) and commitment (7 items; e.g., “I have a clear sense of my ethnic background and what it means for me.”). Participants were asked to respond to 12 statements on a 5-point Likert scale with end-points of 1 (*strongly disagree*) and 5 (*strongly agree*). The MEIM is scored such that higher scores indicate more ethnic identity exploration and higher levels of ethnic identity commitment. The subscales of exploration and commitment were used as separate indicators of ego-social identity latent profiles in the current study. This measure has demonstrated good reliability in samples of adolescents and young adults of various ethnic groups (Ponterotto, Gretchen, Utsey, Stracuzzi, & Saja, 2003). The MEIM has good reliability in the current sample, with alpha coefficients of .78 and .92 for exploration and resolution, respectively (see Table 1 for alpha coefficients for specific participant groups).

**American identity.** An adapted version of the MEIM (MEIM-A; Schwartz et al., in press) was utilized to examine American identity. As with the original MEIM, the MEIM-A includes two subscales. Exploration examines the extent to which individuals have examined their identity as an American (5 items; e.g., “I have spent time trying to find out more about the United States, such as its history.”). Commitment examines the extent to which individuals have a clear sense of what their American identity means and how positively they feel about that identity (7 items; e.g., “I have a clear sense of the United States and what it means to me.”). Participants were asked to respond to 12 statements on a 5-point Likert scale with end-points of 1 (*strongly disagree*) and 5 (*strongly agree*). Higher scores in the MEIM-A indicate more exploration of one’s American

identity and a clearer and more positive sense of American identity. As with ethnic identity, the current study utilized the subscales of exploration and commitment as separate indicators of ego-social identity profiles. The MEIM-A was shown to have the same factor structure as MEIM, and this structure was equivalent across ethnic groups. Furthermore, the MEIM-A performed well on tests of reliability and validity (Schwartz et al., in press). The alpha coefficients in the current study were .73 and .93 for exploration and commitment, respectively (see Table 1 for alpha coefficients for specific participant groups).

## **Results**

Preliminary analyses were performed to examine the distribution and bivariate associations of all study variables. Each study variable was adequately normally distributed, as indicated by skew of less than 2 and kurtosis less than 7 (West, Finch, & Curran, 1995). These indices of normality were consistent across ethnicity, gender, and nativity. Bivariate correlations were in the expected directions (see Table 2) and consistent across ethnicity, gender, and nativity.

### **Latent Profile Analysis**

In order to address the research question concerning what ego-social identity profiles emerge from ego identity, ethnic identity, and American identity, latent profile analysis (LPA) was performed. LPA is a person-centered analytic strategy that identifies categorical profiles that emerge from the data based on a set of continuous indicators (Muthén & Muthén, 2000). The indicators of the latent profiles were ego identity integration, ego identity confusion, ethnic identity exploration, ethnic identity commitment, American identity exploration, and

American identity commitment. A series of models were specified requesting an additional profile in each subsequent model. Models were compared using the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR). Models with additional profiles were fit to the data until the VLMR was non-significant (VLMR  $p > .05$ ), indicating that the inclusion of an additional profile did not improve model fit, and the more parsimonious model (i.e., the model with fewer profiles) should be accepted. Models were also evaluated using Akaike's information criterion (AIC), Bayesian information criterion (BIC), and the adjusted Bayesian information criterion (ABIC). Decreases in each of these information criteria indicate an improvement in model fit (Lubke & Muthén, 2005). Missing data were handled using full information maximum likelihood estimation in all models.

Results indicated that an eight-profile solution was the best fit to the data (see Table 3). The ego-social identity profiles were interpreted based on estimates of the within-profile means compared to the total sample mean of each indicator, utilizing theory and research as a framework (see Table 4 and Figure 1). Results suggested that there were unique ego-social identity profiles and that these profiles were complex in that specific identity domains were more salient in some profiles than in others. The first profile, labeled *Pre-encounter*, included individuals who seemed to have not begun their identity work given their markedly low levels of each identity domain indicator. Specifically, the Pre-encounter profile was characterized by levels of ethnic identity exploration and commitment, American identity exploration and commitment, and ego identity

integration that were all more than one standard deviation below the sample mean of each respective indicator and ego identity confusion that was above the sample mean. A similar profile, labeled *Approaching*, emerged that was also generally low on all identity domains, but not as low as the Pre-encounter profile.

Individuals in the *Approaching* profile may be moving toward beginning their identity work, in that they have low levels of all indicators, but higher levels than the Pre-encounter profile. The *Approaching* profile was characterized by levels of ethnic identity exploration and commitment, American identity exploration and commitment, and ego identity integration that were less than one standard deviation below the sample mean of each indicator. In addition, the *Approaching* profile had ego identity confusion that was above the sample mean.

Several profiles emerged in which one social identity profile was more salient than the other. One such profile, labeled *Bicultural-ethnic*, was characterized by levels of ethnic identity exploration and commitment and ego identity confusion that were above the sample means, American identity exploration that was similar to the sample mean, and levels of American identity commitment and ego identity integration that were below the sample mean. As such, ethnic identity appears to be most salient for individuals in this profile. Given the level of American identity exploration, individuals in the *Bicultural-ethnic* profile may be moving toward moratorium in that domain indicating progression toward a profile in which identity is bicultural, but ethnic identity is more salient. This progression toward American identity moratorium is supported by higher levels in ego identity confusion, which suggests that these individuals

may be questioning parts of their identity. A similar profile, labeled *Ethnic-focused*, also had levels of ethnic identity exploration and commitment that were above the sample means, levels of American identity exploration and commitment and ego identity integration that were below the sample means, and ego identity confusion that was similar to the sample mean. The notable difference between the Ethnic-focused and Bicultural-ethnic profiles was that levels of American identity exploration and commitment were markedly lower in the Ethnic-focused profile compared to the Bicultural-ethnic profile. As such, it appears that in addition to ethnic identity being salient in the Ethnic-focused group, American identity is not a central domain for their self-concept.

Two profiles emerged in which American identity appeared to be more salient than ethnic identity. First, *Bicultural-American* had levels of American identity exploration and commitment that were above the sample means, whereas ethnic identity exploration and commitment were below the sample means. Levels of ego identity integration and confusion in the Bicultural-American profile were similar to sample means. Although levels of ethnic identity exploration and commitment were below the sample mean among the Bicultural-American group, they were approaching mean levels. Thus, this group appears to have a somewhat bicultural identity profile, but American identity is the more salient social identity domain. A second profile, labeled *American-focused*, had the lowest levels of ethnic identity exploration and commitment compared to all other profiles. In addition, these estimates of ethnic identity exploration and commitment were more than one standard deviation below the sample means. The



American-focused profile also had American identity commitment that was above the sample mean, and levels of American identity exploration, and ego identity integration and confusion that were similar to the sample means.

One profile emerged in which individuals were foreclosed in both social identity domains, in that they were low on exploration but high on commitment within a domain. As such, this profile was labeled *Bicultural-foreclosed*. Specifically, the Bicultural-foreclosed profile had levels of ethnic identity exploration, American identity exploration, and ego identity confusion that were below the sample means, and levels of ethnic identity commitment, American identity commitment, and ego identity integration that were above the sample means. The final profile was labeled *Integrated*, due to the generally high levels of identity achievement (i.e., high exploration and high commitment within an identity domain) across identity domains. Specifically, this profile was characterized by the highest levels of ethnic identity exploration and commitment, American identity exploration and commitment, and ego identity integration compared to all other profiles, and ego identity confusion that was below the sample mean.

### **Group Differences and Covariates of Profile Membership**

Group differences and covariates of profile membership were examined using a class analysis strategy. A class analysis strategy assigns each case to a categorical profile indicator based on membership probabilities. A class analysis strategy for follow up analysis is considered appropriate if entropy is greater than .80 (Muthén & Muthén, 2000). Entropy is a measure of the stability of latent

profiles. In the event that entropy is below .80, it is advised that separate LPA models are run for the groups of interest to examine the stability of profiles across groups and if stability occurs, one can proceed with a class analysis approach (B. Muthén, personal communication, January 26, 2012). Because entropy for the accepted model was below .80, separate LPA models were run for each group to examine the structure of the latent profile solution, and a class analysis was also performed for the purpose of comparison. The solutions for the separate groups were consistent with findings using the class analysis strategy. Specifically, the profiles that emerged when LPA models were run for separate groups reflected the profiles that those groups were most likely to be categorized in when using a class analysis strategy. Accordingly, the class analysis results are presented here in the interest of parsimony.

**Ethnic differences.** Differences in ego-social identity profiles across ethnic groups were examined using chi-square analysis. Results indicated that cell proportions in an ego-social identity profile by ethnicity table significantly differed,  $\chi^2(21) = 775.95, p < .001$ . Ethnic differences for each ego-social identity profile were assessed by examining post-hoc tests of proportion differences within a given social profile (see Table 5). A Bonferroni correction of lowering the alpha of .05 to .001 was made to reduce the likelihood of committing a Type I error, given the number of comparisons made. There were no ethnic differences in the Pre-encounter profile. Asian Americans were significantly more likely to have an Approaching ego-social identity profile, compared to all other ethnic groups. Significant ethnic differences emerged in the Bicultural-ethnic profile

such that a greater proportion of African Americans and Asian Americans were classified in this profile, compared to European Americans and Latinos, and Latinos were more likely to be classified in this profile compared to European Americans. European Americans were significantly less likely to be categorized in the Ethnic-focused ego-social identity profile, compared to all other ethnic groups. Conversely, more European Americans had Bicultural-American or American-focused profiles, compared to all other ethnic groups. A greater proportion of Latinos were categorized as Bicultural-American, compared to African Americans. African Americans were least likely to have an American-focused profile, compared to all other ethnic groups. Latinos were most likely to have a Bicultural-foreclosed profile, compared to all other ethnic groups. Finally, African Americans were more likely than Asian Americans and Latinos to be classified as Integrated, whereas Asian Americans were the least likely to be classified in this profile, compared to all other ethnic groups.

**Sex differences.** Differences in ego-social identity profiles by sex were assessed using chi-square analysis. Results indicated that proportions of cases that were classified in each ego-social identity profile significantly differed by sex,  $\chi^2(7) = 30.18, p < .001$ . Sex differences within each ego-social identity profile were assessed by examining post-hoc tests of proportion differences within a given ego-social identity profile (see Table 5). A Bonferroni correction of lowering the alpha of .05 to .006 was made to account for the inflation of Type I error due to the number of comparisons made. Proportions of males and females differed for the Ethnic-focused profile such that females were more likely than

males to have this ego-social identity profile. Similarly, more females were classified as Bicultural-foreclosed, compared to males. Finally, males were more likely than females to have an Integrated ego-social identity profile. There were no sex differences for the other ego-social identity profiles.

**Nativity differences.** Differences in ego-social identity profiles by nativity were assessed using chi-square analysis. Results indicated that the proportion of cases that were categorized in each ego-social identity profile significantly differed by nativity,  $\chi^2 (7) = 500.27, p < .001$ . Nativity differences within each ego-social identity profile were assessed by examining post-hoc tests of proportion differences within a given profile (see Table 5). A Bonferroni correction of lowering the alpha of .05 to .006 was made to control for Type I error inflation due to the number of comparisons made. A higher proportion of individuals who were born outside of the U.S. were classified as Pre-encounter, Bicultural-ethnic, and Ethnic-focused, compared to their U.S.-born counterparts. U.S.-born individuals were more likely than their foreign-born counterparts to be categorized as Bicultural-American, American-focused, Bicultural-foreclosed, and Integrated.

**Age differences.** Age differences across ego-social identity profiles were tested using one-way ANOVA. Results indicated that age differed across ego-social identity profiles  $F (7, 8514) = 4.16, p < .001$ . Post-hoc comparisons were examined, employing a Bonferroni adjustment of lowering the alpha of .05 to .002 to account for the number of comparisons. Post-hoc comparisons indicated that the American-focused profile was the youngest, compared to the Pre-

encounter, Bicultural-ethnic, and Bicultural-foreclosed profiles (see Table 6). There were no other significant differences in age across ego-social identity profiles.

## **Discussion**

The current study was designed to address several limitations in the extant research on identity. Namely, multiple identity domains (i.e., ethnic identity, American identity, and ego identity) were examined together to explore the latent ego-social identity profiles that emerged. The results suggested eight unique ego-social identity profiles that differed in relative salience and developmental status of identity domains. In addition, the current study examined ego-social identity profile differences based on ethnicity, sex, nativity, and age. Results indicated several significant differences that partially supported the hypotheses. Taken together, the results of this study support and extend current theory and research on identity formation by highlighting the complexity in latent identity profiles that emerges when multiple identity domains are jointly considered.

### **Ego-Social Identity Profiles**

The first goal of the present study was to identify the latent ego-social identity profiles that emerged from the identity domains of ethnic identity, American identity, and ego identity. It was expected that several profiles would emerge that differed in the relative salience of each identity domain. The results supported this notion in that ethnic identity was most salient in some of the ego-social identity profiles and American identity was most salient in other profiles. Specifically, ethnic identity was more salient than American identity in the

Bicultural-ethnic and Ethnic-focused profiles and American identity was more salient than ethnic identity in the Bicultural-American and American-focused profiles. The emergence of these profiles supports previous research that has demonstrated differences in salience and development across identity domains (Kroger & Haslett, 1991; Solomontos-Kountouri & Hurry, 2008). In addition to the four ego-social identity profiles in which there were salience differences across identity domains, several profiles emerged in which salience of ethnic identity and American identity were similar. Ethnic identity and American identity were generally low in salience in the Pre-encounter and Approaching profiles, and highly salient in the Integrated profile.

The levels of ego identity integration and confusion within the ego-social identity profiles can provide additional understanding for how ethnic identity and American identity are associated. First, although several profiles demonstrated differences in salience across social identity domains, levels of ego identity integration and confusion were near the sample mean in these profiles. As such, individuals with an Ethnic-focused, Bicultural-American, or American-focused profile seemed to have adequately integrated their ego identity, despite differences in salience across identity domains. This finding lends support to the notion that individuals build their ego identity around salient identity domains (Grotevant, 1987) such that differences in social identity salience did not inhibit ego identity integration. It is possible that individuals with these types of ego-social identity profiles build their ego identity on the social identity that is most central to their self-concept.

Conversely, individuals in the Bicultural-ethnic profile had lower levels of ego identity integration and higher levels of ego identity confusion. This pattern may stem from the fact that this profile was also the most biculturally oriented profile such that these individuals exhibited salient ethnic identity and levels of American identity that were approaching moratorium (i.e., high exploration, low commitment). Individuals with this ego-social identity profile may be struggling with ego identity integration because they may be experiencing conflict between ethnic identity and American identity, given that both social identity domains are relatively salient. Phinney (1993) suggested that integration across social identity domains would be most difficult when the social reference groups differ in norms and values, and research has demonstrated a tendency for individuals to view American identity and ethnic identity as being at odds with one another (Rodriguez et al., 2010; Spencer, 2011). Accordingly, individuals with a Bicultural-ethnic profile may have a more difficult time with ego identity integration than do individuals with other ego-social identity profiles.

The ego identity integration and confusion of ego-social identity profiles in which identity salience is similar for ethnic identity and American identity lends further support for the theoretical notion that salient identity domains, such as ethnic identity and American identity, make up a foundation for ego identity formation (Kroger, 1993). Notably, in both of the profiles in which levels of ethnic identity and American identity were low (i.e., Pre-encounter and Approaching), ego identity integration was low and ego identity confusion was high. Perhaps these individuals had not begun identity work in the social identity

domains on which they would build their ego identity. In line with this pattern, levels of ego identity integration were high and levels of ego identity confusion were low in the Integrated profile, suggesting that these individuals were able to integrate their personal identity, possibly based on the salient social identity domains of ethnic identity and American identity.

The ego-social identity profiles that emerged in this study also lend partial support to theoretical notions of identity formation such as Marcia's identity statuses that are based on levels of identity exploration and commitment (i.e., diffused, foreclosed, moratorium, and achieved; Marcia, 1966). Several of the ego-social identity profiles demonstrated identity statuses that were consistent across identity domains. First, the Pre-encounter and Approaching profiles could be considered to have a diffused identity status in ethnic identity and American identity, such that these profiles had low levels of exploration and commitment in both of these identity domains. In addition, these profiles had low levels of ego identity integration and high levels of ego identity confusion, giving additional support to a diffused identity status. Another ego-social identity profile emerged, Bicultural-foreclosed, in which individuals were foreclosed in terms of their ethnic identity and American identity such that they reported low levels of exploration and high levels of commitment in both of these identity domains. Interestingly, the Bicultural-foreclosed profile also had high levels of ego identity integration and low levels of ego identity confusion despite having what theoretically has been thought to be a less developed identity status in other domains. It is possible that individuals in this profile have higher levels of ego



identity integration because they have not explored their ethnic identity or American identity. Identity exploration is often preceded by a feeling of dissonance between one's identity and the social responses they receive from others, known as an identity crisis (Erikson, 1968). As such, high levels of ego identity integration may be present prior to identity exploration. Alternatively, Bicultural-foreclosed may be related to a bicultural identity type that Ramirez (1983) called synthesized multicultural. Individuals with this type of multicultural orientation are able to integrate into multiple cultural contexts and feel accepted by individuals in each cultural context. This feeling of acceptance by individuals in each social reference group may lead to less need to explore these social identity domains before committing to them and may lead to higher levels of ego identity integration. Finally, individuals with an Integrated profile would be considered to have an achieved identity in each social identity domain such that they had explored and committed to their ethnic identity and American identity. Achieved identity status is posited to be the most mature identity status (Marcia, 1966) and this is supported given that the Integrated profile had the highest levels of ego identity integration compared to the other profiles and low levels of ego identity confusion.

The results of the current study highlight the need to examine multiple domains of identity, given that several ego-social identity profiles emerged in which individuals had different identity statuses across domains. The emergence of these profiles with differing identity statuses across identity domains is consistent with notions that identity formation takes place at different rates across

identity domains (Grotevant, 1993; Kroger & Haslett, 1991; Solomontos-Kountouri & Hurry, 2008), supports research that has demonstrated ethnic identity and American identity to be inversely associated (Rodriguez et al., 2010), and highlights the importance of examining multiple identity domains in context of one another. Other profiles in the current study suggest that salient identity domains such as ethnic identity and American identity form the foundation for ego identity formation such that levels of ego identity were low (i.e., low integration and high confusion) in the Pre-encounter and Approaching profiles in which ethnic identity and American identity were diffused. Conversely, levels of ego identity were high in the Integrated profile in which ethnic identity and American identity were achieved. As such, ego identity formation may include negotiation of other identity domains such as ethnic identity and American identity.

### **Ethnic Differences**

A second goal of this study was to examine group differences in ego-social identity profile membership based on ethnicity, sex, and nativity. Consistent with the hypothesis, ethnic minorities were more likely than European Americans to have an ego-social identity profile in which ethnic identity was more salient and European Americans were most likely to have an ego-social identity profile in which American identity was more salient. Specifically, European Americans were most likely to have a Bicultural-American or American-focused profile, compared to all other ethnic groups. African Americans, Asian Americans, and Latinos were all more likely to have a

Bicultural-ethnic or Ethnic-focused profile, compared to European Americans. The finding that ethnic minorities are more likely to have an ego-social identity profile in which ethnic identity is most salient compared to American identity is consistent with social identity theory which suggests that social group identities are most salient when the social group is marginalized (Tajfel, 1981). Social identity theory holds that individuals who are members of marginalized social groups (e.g., minority groups) will be more motivated to form a positive identity that is associated with the social group as a means to protect their self-esteem. Accordingly, ethnic identity would be expected to be most salient for ethnic minorities. This finding is also in line with previous research that has shown ethnic identity to be more salient for ethnic minorities, compared to European Americans (Branch, 2001; Brach et al., 2000; Phinney & Alipuria, 1996).

Ego-social identity profiles in which American identity was most salient (e.g., Bicultural-American and American-focused) were most prevalent among European Americans. This finding supports scholars' speculations that American identity is more salient among European Americans than among ethnic minorities due to ethnic minorities' experiences with discrimination (Malin, 2011; Spencer, 2011). Discrimination can include biases that characterize ethnic minorities, particularly Asian Americans, as perpetual foreigners and thus, less American (Kim, Wang, Deng, Alvarez, & Li, 2011). Thus, experiences with discrimination may cause ethnic minorities to embrace their ethnic identity above their American identity.

Ethnic differences in the profiles of Bicultural-ethnic, Ethnic-focused, Bicultural-American, and American-focused also suggest ethnic differences in ego identity. Ego identity integration was somewhat higher and confusion lower in American-oriented profiles compared to profiles that were higher in ethnic identity. Given that European Americans were more likely to have an American-oriented profile, this finding supports previous research that found ego identity to be higher among European Americans, compared to ethnic minorities (Streitmatter, 1988). Perhaps familistic values and a collectivistic culture, particularly among Asian Americans and Latinos, lead to an ego-social identity profile in which social group identity (i.e., ethnic identity) is emphasized over personal identity (i.e., ego identity).

Ethnic differences also emerged in profiles in which one identity domain was not more salient than another. First, a higher proportion of Asian Americans had an Approaching ego-social identity profile compared to other ethnic groups. There is some empirical evidence that suggests that ethnic identity is less salient for Asian Americans, compared to other ethnic minorities (Brach et al., 2000; Kiang & Fuligni, 2009). Perhaps ethnic identity is more closely associated with family obligation than with a search for a personal self-concept among Asian Americans. In addition, Asian Americans may be more likely to experience the perpetual foreigner stereotype (Cheryan & Monin, 2005) compared to other ethnic groups given the history of systematic discrimination in U.S. immigration laws that denied citizenship to Asian immigrants (Gardner, Robey, & Smith, 1985). Discrimination such as the perpetual foreigner stereotype may lead to lower levels

of American identity because this type of discrimination emphasizes the stereotype that Asian Americans are not American. Thus, the relatively low ethnic identity salience, combined with discriminatory experiences such as the perpetual foreigner stereotype may be reflected in the Approaching profile. Furthermore, these identity domains may be particularly difficult for Asian Americans to integrate within their ego identity, given that they are contradictory in this instance due to discriminatory experiences (Phinney, 1993).

Another significant ethnic difference was that Latinos were more likely than all other ethnic groups to have a Bicultural-foreclosed ego-social identity profile. The prevalence of this profile among Latinos may stem from familism, a cultural value considered to be central among Latino families (Sabogal, Marin, & Otero-Sabogal, 1987). Latinos may be particularly likely to derive their identity from their family relationships. As such, they may do less identity exploration in identity domains that are closely linked to culture, because they have committed to this identity based on familistic values. Furthermore, although identity foreclosure has been viewed as a less mature and non-adaptive identity status (Marcia, 1966), individuals in the Bicultural-foreclosed profile appear to be doing well in terms of their ego identity such that integration is high and confusion is low. Perhaps this is the result of positive identity formation via one's familial values. Identity formation in this context may lead to a more adaptive form of foreclosure that Archer and Waterman (1990) referred to as open foreclosure. Individuals in this identity status are comfortable in their identity commitment and do not feel the need to explore identity options.

Finally, African Americans were most likely to have an Integrated ego-social identity profile, compared to Asian Americans and Latinos. It is possible that African Americans face less conflict between their ethnic identity and American identity, making it easier to integrate these two identity domains with one another and ego identity. For instance, given the nature and recency of Latino and Asian American immigration compared to African Americans' arrival in the U.S., Latinos and Asian Americans may experience the perpetual foreigner stereotype more often than African Americans, making it more difficult for these ethnic groups to integrate their ethnic identity and American identity, and leading to lower ego identity integration and higher ego identity confusion.

### **Sex Differences**

The present study also examined sex differences in ego-social identity profile membership. It was expected that females would be more likely than males to focus on social identity domains. The results partially supported this notion in that females were more likely than males to have an Ethnic-focused or a Bicultural-foreclosed profile. Ethnic identity is the most salient identity domain in the Ethnic-focused profile, whereas American identity and ego identity are less salient in this profile. The finding that females are more likely to have an Ethnic-focused profile reflects previous empirical evidence that females have higher levels of ethnic identity (Umaña-Taylor et al., 2009). The reason for the sex difference in the Bicultural-foreclosed profile is less clearly reflected in previous theory or research, given that females have been found to have more mature ethnic identity statuses. The Bicultural-foreclosed profile does have relatively

high levels of ego identity, however, such that integration is high and confusion is low. As such, this finding supports previous findings that females are more likely to have an achieved ego identity, compared to males (Archer, 1989; Lewis, 2003). Perhaps females in the Bicultural-foreclosed profile have foreclosed ethnic identity and American identity statuses because they have internalized cultural and familial expectations of females' role to pass cultural values to subsequent generations (Thornton, Chatters, Taylor, & Allen 1990).

Another surprising sex difference that emerged in the current study was that males were more likely than females to have an Integrated profile. Again, this is contrary to previous research that suggests that females are more likely than males to have achieved ego identity (Archer, 1989; Lewis, 2003) and ethnic identity statuses (Umaña-Taylor et al., 2009). Again, this finding highlights the importance of examining latent profiles based on multiple identity domains. It is possible that females have higher levels of each identity domain overall, however, the latent profiles suggest that females are less likely to have an achieved identity in all domains simultaneously. It is possible that this may result from females' status as a double minority in some cases. Specifically, ethnic minority females must navigate their identity as a member of an ethnic minority group and as a female, both of which are marginalized groups. As such, formation of some social identity domains may be delayed as females focus on other identity domains such as gender identity. Future research should examine how other identity domains including gender identity fit into latent identity profiles, and whether there are sex-ethnic interactions in profile membership.

## **Nativity Differences**

Given the identity domains of interest in the current study, differences by nativity were also examined. It was expected that individuals born in the U.S. would have ego-social identity profiles in which American identity was most salient and individuals born outside of the U.S. would have ego-social identity profiles in which ethnic identity was most salient. Results supported this hypothesis in that individuals born in the U.S. were more likely than their foreign-born counterparts to have a Bicultural-American or American-focused profile. Further, participants who were born outside of the U.S. were more likely than their U.S.-born counterparts to have a Bicultural-ethnic or Ethnic-focused profile. This finding is consistent with previous research that has demonstrated a link between generational status and ethnic identity via familial ethnic socialization such that more recent generational status was associated with higher levels of ethnic identity (Umaña-Taylor et al., 2009). It is likely that individuals who were born outside of the U.S. maintain closer ties to their country of origin and thereby, their culture. As such, these individuals have more opportunities to explore their ethnicity. Conversely, individuals born in the U.S. may be more acculturated and therefore, their American identity is more salient than their ethnic identity.

Additional differences in ego-social identity profile by nativity emerged. Specifically, U.S.-born individuals were more likely than foreign-born individuals to have a Bicultural-foreclosed or Integrated profile and less likely to have a Pre-encounter profile. These differences may be the result of conflicting identity domains. Phinney (1993) suggested that integration across identity domains will



be more difficult when the social groups associated with the identity domains have differing values, norms, or beliefs. In this instance, ethnic identity and American identity may have opposing characteristics for foreign-born individuals who may be more likely to have close ties to their country of origin and may be more enculturated than their U.S.-born counterparts. This notion is supported by the pattern of ego identity in the profiles that were most prevalent among foreign-born participants compared to U.S.-born participants. Specifically, ego identity integration is low and confusion is high in the profiles of Pre-encounter and Bicultural-ethnic. Thus, differences in norms and culture between the U.S. and one's culture of origin may be particularly relevant for foreign-born individuals, leading to more difficulty in integrating these social identity domains into their ego identity.

### **Age Differences**

Finally, this study examined differences in ego-social profile membership based on age. It was expected that individuals who had ego-social identity profiles in which identity domains demonstrated a more mature identity status would be older. This hypothesis was not supported in that the American-focused profile was the youngest compared to the Pre-encounter, Bicultural-ethnic, and Bicultural-foreclosed profiles. No other age differences emerged. This finding conflicts with previous identity theory and research that has suggested that individuals will become more mature in their identity status over time (Erikson, 1968; Kroger et al., 2010; Marcia, 1966; Meeus, 2011). Although this difference was statistically significant, it may be an artifact of the current study, given the

large sample size, and the fact that the difference in age was relatively small between the American-focused profile and other profiles (e.g., about 6 months). As such, it is not clear if this is a developmentally meaningful age difference.

It is possible, however, that there is a valid difference in age between the American-focused profile and the Pre-encounter, Bicultural-ethnic, and Bicultural-foreclosed profiles. This difference may be the result of high school students having more opportunities to explore their American identity compared to their ethnic identity in structured ways such as in a U.S. history course. As such, American identity may have been more salient to younger participants due to recent previous identity work in this domain. In addition, younger individuals may have been in a more ethnically homogenous environment before entering college. Thus, prior to entering college, which may be a more ethnically diverse context, individuals may have experienced little conflict between ethnic identity and American identity based on norms and values. This lack of dissonance between social identity domains may partially explain the higher ego identity for the younger profile (i.e., American-focused). Further, given that ethnic identity has been shown to be more salient in more ethnically diverse settings (Umaña-Taylor, 2004), these individuals may begin identity work on ethnic identity as they spend more time in more diverse settings.

### **Limitations and Future Directions**

Although the current study addressed several limitations in the identity literature, it is not without limitations. First, the study was cross-sectional. As such, longitudinal change in ego-social identity profiles cannot be explored. This

limitation is somewhat addressed through the inclusion of age as a covariate of ego-social identity profiles, however, because this analytic strategy was cross-sectional, inferences about identity change over time cannot be made. Furthermore, the current study examined ego-social identity profiles within a relatively small age range (i.e., 18-25 years). It is possible that more age differences were not observed because participants had already completed most of their identity work, given that most identity development occurs during adolescence (Erikson, 1968).

A second limitation of the current study was generalizability. All of the participants were college students, and therefore, findings cannot be generalized to all young adults in the U.S. The current sample, however, was recruited from a diverse set of universities. Recruitment sites included private and public institutions, and campuses located in urban and suburban locations. Thus, although generalizability was restricted to college students, the sample was quite diverse in terms of the general college student population in the U.S.

Overall, this study highlights the importance of jointly examining multiple identity domains in that complex ego-social identity profiles emerged and that membership in these profiles varied by ethnicity, sex, nativity, and age. Thus, future research on identity formation should continue to extend this work to incorporate other identity domains such as gender, occupational, and religious identity. In addition, it will be important for scholars to explore latent ego-social identity profiles using longitudinal methods in order to increase our understanding of how identity formation takes place across multiple identity domains. Finally,

given that some profiles had different identity statuses across domains, future research should seek to understand how these statuses are associated with other areas of development and well-being. For example, is it most adaptive to have an achieved status in all identity domains, or are some domains more important within a given context? How are identity domains jointly associated with well-being? By addressing such research questions, scholars in the area of identity formation will move closer to understanding the complexities of identity across domains.

## **Study 2: Ego-Social Identity Profiles and Academic Achievement among Biethnic Young Adults**

A body of literature has developed over the past two decades that has contributed to our understanding of ethnic identity formation among mono-ethnic minority youth (Phinney & Ong, 2007); however there remains a lack of research addressing ethnic identity formation among individuals with parents from different ethnic backgrounds (i.e., biethnic individuals), who constitute a growing portion of the U.S. population (Humes, Jones, & Ramirez, 2011). A group that is particularly on the rise is individuals with one European American parent and one Latino parent (Bean & Stevens, 2003). Identity formation of this group may be unique in terms of integration across domains and relative salience of identity domains; however, current research on biethnic identity has been limited to focusing on preferred ethnic labels, rather than a multidimensional study of multiple domains of identity. Erikson (1968) suggested that formation of a stable identity that is integrated across domains is critical for psychosocial well-being. Biethnic individuals are in the unique position of negotiating multiple ethnic backgrounds and integrating those backgrounds with one another into a coherent ethnic identity, with other social identity domains (e.g., American identity), and with domains of personal identity (i.e., ego identity). Biethnic individuals' ability to negotiate these identity domains may have implications for their psychological, social, and academic adjustment, and the association between identity and adjustment may vary as a function of ecological factors such as ethnic

composition in one's social environment (Jiminez, 2004; Song, 2010; Umaña-Taylor, 2004).

The current study had the following goals: (1) examine ego-social identity profiles among biethnic college students of Latino and European American heritage, (2) examine how these profiles differ based on preferred ethnic labels (i.e., European American, Latino, or biethnic), and (3) examine how ego-social identity profiles are associated with academic achievement, and whether college ethnic composition moderated of the relationship between ego-social identity profiles and academic achievement.

Before delving into a discussion of the literature that is relevant to identity formation among biethnic individuals, it is important to define a few central terms. First, I will use the terms *biethnic* and *mono-ethnic* to refer to individuals having parents of different ethnic backgrounds and those with parents of the same ethnic background, respectively. Second, I will use the terms *race* and *ethnicity* to refer to related, but distinct concepts. Race refers to a social construct that is based primarily on skin color and other physical features, as well as the shared historical experiences of people based on these superficial features. Generally, when scholars have referred to *racial identity*, they have focused on how one perceives the social hierarchy of race, racism and discrimination, and how these concepts are incorporated into one's identity (see Herman, 2008 for a review). Conversely, ethnicity refers to one's ancestry, geographic origin, and culture (Perez & Hirschman, 2009). Scholars who study *ethnic identity* generally examine the degree to which individuals have explored their ethnicity, feel

positively about their membership in their ethnic group, and are clear about what role ethnicity plays within their global self-concept (Umaña-Taylor, Bhnnot, & Shin, 2006).

### **Ego Identity**

According to Erikson (1968), individuals progress through a period of exploration to arrive at a committed identity that incorporates important domains of identity. Identity domains include aspects of one's identity that are linked to specific characteristics such as ethnicity, nationality, gender, or career. Based on Erikson's notions, Marcia (1966) developed an ego identity typology in which individuals could be classified within four ego identity statuses based on their levels of ego identity exploration and commitment. Diffusion is viewed as the least mature status in which an individual has neither explored nor committed to a stable identity. In the foreclosure status, individuals have not explored their identity, however, they have committed to an identity. Moratorium is the identity status that individuals are classified as when they are in the process of identity exploration. These individuals are currently exploring or have explored their identity, but have not made a stable commitment to their identity. Finally, achieved identity status is viewed as the most mature identity status. Individuals who are classified as ego identity achieved have actively explored their identity options and have made a commitment to a stable identity.

Erikson (1968) and Marcia (1966) agree that identity achievement involves the integration of identity that is consistent across domains and situations. In other words, individuals are faced with the task of integrating their

personal identity (i.e., ego identity) with their social group identity (i.e., ethnic identity and American identity). Research has suggested that identity statuses employed at any given time can be different across domains (Archer & Waterman, 1990; Kroger & Haslett, 1991). For example, Skorikou and Vondracek (1998) found that vocational identity statuses developed earlier than other identity domains, including ego identity among adolescents. Furthermore, in a meta-analysis of longitudinal studies on identity, Meeus and colleagues (Meeus, Iedema, Helsen, & Vollebergh, 1999) found that ego identity developed over time from less mature statuses toward identity achievement, whereas statuses within specific identity domains were more stable. Based on these studies, it appears that specific identity domains may form a foundation for one's ego identity by experiencing more initial growth and then becoming more stable, while ego identity continues to develop.

Some research has shed light on how ego identity is associated with other identity domains such as ethnic identity. Research has shown that among ethnic minorities, ethnic identity is typically associated with more advanced statuses of ego identity among ethnic minorities but not among their European American counterparts (Branch, Tayal, & Triplett, 2000). Ethnic identity may be particularly important for ego identity among ethnic minorities due to power stratification across ethnic groups in U.S. society (Millville, Darlington, Whitelock, & Mulligan, 2005). Specifically, ethnic minorities seek to integrate a positive ethnic identity into their ego identity as a means of preserving a positive self-concept in the face of marginalization. When it comes to biethnic individuals,



the influence of ethnic stratification may become more complex, as individuals negotiate identity in terms of a social group that may be linked to societal power *and* in terms of another that may be linked to marginalization.

### **Social Group Identity**

According to social identity theory (Tajfel, 1981), an important dimension of one's identity is their identity as a member of social groups such as ethnic groups and nationality groups. Tajfel suggested that identity domains derived from membership in marginalized groups, such as ethnic minority groups, will be particularly salient. As such, ethnic identity has been posited to be a central identity domain for ethnic minority individuals (Phinney, 1988), and the salience of ethnic identity among ethnic minorities has been demonstrated empirically (Branch, 2001; Phinney & Alipuria, 1996). A body of literature has developed and increased our understanding of ethnic identity formation among mono-ethnic minorities (Brown, Herman, Hamm, & Heck, 2008), but few studies have examined ethnic identity formation among biethnic adolescents, specifically adolescents who are of Latino and European American backgrounds.

Several models of biracial identity formation have been proposed (see Herman, 2008 for a review). These theories generally focus on racial identification (i.e., preferred racial labels) rather than a multidimensional racial or ethnic identity (e.g., Rockquemore & Brunisma, 2001). These frameworks of biracial identification can be informative for biethnic identity research, however, in that they assume a multidimensional identity structure informs racial identification, and emphasize the importance of context informing that identity

(Herman, 2004; Poston, 1990; Root, 1999). Like biracial individuals, biethnic individuals may come to a multidimensional understanding of ethnicity that is associated in different ways with other identity domains, compared to their mono-ethnic counterparts. These differences are likely to emerge from biethnic individuals' different experiences regarding ethnicity compared to mono-ethnic individuals. For example, biethnic individuals may experience different forms and levels of familial ethnic socialization resulting from their parents' different ethnic backgrounds. As such, their ethnic identity may develop and be associated with other identity domains in unique ways.

Based on ego identity theory (Erikson, 1968; Marcia, 1966), Phinney (1988) proposed that, like ego identity, ethnic identity can be viewed using two developmental components (i.e., exploration and commitment) and that the most adaptive ethnic identity status is achieved, in which individuals have explored the meaning of their ethnicity and have committed to a stable identity with regard to their ethnicity. It appears that ethnic identity is a salient identity domain that follows a similar developmental trajectory as ego identity among mono-ethnic minorities (Phinney & Chavira, 1992; Umaña-Taylor, Gonzales-Backen, & Guimond, 2009). Research has suggested that ethnic identity is an important identity domain for biethnic individuals, in that biethnic adolescents scored higher than European American adolescents on ethnic identity, but lower than their mono-ethnic minority counterparts. Moreover, ethnic identity was found to have a factor structure that was similar to that of ego identity, consisting of exploration

and commitment, and this structure was consistent for biethnic and mono-ethnic individuals (Spencer, Icard, Harachi, Catalano, & Oxford, 2000).

It is important to acknowledge that the biethnic individuals that are the focus of the current study have European American background in addition to their Latino heritage. As such, we must consider a social group identity domain that has been shown to be salient for European Americans. Spencer (2011) argued that American identity is likely to be more salient among European Americans than among ethnic minorities due to differential experiences with discrimination. Because equality is central to American ideology, when youth do have experiences that are discordant with this ideology, they may feel like outcasts with regard to American identity. Accordingly, this domain of their identity may be less salient.

Empirical evidence supports the notion that American identity may be a more central identity domain for European Americans, compared to ethnic minorities. Rodriguez and colleagues (2010) found that European Americans reported feeling more American than did African Americans and Latinos, and that American identity was positively associated with personal identity for European Americans only, whereas ethnic identity was negatively associated with American identity for African Americans and Latinos. Other studies have found that American identity is salient among adults in general, in that 80% of adult respondents acknowledged that being American was important to their identity (Huddy & Khatib, 2007). As such, American identity appears to be an important

identity domain for European Americans in particular, and may be salient for other ethnic groups as well.

There have been no studies exploring how biethnic individuals negotiate these two social group identities, and more specifically, how they integrate these two identity domains with their ego identity. Such integration may be particularly complex in this group. Indeed, Phinney (1993) noted that identity integration across domains may be particularly difficult when the identity domains are at odds with one another, as may be the case with ethnic identity and American identity. It is likely that this complex task of identity integration among biethnic individuals cannot be understood adequately by isolating notions of ethnic and American identity. Rather, we may better understand identity structure among biethnic youth by examining the latent structure of these identity domains.

### **The Role of Identity in Psychosocial Adjustment**

Erikson emphasized the importance of identity formation during adolescence and early adulthood and noted that individuals encounter a period of identity crisis which causes them to question previously held notions of their identity. A healthy identity integrates multiple identity domains into an identity that is stable across situations and domains. Failure to establish this mature sense of identity may result in negative psychosocial outcomes because the individual does not have a stable sense of self and, therefore, may experience cognitive dissonance regarding self-concept across context and identity domains. The positive association between ego identity and well-being has been consistently demonstrated empirically (see Marcia, Waterman, Matteson, Archer, & Orlofsky,

1993 for a review). In addition, ego identity has been identified as an important predictor for academic outcomes. For example, among college students, ego identity status was found to be associated with college satisfaction (Waterman & Waterman, 1970). Furthermore, ego identity has also emerged as a predictor of academic achievement during college in that more mature statuses of ego identity, such as achieved, have been associated with higher grades (Good & Adams, 2008).

Social identity domains are thought to be similarly associated to psychosocial well-being. Tajfel (1981) noted that because membership in marginalized social groups is salient, individuals may be motivated to establish a positive identity related to that social group as a means of preserving their self-esteem. Based on these theoretical notions, it follows that ethnic identity would be particularly salient among ethnic minorities and thereby predictive of psychosocial well-being in this group. Research has supported that ethnic identity is more salient among ethnic minorities than among European Americans (Branch, 2001) and that it is associated with positive adjustment. For instance, ethnic identity predicts higher self-esteem (Bracey, Bámaca, & Umaña-Taylor, 2004; Phinney, Cantu, & Kurtz, 1996), higher daily happiness (Kiang, Yip, Gonzales-Backen, Witcow, & Fuligni, 2006), and is protective against cultural stressors (Iturbide, Raffaelli, & Gustavo, 2009; Umaña-Taylor, Updegraff, & Gonzales-Backen, 2011) among adolescents and young adults from various ethnic minority backgrounds. In addition, ethnic identity has been associated with higher levels of academic self-confidence among a diverse sample of adolescents

(Martinez & Dukes, 1997). Although ethnic identity appears to be important for well-being among ethnic minorities, researchers have not addressed these concepts among biethnic individuals in any depth. Research has shown that ethnic identity is more salient among biethnic individuals than among European Americans, but less salient among biethnic individuals than among ethnic minorities (Martinez & Dukes, 1997). It is possible however, that ethnic identity interacts with ego identity and other domains of social identity that are traditionally not thought of as being salient among ethnic minorities, such as American identity, to inform well-being.

As discussed earlier, research indicates that American identity is less salient among ethnic minorities than among European Americans, and that American identity and ethnic identity are inversely associated among ethnic minorities (Rodriguez et al., 2010). Rodriguez and colleagues (2010) found that discrimination was one of the themes that emerged when Latinos and African Americans have discussed ways that they do not feel American. European Americans are often identified as the perpetrators of injustice, and as such, they may feel the need to decrease dissonance related to such ethnic stratification and perhaps preserve self-esteem through establishing a strong American identity (Spencer, 2011). Thus, ethnic identity and American identity may be identity domains that similarly inform psychosocial well-being among biethnic individuals.

The association of specific identity domains with indices of well-being appears to vary as a function of the salience of the identity domain, and identity

domain salience is associated with context. Research has indicated that biethnic individuals' ethnic identity salience varies as a function of the ethnic composition of their context such that they are more likely to identify with the ethnic majority in their immediate context, such as their school or neighborhood (Jimenez, 2004). Research among mono-ethnic Latino youth has indicated that ethnic identity is most strongly associated with well-being when ethnicity is most salient (Umaña-Taylor, 2004). Accordingly, ethnic composition of one's context appears may hold importance for how ethnic identity is associated with other identity domains and how these identity domains jointly inform academic outcomes.

### **Research Questions**

Based on the literature described above, the current study addressed the following research questions: (1) What ego-social identity profiles emerge among biethnic young adults of Latino and European American backgrounds? It was expected that multiple latent identity profiles would emerge that differed in identity statuses across identity domains such that some identity domains would be more salient in some profiles than in others. (2) Do ego-social identity profiles differ based on preferred ethnic label? It was expected that individuals who identified with a Latino label would have an ego-social identity profile that emphasized ethnic identity, whereas individuals who identified as European American would have an ego-social identity profile in which American identity was most salient. Individuals who identified as biethnic were predicted to have an ego-social identity profile that integrated ethnic identity and American identity. (3) Do ego-social identity profiles predict academic achievement, and does the

ethnic composition of one's university moderate that association? It was expected that more mature identity profiles (i.e., those who had explored and committed in multiple identity domains) would have higher college grades. In addition, it was predicted that ethnic composition at one's university would moderate the association between ego-social identity profile and college grades such that ego-social identity profiles in which ethnic identity was most salient would be most adaptive in settings with a higher proportion of Latino students, whereas ego-social identity profiles in which American identity was most salient would be most adaptive in settings with a higher proportion of European American students.

## **Method**

### **Participants**

Data for the current study were from a larger study including 10,573 college students from 30 universities across the U.S. (Zamboanga et al., 2010). Given the focus of the current study on identity among emerging adults, the current sample was restricted to participants who were between the ages of 18 and 25 years of age ( $M = 19.76$ ,  $SD = 1.71$ ) at the time of participation and who had one Latino parent and one European American parent ( $n = 401$ ). Biethnic participants were identified based on their reports of their parents' ethnicity. This strategy was utilized because some biethnic individuals have a tendency to identify with a single ethnicity even when they are aware of multiple and recent ethnic heritages (Perez & Hirschman, 2009). In addition, one of the goals of this study was to examine how ego-social identity profiles differed as a function of



preferred ethnic label. This made it necessary to identify participants who have biethnic heritage, but identify with a mono-ethnic label. Fifty-two percent of participants had a Latina mother and a European American father and 48% had a Latino father and a European American mother. The majority of participants in the current study were female (72.6%), 26.4% were male, and 1% did not specify their sex. Most participants were born in the U.S. (93.8%).

### **Procedure**

Undergraduate college students at 30 U.S. universities were invited via printed, emailed, and in-class announcements to complete an online survey. Participants were directed to the online survey through the recruitment materials and took the survey on their own time in a private setting. Data collection sites were diverse with regard to type of institution (e.g., large and small private universities and state universities) and setting (e.g., urban and suburban). The survey took approximately two hours to complete and participants received either course credit or entry into a drawing for a prize in compensation for participating.

### **Measures**

**Ego identity.** The identity subscale of the Erikson Psychosocial Stage Inventory was used to measure ego identity (EPSI; Rosenthal, Gurney, & Moore, 1981). The EPSI includes 12 items that assess ego identity integration (6 items; e.g., “I’ve got a clear idea of what I want to be.”) and ego identity confusion (6 items; e.g., “I change my opinion of myself a lot.”). Participants responded to statements on a 5-point Likert scale with end points of 0 (*strongly disagree*) and 4 (*strongly agree*). The integration and confusion subscales were coded such that

higher scores indicate higher levels of ego identity integration and confusion, respectively. The EPSI has shown good reliability across ethnic groups (Rodriguez et al., 2010). The alpha coefficients for the EPSI in the current sample were .82 and .79 for integration and confusion, respectively.

**Ethnic identity.** Ethnic identity was assessed using the Multi-group Ethnic Identity Measure (MEIM; Phinney, 1992). The MEIM assesses two components of ethnic identity: exploration (5 items; e.g., “I have spent time trying to find out more about my ethnic group, such as its history.”) and commitment (7 items; e.g., “I have a clear sense of my ethnic background and what it means for me.”). Participants were asked to respond to 12 statements on a 5-point Likert scale with end-points of 1 (*strongly disagree*) and 5 (*strongly agree*). Participants responded to questions asking about their ethnicity in general. As such, it is likely that biethnic individuals are responding in terms of their preferred ethnic label. The MEIM is scored such that higher scores indicate more ethnic identity exploration and higher levels of ethnic identity commitment. This measure has demonstrated good reliability in samples of adolescents and young adults of various ethnic groups (Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003). In addition, the MEIM demonstrated good reliability and consistent factor structure among biethnic adolescents (Spencer, Icard, Harachi, Catalano, & Oxford, 2000). The MEIM had good reliability in the current sample, with alpha coefficients of .81 and .93 for exploration and commitment, respectively.

**American identity.** An adapted version of the MEIM (MEIM-A; Schwartz et al., in press) was utilized to examine American identity. As with the

original MEIM, the MEIM-A includes two subscales. Exploration examines the extent to which individuals have examined their identity as an American (5 items; e.g., “I have spent time trying to find out more about the United States, such as its history.”). Commitment examines the extent to which individuals have a clear sense of what their American identity means and how positively they feel about that identity (7 items; e.g., “I have a clear sense of the United States and what it means to me.”). Participants were asked to respond to 12 statements on a 5-point Likert scale with end-points of 1 (*strongly disagree*) and 5 (*strongly agree*). Higher scores in the MEIM-A indicate more exploration of one’s identity as an American and a clearer and more positive sense of American identity. The MEIM-A has been shown to have equivalent factor-structure across ethnic groups and to have good reliability and validity across ethnic groups (Schwartz et al., in press). The MEIM-A demonstrated good reliability in the current sample with alpha coefficients of .74 and .94 for exploration and commitment, respectively.

**Preferred ethnic label.** Participants were asked to identify their preferred ethnic label by responding to the following open-ended question: “In my own words, I prefer to think of my ethnicity as...” Thirty-six percent of participants ( $n = 143$ ) responded with a mono-ethnic Latino label (e.g., Hispanic, Mexican American), 25.4% ( $n = 102$ ) identified with a mono-ethnic European American label (e.g., Irish, white), 28.7% ( $n = 115$ ) identified with a biethnic label (e.g., mixed, biracial). Forty-one participants (10.2%) identified as American or with a non-ethnic label (e.g., human). Due to small sample size, participants who

identified as American or with a non-ethnic label were not included in analyses involving preferred ethnic label.

**Ethnic composition of college.** Ethnic composition data of postsecondary institutions were obtained from institutional research offices at each university for the fall semester in 2008, when data were collected for this study. The current study utilized estimates of Latino and European American proportions at each institution. The proportion of the student body that was Latino ranged from 1% to 60% ( $M = 18.2$ ,  $SD = 15.2$ ) and the proportion of the student populations that was European American ranged from 17% to 92% ( $M = 55.1$ ,  $SD = 19.5$ ).

**Academic achievement.** Academic achievement was assessed by self-report of college grades. Specifically, participants were asked “What kinds of grades do you mostly get in your classes?” Participants responded on a scale ranging from “Mostly A’s” to “Mostly D’s and F’s”. Responses were coded such that higher scores indicated higher grades. Self-reported grades are commonly used in research, and in a meta-analysis examining the reliability and validity of self-reported grades, it was demonstrated that self-reported grades are reasonably accurate reflections of actual grade point averages, particularly among college students (Kuncel, Credé, & Thomas, 2005).

## **Results**

Preliminary analyses were performed in order to assess the distribution of study variables and the bivariate associates between variables. Each study variable was adequately normally distributed, as indicated by skew of less than 2

and kurtosis less than 7 (West, Finch, & Curran, 1995). Bivariate correlations were in the expected directions (see Table 7).

### **Latent Profile Analysis**

In order to examine the ego-social identity profiles that emerged from the data, a latent profile analysis (LPA) was run. LPA is a person-centered analysis that examines latent patterns within the data based on a set of continuous indicators (Muthén & Muthén, 2000). The indicators in the current analyses were the ethnic identity exploration and commitment subscales of the MEIM, the American identity exploration and commitment subscales of the MEIM-A, and the ego identity integration and confusion subscales of the EPSI. An LPA model with  $k$  profiles was estimated, and fit statistics examined. If this model was shown to be a better fit than a model with  $k - 1$  profiles, an additional model with  $k + 1$  profiles was estimated until the model fit indices suggested that a more parsimonious model (e.g., a model with  $k - 1$  profiles) was a better fit. Models were compared using the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR). The VLMR compares an LPA model to one with  $k - 1$  profiles. A VLMR with a  $p$ -value greater than .05 indicates that the  $k - 1$  solution is a better fit to the data than the current model. Models were also evaluated using Akaike's information criterion (AIC), Bayesian information criterion (BIC), and the adjusted Bayesian information criterion (ABIC). Decreases in each of these information criteria indicate an improvement in model fit (Lubke & Muthén, 2005). Full information maximum likelihood estimation was utilized in all models.

Results indicated that a two-profile solution was the best fit to the data (see Table 8). The two ego-social identity profiles were interpreted by examining the estimated within profile means of each indicator to see if they fell above or below the sample means, using existing research and theory as a guide (see Table 9 and Figure 2). The first profile, labeled *Approaching*, emerged in which individuals had not explored or committed to their ethnic identity or American identity. In addition, individuals categorized in the Approaching profile scored relatively high on ego identity confusion. Specifically, the Approaching profile was characterized by levels of ethnic identity exploration and commitment, American identity exploration and commitment, and ego identity integration that were lower than the respective sample means, and ego identity confusion that was higher than the sample mean. The second profile, labeled *Integrated*, included individuals who had an achieved ethnic identity and American identity, in that they had explored and committed in both identity domains. In addition, these individuals had a relatively integrated ego identity. Specifically, the Integrated profile was characterized by levels of ethnic identity exploration and commitment, American identity exploration and commitment, and ego identity integration that were above the respective sample means, and ego identity confusion that was below the sample mean.

### **Differences by Preferred Ethnic Label**

After the best fitting LPA model was identified, differences in ego-social identity profile by preferred ethnic label (i.e., European American, Latino, or biethnic) were explored by entering preferred ethnic label as a covariate of profile

membership. This strategy was chosen over a class-analysis strategy because entropy, a measure of latent profile stability, was less than .80. In addition, it was not possible to examine separate LPA models for each group because of lack of power resulting from small subsample sizes. To examine group differences within the LPA framework, dummy variables were created for each of the three preferred ethnic label codes (i.e., European American, Latino, and biethnic) and entered into the LPA model such that latent class probabilities were regressed on each dummy code. Results indicated that ego-social profile membership did not significantly differ by ego-social identity profile (see Table 10). The latent profiles identified in the model that included preferred ethnic labels as covariates were consistent with the original two-profile LPA model in terms of interpretation of profiles and proportions of profile membership. In addition, the original two-profile LPA model appeared (AIC = 5336.31) to be a better fit to the data than the model that included preferred ethnic labels as covariates (AIC = 5340.51).

### **Ego-Social Identity Profile and Academic Achievement**

The association between ego-social identity profile and academic achievement was examined by including college grades as a covariate of ego-social identity profile membership in the 2-profile LPA model. This strategy was chosen due to low entropy ( $< .80$ ) in the original 2-profile LPA model. Specifically, class membership probabilities were regressed on college grades. Results indicated that individuals with an Integrated ego-social identity profile had higher grades, compared to those with an Approaching ego-social identity profile,  $\beta = .26, p < .05$ . The interpretation and membership proportion of latent

profiles was consistent between the LPA model that included college grades as a covariate and the original 2-profile solution LPA model.

**Role of ethnic composition of university.** In order to assess whether university ethnic composition moderated the association between ego-social identity profile and college grades a set of LPA models were run that examined whether the association between university ethnic composition and college grades varied across latent profiles. Specifically, separate models were run for the proportion of the university that was Latino and the proportion that was European American. First, a 2-profile LPA model was run in which the college grades variable was regressed on university ethnic composition (either Latino proportion or European American proportion) and this association was restricted to be equal across latent profiles. Next, a nested LPA model was run in which the college grades variable was regressed on university ethnic composition and this association was allowed to vary across ego-social identity profiles. The interpretation and proportion of membership of latent profiles was similar across these models and the original 2-profile LPA solution. Results indicated that university ethnic composition was not a significant moderator of the association between ego-social identity profile and college grades (see Table 11).

## **Discussion**

Scholars have speculated about the complexity of identity formation among biethnic individuals, particularly with regard to their ethnic identity (Herman, 2008); however, no studies have examined how a multidimensional form ethnic identity is associated with other identity domains and how these



identity domains are jointly associated with academic outcomes among a specific group of biethnic individuals. Accordingly, the current study aimed to address limitations in the current literature on biethnic identity. First, ego-social identity profiles were identified based on the identity domains of ethnic identity, American identity, and ego identity among a sample of biethnic individuals of Latino and European American origin. Next, given that previous research on biethnic identity has focused on ethnic labels, the association between preferred ethnic labels and ego-social identity profile membership was examined. Finally, the association between ego-social identity profile membership and academic achievement and the moderating role of university ethnic composition on this association were assessed. Overall, the current study highlights the importance of examining complex identity profiles based on multiple identity domains, particularly among biethnic individuals. In addition, these latent ego-social identity profiles appear to have implications for academic achievement. As such, they may hold importance for other indices of adjustment.

### **Ego-social Identity Profiles**

The first goal of this study was to examine the latent ego-social identity profiles that emerged from the identity domains of ethnic identity, American identity, and ego identity among biethnic young adults. It was expected that multiple ego-social identity profiles would emerge that differed in the relative salience of identity domains. This hypothesis was not supported in that two ego-social identity profiles emerged in which identity salience was relatively consistent across identity domains. The two profiles that emerged were (1)

Approaching, in which levels of ethnic identity, American identity, and ego identity integration were low and ego identity confusion was high, and (2) Integrated, in which levels of ethnic identity, American identity, and ego identity integration were high and ego identity confusion was low.

The ego-social identity profiles that were identified in this study conflict with previous theoretical notions about biethnic identity that suggest that biethnic individuals experience a complex ethnic identity formation pattern that is difficult to integrate (Gibbs, 1987). Specifically, the ego-social identity profiles of Approaching and Integrated are characterized by the same identity status, as indicated by levels of exploration and commitment within a given identity domain (e.g., diffused, achieved), across identity domains. In the Integrated profile, individuals would be considered to have an achieved ethnic identity status and American identity status, given that levels of exploration and commitment are high in each of these domains. In addition, individuals with an Integrated profile had higher levels of ego identity integration and lower levels of ego identity confusion, suggesting that in addition to having achieved identity across social identity domains, they are able to integrate these domains into a consistent personal identity. Individuals with an Approaching profile had low levels of exploration and commitment in the identity domains of ethnic identity and American identity. This profile also exhibited low levels of ego identity integration and high levels of ego identity confusion. Both social identity domains appear to be relatively low in salience for individuals in this profile in that they would be considered to be diffused in terms of their ethnic identity and

American identity. Despite having ego identity integration that is lower than the sample mean, ego integration is not particularly low given the scale of the measure. As such, Approaching individuals appear to be adequately integrating multiple identity domains, contrary to previous notions that the domains of ethnic identity and American identity would be in conflict (Phinney, 1993). It is also possible that individuals in the Approaching profile may have not yet begun identity work in the social identity domains of interest in this study. Given that, although below the mean, their scores on exploration and commitment on each respective social identity scale were not particularly low, these individuals may be moving into a period of identity negotiation in terms of ethnic identity and American identity. Conversely, it is possible that these individuals may be exhibiting an identity pattern that Rockquemore and Brunsma (2001) termed transcendent, such that they do not view themselves in terms of ethnicity or nationality.

Two models have been set forth in the identity literature that seek to explain the negotiation of mainstream American culture and one's culture of origin. The ethnic pluralism model holds that individuals can integrate their ethnic identity and American identity, such that both identity domains are salient (Phinney, 1996; Rodriguez et al., 2010). Conversely, the social dominance theory suggests that these identity domains will be difficult to integrate, given the social stratification of ethnicity (Rodriguez et al., 2010; Sidanius, Pratto, van Laar, & Levin, 2004). To date, only one study has directly tested these models by examining the association between ethnic identity and American identity.

Rodriguez and colleagues (2010) found that ethnic identity and American identity were inversely associated among mono-ethnic minorities, lending support to the social dominance theory. The results of the current study of biethnic individuals, however, support the ethnic pluralism model such that salience was similar across social identity domains within ego-social profiles, and ego identity integration was relatively high overall. Furthermore, bivariate correlations between ethnic identity exploration and commitment and American identity exploration and commitment were all significant and positive, such that higher levels of ethnic identity were associated with higher levels of American identity. Perhaps integration between ethnic identity and American identity is more likely among biethnic individuals compared to mono-ethnic individuals because biethnic individuals are simultaneously members of the ethnic majority in the U.S., European Americans, and members of an ethnic minority group, Latinos. Research has shown that American identity is more salient among European Americans, compared to ethnic minorities (Rodriguez et al., 2010) and that ethnic identity is more salient among ethnic minorities, compared to European Americans (Branch, 2001). Thus, instead of experiencing conflict between these two social identity domains, the biethnic individuals in the current study appear to have derived a bicultural identity from these domains in which identity status is similar across domains, and ego identity integration is relatively high.

### **Preferred Ethnic Labels**

A second goal of the current study was to assess whether there was an association between preferred ethnic label (i.e., European American only, Latino

only, or biethnic) and ego-social identity profile membership. It was expected that individuals who identified with a Latino ethnic label would have ego-social identity profiles in which ethnic identity was salient and individuals who identified with a European American ethnic label would have ego-social identity profiles in which American identity was most salient. Individuals who identified as biethnic were expected to have ego-social identity profiles in which ethnic identity and American identity were integrated. The results did not support this hypothesis in that preferred ethnic labels were not significantly associated with ego-social profile membership. Although caution should be taken in interpreting non-significant findings, it is possible that no association was found because ethnic labels are dependent on context. Root (1999) suggested that biracial individuals' racial identification (i.e., preferred racial labels) were fluid across context such that how an individual identifies racially is dependent on contextual factors such as situation, the race of other people who are present, and how salient race is in a given setting. For example, when a biethnic individual of Latino and European American origin is with their Latino relatives, they may be more likely to identify as Latino, whereas they may be more likely to identify as European American when at their predominately European American school. As such, it is possible that the preferred ethnic labels reported by the participants in the current study were context-specific and are not as indicative of a consistent, underlying identity as some biracial identity models have assumed.

The preferred ethnic labels that were reported by participants in the current study reflect those proposed by Rockquemore and Brunsma (2001) in

their model of biracial identification. According to this model, biracial individuals identify racially in one of four ways: singular (with a single race), border (as biracial), protean (with a single race depending on context), or transcendent (with no race). With the exception of protean identity, which could not be examined due to the current research study design, all of these identification types emerged in the current study. Furthermore, contrary to previous notions that biethnic individuals would be more likely to identify with a singular ethnic minority label, given societal pressures (Kerwin, Ponterotto, Jackson, & Harris, 1993), similar proportions of participants identified as mono-ethnic European American, mono-ethnic Latino, and biethnic in the current sample. A smaller proportion of participants identified as American or with a non-ethnic label such as human, lending support to the existence of a transcendent identity type. Unfortunately, the sample size of this transcendent group was too small to include in the preferred ethnic status analyses.

Although the findings of the current study are consistent with Rockquemore and Brunisma's (2001) model of biracial identification, it is important to point out that this model was intended to describe racial identification among biracial individuals who are black and white. Rockquemore and Brunisma suggested that identification in other biracial groups, including biethnic groups such as Latino-European Americans, would differ from black-white biracial individuals because they are less subject to the one-drop rule. The one-drop rule is a societal norm in which individuals with any black ancestry are considered mono-racial black. Rockquemore and Brunisma's assertions about the

differential role of the one-drop rule between black-white biracials and other multiracial and multiethnic groups may be reflected in the finding of similar proportions of individuals in the current study who identified with a singular European American, singular Latino, and biethnic label. It may be the case, that the phenotypic characteristics of this group allow them more identification options.

### **Identity Profiles and Academic Achievement**

The final goal of the current study was to examine the association between ego-social identity profile membership and academic achievement, and whether university ethnic composition moderated this association. It was expected that individuals with ego-social identity profiles in which identity statuses were mature across identity domains would have the highest academic achievement. In addition, it was hypothesized that the association between ego-social identity profile membership and academic achievement would be dependent on university ethnic composition, such that profiles in which ethnic identity was most salient would be most adaptive when a higher proportion of the student body was Latino and profiles in which American identity was most salient would be most adaptive when a higher proportion of the student body was European American. The results partially supported the hypothesis such that ego-social identity profile membership was associated with academic achievement, but university ethnic composition did not significantly moderate this association.

The finding that ego-social identity profile membership was significantly associated with academic achievement corresponds with previous research linking

more mature identity statuses to positive psychosocial and academic outcomes (Good & Adams, 2008; Kiang et al., 2006; Marcia et al., 1993) such that individuals who had an Integrated profile reported higher college grades. Scholars have suggested that identity is associated with positive outcomes because a more developed identity is indicative of a consistent, positive sense of self in which one does not experience cognitive dissonance in self-concept across contexts (Erikson, 1968; Marcia, 1966). In addition, social identity domains in particular are thought to be associated with positive outcomes because the individual is deriving notions about his self-concept based on notions about the group (Tajfel, 1981). As such, if the individual has explored aspects of this social group and has a consistent understanding of what membership in the group means for his self-concept, it is theorized that he will have more positive psychosocial outcomes.

Bicultural competence theory (Ramirez, 1983) may help further explain the association between ego-social identity profile and academic achievement. According to this theory, individuals benefit from their ability to negotiate multiple cultural settings or origins. The participants in the current study are in the unique position of experiencing a multicultural setting at the family level (Gonzales-Backen, in press). Thus, biethnic individuals may have developed competencies associated with the flexibility needed to negotiate challenges posed by such a context. Conversely, it is possible that individuals who are more mature in general are likely to have better study skills and thereby, better grades. Indeed, there is empirical evidence that identity formation is positively associated



with cognitive functioning (Leadbeater & Dionne, 1981). As such, perhaps ego-social identity profiles and academic achievement have the common predictor of cognitive development.

Contrary to the hypothesis, university ethnic composition did not significantly moderate the association between ego-social identity profile and academic achievement. Once again, caution should be exercised when interpreting non-significant results. It is possible that this finding suggests that ego-social identity profiles are important for biethnic individuals' academic achievement, regardless of the ethnic composition of their university. This may be the case because both of the profiles identified in the current study, Approaching and Integrated, had similar statuses across social identity domains, such that the Approaching profile was characterized by a diffused identity across identity domains and Integrated was characterized by an achieved identity across identity domains. As such, an Integrated profile would be more adaptive than an Approaching profile, regardless of university ethnic composition because ethnic identity and American identity are similarly and highly salient.

### **Limitations and Future Directions**

Despite the contributions of the current study to the identity literature, it was not without limitations. First, the present study was limited in terms of generalizability. Because the sample was made up of college students, the results cannot be generalized to other young adults. In addition, the current study explored ego-social identity profiles and processes within a specific group of biethnic young adults, those of Latino and European American background. As

such, results cannot be generalized to biethnic individuals in general, as the experiences of biethnic individuals of other heritages may be different. Despite the limitation of generalizability, it is important to note, that one of the goals of the current study was to examine the association between ego-social identity profiles and academic achievement during college. As such, it was necessary to use a college sample. Future studies, however, should include other indices of well-being that are not specific to college students such as risk-taking behaviors, depressive symptoms, and self-esteem. With regard to limitations in generalizability across other biethnic groups, the current study was a first step in examining biethnic identity formation in the context of another domain of social identity (i.e., American identity) and ego identity. It is important to examine these processes at the within-group level and not combine other groups of biethnic individuals, who may have different ethnic experiences, into a single group assuming homogeneity. It will be important in future research, however, to determine whether biethnic individuals from other backgrounds have similar or different ego-social identity profiles compared to individuals of Latino and European American backgrounds.

A second limitation is that the current study did not have sufficient power to examine differences in ego-social identity profiles as a function of parent ethnicity. In other words, it was not possible with the current sample size to examine if there were differences in profile if one's mother versus one's father was Latino. This will be an important endeavor for future studies, given that past

research has highlighted the role of mothers in passing cultural ideologies to younger generations (Thornton, Chatters, Taylor, & Allen 1990).

A final limitation of the current study was the measurement of ethnic identity and college grades. First, measurement of ethnic identity was restricted to participants' responses to items asking about their ethnicity in general. As such, it is not clear whether participants were responding with both ethnicities as reference groups, or if they were responding with only one as the reference group. It is likely that they were responding with preferred ethnic label as the reference group, confounding these two variables. Future studies should work toward a more valid strategy of assessing ethnic identity among biethnic individuals. Finally, college grades were assessed through self-reports. It is possible that individuals over-estimated their grades in order to preserve their self-esteem. Studies have indicated, however, that self-reported grades, particularly among college students, adequately reflect actual grades (Kuncel et al., 2005). Regardless, future studies should seek to obtain official reports of college grades and other assessments of academic achievement and adjustment.

Overall, the current study addresses several limitations in the extant literature on biethnic identity. First, unique ego-social identity profiles were identified using a person-centered, data-driven method. Contrary to some notions of the challenges of identity integration among biethnic people, these profiles suggest that ethnic identity and American identity are similarly salient among biethnic individuals and that these identity domains appear to be successfully integrated with one another and with ego identity. Second, the current study

offers descriptive data on how biethnic individuals of Latino and European American origin identify. In addition, this study highlights the importance of going beyond ethnic identification when studying biethnic identity, given that preferred ethnic labels were not indicative of an underlying ego-social identity profile. Finally, this study underscores the importance of ego-social identity for academic achievement, regardless of university ethnic composition. In light of these contributions, future research should continue to consider multiple identity domains in context of one another, and continue to view identity among biethnic individuals as a multidimensional, complex process that has implications for psychosocial and academic outcomes.

## REFERENCES

- Abraham, K. G. (1986). Ego-identity differences among Anglo-American and Mexican-American adolescents, *Journal of Adolescence*, 9, 151-166.
- Abu-Rayya, H. M. (2006). Ethnic identity, ego identity, and psychological well-being among mixed-ethnic Arab-European adolescents in Israel. *British Journal of Developmental Psychology*, 24, 669-679.
- Archer, S. L. (1989). Gender differences in identity development: Issues of process, domain, and timing. *Journal of Adolescence*, 12, 55-66.
- Archer, S. L., & Waterman, A. S. (1983). Identity in early adolescence: A developmental perspective. *The Journal of Early Adolescence*, 3, 203-214.
- Archer, S. L., & Waterman, A. S. (1990). Varieties of identity diffusions and foreclosures: An exploration of subcategories of the identity statuses. *Journal of Adolescent Research*, 5, 96-111.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480.
- Bean, F. D., & Stevens, G. (2003). *America's Newcomers and the Dynamics of Diversity*. New York, NY: Russell Sage Foundation Publications.
- Berzonsky, M. D., & Adams, G. R. (1999). Reevaluating the identity status paradigm: Still useful after 35 years. *Developmental Review*, 19, 557-590.
- Bracey, J. R., Bámaca, M. Y., & Umaña-Taylor, A. J. (2004). Examining ethnic identity and self-esteem among biracial and monoracial adolescents. *Journal of Youth and Adolescence*, 33, 123-132.
- Branch, C. W. (2001). The many faces of self: Ego and ethnic identities. *The Journal of genetic psychology*, 162, 412-429.
- Branch, C. W., Tayal, P., & Triplett, C. (2000). The relationship of ethnic identity and ego identity status among adolescents and young adults. *International Journal of Intercultural Relations*, 24, 777-790.
- Brown, B.B., Herman, M., Hamm, J. V., & Heck, D. J. (2008). Ethnicity and image: Correlates of crowd affiliation among ethnic minority youth. *Child Development*, 79, 529-546.

- Cheryan, S., & Monin, B. (2005). "Where are you *really* from?": Asian Americans and identity denial. *Journal of Personality and Social Psychology*, *89*, 717-730.
- Erikson, E. H. (1959). Identity and the life cycle: Selected papers. *Psychological Issues*, *1*, 1-171.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Gardner, R. W., Robey, B., & Smith, P. (1985). Asian Americans: Growth, change, and diversity. *Population Bulletin*, *40* (4), 6-46.
- Gibbs, J. T. (1987). Identity and marginality: Issues in the treatment of biracial adolescents. *American Journal of Orthopsychiatry*, *57*, 265-278.
- Good, M., & Adams, G. R., Linking academic social environments, ego-identity formation, ego virtues, and academic success. *Adolescence*, *43*, 221-236.
- Gonzales-Backen, M. (in press). An application of ecological theory to ethnic identity formation among biethnic adolescents. *Family Relations*.
- Herman, M. (2004). Forced to choose: Some determinants of racial identification in multiracial adolescents. *Child Development*, *75*, 730-748.
- Herman, M. (2008). Racial identification among multiracial youth: Implications for adjustment. In S. M. Quintana & C. McKown (Eds.), *Handbook of Race, Racism, and the Developing Child* (pp. 203-225). Hoboken, NJ: John Wiley & Sons, Inc.
- Huddy, L., & Khatib, N. (2007). American patriotism, national identity, and political involvement, *American Journal of Political Science*, *51*, 63-77.
- Humes, K. R., Jones, N. A., & Ramirez, R. R. (2011). Overview of race and Hispanic origin: 2010. *2010 Census Briefs*. Washington, DC: U.S. Department of Commerce.
- Iturbide, M. I., Raffaelli, M., & Carlo, G. (2009). Protective effects of ethnic identity on Mexican American college students' psychological well-being. *Hispanic Journal of Behavioral Sciences*, *31*, 536-552.
- Jimenez, T. R. (2004). Negotiating ethnic boundaries: Multiethnic Mexican Americans and ethnic identity in the United States. *Ethnicities*, *4*, 75-97.

- Kerwin, C., Ponterotto, J. G., Jackson, B. L., & Harris, A. (1993). Racial identity in biracial children: A qualitative investigation. *Journal of Counseling Psychology, 40*, 221-231.
- Kiang, L., & Fuligni, A. J. (2009). Ethnic identity and family processes among adolescents from Latino American, Asian, and European backgrounds. *Journal of Youth and Adolescence, 38*, 228-241.
- Kiang, L., Yip, T., Gonzales-Backen, M., Witcow, M., & Fuligni, A. (2006). Ethnic identity and the daily psychological well-being of adolescents. *Child Development, 77*, 1338-1350.
- Kim, S. Y., Want, Y., Deng, S., Alvarez, R., & Li, J. (2011). Accent, perpetual foreigner stereotype, and perceived discrimination as indirect links between English proficiency and depressive symptoms in Chinese American adolescents. *Developmental Psychology, 47*, 289-301.
- Kim-Ju, G. M., & Liem, R. (2003). Ethnic self-awareness as a function of ethnic group status, group composition, and ethnic identity orientation. *Cultural Diversity and Ethnic Minority Psychology, 9*, 289-302.
- Kroger, J., & Haslett, S. J. (1991). A comparison of ego identity status transition pathways and change rates across five identity domains. *The International Journal of Aging and Human Development, 32*, 303-330.
- Kroger, J., Martinussen, M. & Marcia, J. E. (2010). Identity status change during adolescence and young adulthood: A meta-analysis. *Journal of Adolescence, 33*, 683-698.
- Kuncel, N., Credé, M., & Thomas, L. (2005). The validity of self-reported grade point averages, class ranks, and test scores: A meta-analysis and review of the literature. *Review of Educational Research, 75*, 63-82.
- Leadbeater, B. J., & Dionne, J. (1981). The adolescent's use of formal operational thinking in solving problems related to identity resolution. *Adolescence, 16*, 111-121.
- Lewis, H. L. (2003). Differences in ego identity among college students across age, ethnicity, and gender. *Identity: An International Journal of Theory and Research, 3*, 159-189.
- Lopez, A. M. (2003). Mixed-race school-age children: A summary of Census 2000 data. *Educational Researcher, 32*, 25-37.

- Lubke, G. H., & Muthén, B. (2005). Investigating population heterogeneity with factor mixture models. *Psychological Methods, 10*, 21-39.
- Malin, H. (2011). America as a philosophy: Implications for the development of American identity among today's youth. *Applied Developmental Science, 15*, 54-60.
- Marcia, J. E. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology, 3*, 551-558.
- Marcia, J. (1994). The empirical study of ego identity. In H. Bosma, T. Graafsma, H. Grotevant, & D. de Levita (Eds.), *Identity and development: An interdisciplinary approach* (pp. 67-80). Thousand Oaks, CA: Sage.
- Marcia, J. E., Waterman, A. S., Matteson, D. R., Archer, S. L., & Orlofsky, J. L. (1993). *Ego identity: A handbook for psychosocial research*. New York: Springer-Verlag.
- Martinez, R., & Dukes, R. L. (1997). The effects of ethnic identity, ethnicity, and gender on adolescent well-being. *Journal of Youth and Adolescence, 26*, 503-516.
- Meeus, W. (2011). The study of adolescent identity formation 2000-2010: A review of longitudinal research. *Journal of Research on Adolescence, 21*, 75-94.
- Meeus, W., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: Review of literature and longitudinal analysis. *Developmental Review, 19*, 419-461.
- Miville, M. L., Koonce, D., Darlington, P., & Whitlock, B. (2000). Exploring the relationships between racial/cultural identity and ego identity among African Americans and Mexican Americans. *Journal of Multicultural Counseling and Development, 28*, 208-224.
- Muthén, B. & Muthén, L. (2000). Integrating person-centered and variable-centered analysis: Growth mixture modeling with latent trajectory classes. *Alcoholism: Clinical and Experimental Research, 24*, 882-891.
- Perez, A. D., & Hirschman, C. (2009). The changing racial and ethnic composition of the US population: Emerging American identities. *Population and Development Review, 35*, 1-51.
- Phinney, J. S. (1988). Stages of ethnic identity development in minority group adolescents. *Journal of Early Adolescence, 9*, 34-49.



- Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A new scale for use with diverse groups. *Journal of Adolescent Research, 7*, 156-176.
- Phinney, J. S. (1993). Multiple group identities: Differentiation, conflict, and integration. In J. Kroger (Ed), *Discussions on Ego Identity* (pp. 47-73). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Phinney, J. S. & Alipuria, L. L. (1996). At the interface of cultures: Multiethnic/multiracial high school and college students. *Journal of Social Psychology, 136*, 139-158.
- Phinney, J. S., Cantu, C. L., & Kurtz, D. A. (1996). Ethnic and American identity as predictors of self-esteem among African American, Latino, and White adolescents. *Journal of Youth and Adolescence, 26*, 165-185.
- Phinney, J. S. & Chavira, V. (1992). Ethnic identity and self-esteem: An exploration longitudinal study. *Journal of Adolescence, 15*, 271-281.
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology, 54*, 271-281.
- Ponterotto, J. G., Gretchen, D., Utsey, S. O., Stracuzzie, T., & Saya Jr., R. (2003). The Multigroup Ethnic Identity Measure (MEIM): Psychometric review and further validity testing. *Educational and Psychological Measurement, 63*, 502-515.
- Poston, W. S. C. (1990). The biracial identity development model: A needed addition. *Journal of Counseling and Development, 69*, 152-155.
- Ramirez III, M. (1983). *Psychology of the Americas: Mestiz perspectives on personality and mental health*. New York NY: Pergamon.
- Rockquemore, K. A., & Brunsma, D. (2001). Negotiations on the color line: Phenotype, appearances, and (bi)racial identity. *Identity, 3*, 225-246.
- Rodriguez, L., Schwartz, S. J., & Whitbourne, S. K. (2010). American identity revisited: The relation between national, ethnic, and personal identity in a multiethnic sample of emerging adults. *Journal of Adolescent Research, 25*, 324-349.
- Root, M. P. P. (1999). The biracial baby boom: Understanding ecological constructions of racial identity in the 21st century. In M. H. Sheets (Ed.),

Racial and Ethnic Identity in School Practices: Aspects of Human Development (pp. 67 – 89). Mahwah, NJ: Erlbaum.

- Rosenthal, D. A., Gurney, R. M., & Moore, S. M. (1981). From trust to intimacy: A new inventory for examining Erikson's stages of psychosocial development. *Journal of Youth and Adolescence, 10*, 525-537.
- Sabogal, F., Marin, G., & Otero-Sabogal, R. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences, 9*, 397-412.
- Sidanius, J., Pratto, F., Van Laar, C., & Levin, S. (2004). A comprehensive analysis of group-based oppression: Social dominance theory, its agenda and method. *Political Psychology, 25*, 845-880.
- Schwartz, S. J., Park, I. J. K., Huynh, Q., Zamboanga, B. L., Umaña-Taylor, A., Lee, R. M., Rodriguez, L., Kim, S. Y., Whitbourne, S. K., Castillo, L. G., Weisskirch, R. S., Vazsonyi, A. T., Williams, M. K., & Agocha, V. B. (in press). The American Identity Measure: Development and validation across ethnic group and immigrant generation. *Identity: An International Journal of Theory and Research*.
- Schwartz, S. J., Zamboanga, B. L., & Weisskirch, R. S. (2008). Broadening the study of the self: Integrating the study of personal identity and cultural identity. *Social and Personality Psychology Compass, 2*, 635-651.
- Smith, T. B., & Silva, L. (2011). Ethnic identity and personal well-being of people of color: A meta-analysis. *Journal of Counseling Psychology, 58*, 42-60.
- Solomontos-Kountouri, O., & Hurry, J. (2008). Political, religious, and occupational identities in context: Placing identity status paradigm in context. *Journal of Adolescence, 31*, 241-258.
- Song, M. (2010). Does 'race' matter? A study of 'mixed race' siblings' identifications. *The Sociological Review, 58*, 265-285.
- Spencer, M. B. (2011). American identity: Impact of youths' differential experiences in society on their attachment to American ideals. *Applied Developmental Science, 15*, 61-69.
- Spencer, M. B., Icard, L. D., Harachi, T. W., Catalano, R. F., & Oxford, M. (2000). Ethnic identity among monoracial and multiracial early adolescents. *Journal of Early Adolescence, 20*, 365-387.

- St. Louis, G. R., & Liem, J. H. (2005). Ego identity, ethnic identity, and the psychosocial well-being of ethnic minority and majority college students. *Identity: An International Journal of Theory and Research*, 5, 227-246.
- Stonequist, E. V. (1937). *The marginal man: A study in personality and culture conflict*. New York: Wiley.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge University Press: New York.
- Thorbecke, W. L., & Grotevant, H. D. (1982). Gender differences in adolescent interpersonal identity formation. *Journal of Youth and Adolescence*, 11, 479-482.
- Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of Adolescence*, 27, 139-146.
- Umaña-Taylor, A. J., Alfaro, E. C., Bámaca, M. Y., & Guimond, A. (2009). The central role of familial ethnic socialization in Latino adolescents' cultural orientation. *Journal of Marriage and Family*, 71, 46-60.
- Umaña-Taylor, A. J., Bhanot, R., & Shin, N. (2006). Ethnic identity formation during adolescence: The critical role of families. *Journal of Family Issues*, 27, 390-414.
- Umaña-Taylor, A. J., Gonzales-Backen, M. A., & Guimond, A. B. (2009). Latino adolescents' ethnic identity: Is there a developmental progression and does growth in ethnic identity predict growth in self-esteem? *Child Development*, 80, 391-405.
- Umaña-Taylor, A. J., Updegraff, K., & Gonzales-Backen, M. A. (2011). Mexican-origin Adolescent Mothers' Stress and Psychosocial Functioning: Examining Ethnic Identity Affirmation and Familism as Moderators. *Journal of Youth and Adolescence*, 40, 140-157.
- Waterman, A. S. (2007). Doing well: The relationship of identity status to three conceptions of well-being. *Identity: An International Journal of Theory and Research*, 7, 289-307.
- Waterman, A. S., Geary, P. S., & Waterman, C. K. (1974). Longitudinal study of changes in ego identity status from the freshman to the senior year at college. *Developmental Psychology*, 10, 387-392.

- Waterman, A. S., & Waterman, C. K. (1970). The relationship between ego identity status and satisfaction with college. *The Journal of Educational Research, 64*, 165-168.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with non-normal variables: Problems and remedies. In R. Hoyle (Ed.), *Structural equation modeling: Concepts, Issues and Applications* (pp. 56-75). Newbury Park, CA: Sage.
- Yip, T. (2005). Sources of situation variation in ethnic identity and psychological well-being: A palm pilot study of Chinese American students. *Personality and Social Psychology Bulletin, 31*, 1603-1616.
- Zamboanga, B. L., Schwartz, S. J., Van Tyne, K., Ham, L. S., Olthuis, J. V., Huang, S. Kim, S. Y., Hudson, M., Forthun, L. F., & Weisskirch, R. (2010). Drinking game behaviors among college students: How often and how much? *The American Journal of Drug and Alcohol Abuse, 36*, 175-179.

Table 1

*Cronbach's alpha of Study 1 measures by ethnicity, sex, and nativity.*

Group	Ego Identity		Ethnic Identity		American Identity	
	Integration	Confusion	Exploration	Commitment	Exploration	Commitment
Ethnicity						
African American	.84	.81	.78	.92	.70	.93
Asian American	.80	.78	.77	.91	.72	.92
European American	.80	.78	.78	.92	.73	.93
Latino	.82	.81	.77	.92	.72	.92
Sex						
Female	.81	.79	.77	.92	.72	.93
Male	.82	.80	.80	.92	.76	.93
Nativity						
U.S.-born	.81	.79	.78	.92	.73	.93
Foreign-born	.83	.81	.76	.92	.74	.93

Table 2

*Correlations of Study 1 variables (sample size in parentheses).*

	1	2	3	4	5	6	<i>M</i>	<i>SD</i>
1. Age	--						19.77	1.61
2. Ego Identity Integration	.03* (7,686)	--					2.93	.69
3. Ego Identity Confusion	-.05** (7,685)	-.49** (7,668)	--				1.69	.82
4. Ethnic Identity Exploration	.01 (8,322)	.15** (7,495)	.05** (7,498)	--			3.19	.92
5. Ethnic Identity Commitment	.01 (8,308)	.29** (7,485)	-.08** (7,484)	.67** (8,297)	--		3.86	.88
6. American Identity Exploration	-.03* (8,205)	.27** (7,410)	-.01 (7,411)	.41** (8,160)	.31** (8,152)	--	3.64	.79
7. American Identity Commitment	-.02 (8,197)	.38** (7,404)	-.12** (7,404)	.16** (8,145)	.33** (8,136)	.61** (8,174)	4.12	.81

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

Table 3

*Study 1 model fit statistics for latent profile solutions for total sample.*

No. of profiles	No. of free parameters	AIC	BIC	A-BIC	VLMR <i>p</i> value	Entropy
1	12	117730.17	117814.78	117776.64	--	--
2	19	111344.81	111478.77	111418.39	< .001	.68
3	26	109223.39	109406.70	109324.08	< .001	.69
4	33	107462.54	107695.20	107590.33	< .001	.72
5	40	106106.61	106388.63	106261.51	< .001	.76
6	47	104954.56	105285.93	105136.57	< .001	.77
7	54	104234.86	104615.58	104443.98	.04	.75
<b>8</b>	<b>61</b>	<b>103526.98</b>	<b>103957.06</b>	<b>103763.21</b>	<b>.01</b>	<b>.77</b>
9	68	102853.10	103332.53	103116.44	.06	.75

*Note:* Fit statistics for the best fitting model are in bold.

Table 4  
*Descriptive statistics for latent profiles for Study 1.*

	Total Sample		Latent profiles															
			Pre-encounter		Approaching		Bicultural-ethnic		Ethnic-focused		Bicultural-American		American-focused		Bicultural-foreclosed		Integrated	
Prevalence			2.8% (n = 236)		20.3% (n = 1,729)		17.5% (n = 1,490)		5.1% (n = 435)		15.6% (n = 1,330)		4.0% (n = 344)		8.8% (n = 747)		25.9% (n = 2,211)	
Indicators	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Ethnic identity exploration	3.19	.92	1.91	.08	2.75	.03	3.62	.06	3.78	.06	2.74	.04	1.60	.04	2.62	.09	4.04	.04
Ethnic identity commitment	3.86	.88	2.27	.08	3.19	.03	4.16	.05	4.54	.05	3.37	.06	2.00	.07	4.28	.05	4.69	.01
American identity exploration	3.64	.79	2.26	.07	3.09	.03	3.61	.03	2.87	.06	3.96	.04	3.60	.07	3.15	.14	4.40	.02
American identity commitment	4.12	.81	2.28	.08	3.35	.04	3.94	.05	2.79	.09	4.62	.03	4.42	.06	4.57	.05	4.82	.01
Ego identity integration	2.93	.69	2.16	.09	2.51	.02	2.77	.06	2.86	.08	2.99	.03	2.97	.05	3.26	.05	3.30	.02
Ego identity confusion	1.69	.82	1.80	.06	1.90	.03	1.91	.08	1.67	.07	1.66	.04	1.61	.06	1.27	.07	1.55	.01



Table 5

*Frequency of subjects categorized in each ego-social identity profile by ethnicity, sex, and nativity.*

	Pre-encounter	Approaching	Bicultural-ethnic	Ethnic-focused	Bicultural-American	American-focused	Bicultural-foreclosed	Integrated
Ethnicity								
African American <sup>a</sup> ( <i>n</i> = 698)	2.6% ( <i>n</i> = 18)	16.4% <sup>c</sup> ( <i>n</i> = 112)	25.8% <sup>bd</sup> ( <i>n</i> = 180)	10.7% <sup>b</sup> ( <i>n</i> = 75)	6.2% <sup>bd</sup> ( <i>n</i> = 43)	0.4% <sup>bcd</sup> ( <i>n</i> = 3)	6.2% <sup>bd</sup> ( <i>n</i> = 43)	32.1% <sup>cd</sup> ( <i>n</i> = 224)
European American <sup>b</sup> ( <i>n</i> = 5,513)	2.9% ( <i>n</i> = 162)	19.7% <sup>c</sup> ( <i>n</i> = 1,084)	13.9% <sup>acd</sup> ( <i>n</i> = 764)	2.1% <sup>acd</sup> ( <i>n</i> = 114)	19.2% <sup>acd</sup> ( <i>n</i> = 1,059)	5.2% <sup>acd</sup> ( <i>n</i> = 285)	9.3% <sup>acd</sup> ( <i>n</i> = 514)	27.8% <sup>c</sup> ( <i>n</i> = 1,531)
Asian American <sup>c</sup> ( <i>n</i> = 1,196)	3.1% ( <i>n</i> = 37)	27.7% <sup>abd</sup> ( <i>n</i> = 331)	26.8% <sup>bd</sup> ( <i>n</i> = 320)	11.7% <sup>b</sup> ( <i>n</i> = 140)	8.6% <sup>b</sup> ( <i>n</i> = 103)	2.1% <sup>ab</sup> ( <i>n</i> = 25)	4.5% <sup>bd</sup> ( <i>n</i> = 54)	15.6% <sup>abd</sup> ( <i>n</i> = 186)
Latino <sup>d</sup> ( <i>n</i> = 1,115)	1.7% ( <i>n</i> = 19)	18.1% <sup>c</sup> ( <i>n</i> = 202)	20.3% <sup>abc</sup> ( <i>n</i> = 226)	9.5% <sup>b</sup> ( <i>n</i> = 106)	11.2% <sup>ab</sup> ( <i>n</i> = 125)	2.8% <sup>ab</sup> ( <i>n</i> = 31)	12.2% <sup>abc</sup> ( <i>n</i> = 136)	24.2% <sup>ac</sup> ( <i>n</i> = 270)
Sex								
Female <sup>a</sup> ( <i>n</i> = 6,203)	2.7% ( <i>n</i> = 167)	20.0% ( <i>n</i> = 1,240)	17.2% ( <i>n</i> = 1,064)	5.4% <sup>b</sup> ( <i>n</i> = 332)	15.7% ( <i>n</i> = 975)	4.1% ( <i>n</i> = 256)	9.6% <sup>b</sup> ( <i>n</i> = 596)	25.4% <sup>b</sup> ( <i>n</i> = 1,573)
Male <sup>b</sup> ( <i>n</i> = 2,289)	3.0% ( <i>n</i> = 69)	21.3% ( <i>n</i> = 487)	18.3% ( <i>n</i> = 419)	4.3% <sup>a</sup> ( <i>n</i> = 98)	15.3% ( <i>n</i> = 351)	3.8% ( <i>n</i> = 87)	6.4% <sup>a</sup> ( <i>n</i> = 147)	27.6% <sup>a</sup> ( <i>n</i> = 631)
Nativity								
U.S.-born <sup>a</sup> ( <i>n</i> = 7,462)	2.6% <sup>b</sup> ( <i>n</i> = 196)	20.0% ( <i>n</i> = 1,495)	16.7% <sup>b</sup> ( <i>n</i> = 1,245)	3.4% <sup>b</sup> ( <i>n</i> = 251)	16.8% <sup>b</sup> ( <i>n</i> = 1,254)	4.3% <sup>b</sup> ( <i>n</i> = 323)	9.3% <sup>b</sup> ( <i>n</i> = 695)	26.8% <sup>b</sup> ( <i>n</i> = 2,003)
Foreign-born <sup>b</sup> ( <i>n</i> = 1,039)	3.8% <sup>a</sup> ( <i>n</i> = 40)	22.0% ( <i>n</i> = 229)	22.9% <sup>a</sup> ( <i>n</i> = 238)	17.7% <sup>a</sup> ( <i>n</i> = 184)	7.2% <sup>a</sup> ( <i>n</i> = 75)	1.9% <sup>a</sup> ( <i>n</i> = 20)	4.8% <sup>a</sup> ( <i>n</i> = 50)	19.5% <sup>a</sup> ( <i>n</i> = 203)

*Note:* Superscripts denote column proportions that significantly differ at the adjusted  $p < .05$  level.

Table 6

*Age differences by ego-social identity profile.*

Ego-social identity profile	Age	
	<i>M</i>	<i>SD</i>
Pre-encounter <sup>a</sup>	19.98	1.78
Approaching	19.75	1.56
Bicultural-ethnic <sup>b</sup>	19.83	1.61
Ethnic-focused	19.75	1.70
Bicultural-American	19.75	1.62
American-focused <sup>abc</sup>	19.46	1.47
Bicultural-foreclosed <sup>c</sup>	19.93	1.65
Integrated	19.73	1.61

*Note:* Profiles with the same superscripts have means that significantly differ at the adjusted  $p < .05$  level.

Table 7

*Correlations of Study 2 variables (sample size in parentheses).*

	1	2	3	4	5	6	7	8	<i>M</i>	<i>SD</i>
1. Ego Identity Integration	--								3.96	.72
2. Ego Identity Confusion	-.46*** (347)	--							2.60	.84
3. Ethnic Identity Exploration	.18** (334)	.04 (335)	--						2.84	.94
4. Ethnic Identity Commitment	.30** (334)	-.06 (336)	.73*** (372)	--					3.48	.97
5. American Identity Exploration	.23*** (332)	-.02 (333)	.32*** (372)	.24*** (373)	--				3.66	.82
6. American Identity Commitment	.34*** (333)	-.12* (335)	.12* (373)	.31*** (374)	.57*** (374)	--			4.19	.84
7. College Grades	.05 (345)	-.05 (347)	.08 (378)	.10 (379)	.12* (372)	-.05 (375)	--		6.65	1.02
8. Percent Latino	.03 (343)	-.02 (345)	.03 (377)	.01 (378)	-.15** (370)	-.03 (373)	-.01 (394)	--	18.19	15.22
9. Percent European American	.00 (343)	-.02 (345)	.03 (377)	.04 (378)	.19*** (370)	.05 (373)	.05 (394)	.05 (394)	55.07	19.50

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

Table 8

*Study 2 model fit statistics for latent profile solutions.*

No. of profiles	No. of free parameters	AIC	BIC	A-BIC	VLMR <i>p</i> value	Entropy
1	12	5598.31	5646.08	5608.01	--	--
<b>2</b>	<b>19</b>	<b>5336.31</b>	<b>5411.96</b>	<b>5351.67</b>	<b>&lt; .001</b>	<b>.68</b>
3	26	5235.06	5338.58	5256.08	.34	.70

*Note:* Fit statistics for the best fitting model are in bold.

Table 9  
*Descriptive statistics for latent profiles for Study 2 (N = 396).*

	Total Sample		Latent profiles			
			Approaching		Integrated	
Prevalence			46.7%		53.3%	
			<i>(n = 185)</i>		<i>(n = 211)</i>	
Indicators	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Ethnic identity exploration	2.84	.94	2.22	.11	3.44	.07
Ethnic identity commitment	3.48	.97	2.78	.12	4.16	.04
American identity exploration	3.66	.82	3.31	.07	3.99	.06
American identity commitment	4.19	.84	3.88	.09	4.50	.05
Ego identity integration	3.96	.72	3.71	.09	4.19	.04
Ego identity confusion	2.60	.84	2.72	.09	2.50	.05

Table 10

*Ego-social identity profile membership by preferred ethnic label (N = 396).*

	Approaching	Integrated
Prevalence	46.5% (n = 184)	53.5% (n = 212)
Membership Likelihood of Integrated Profile with Approaching Profile as the Reference Group		
Covariates:	<i>B</i>	<i>SE</i>
European American	.12	.27
Latino	.45	.99
Biethnic	.17	.38

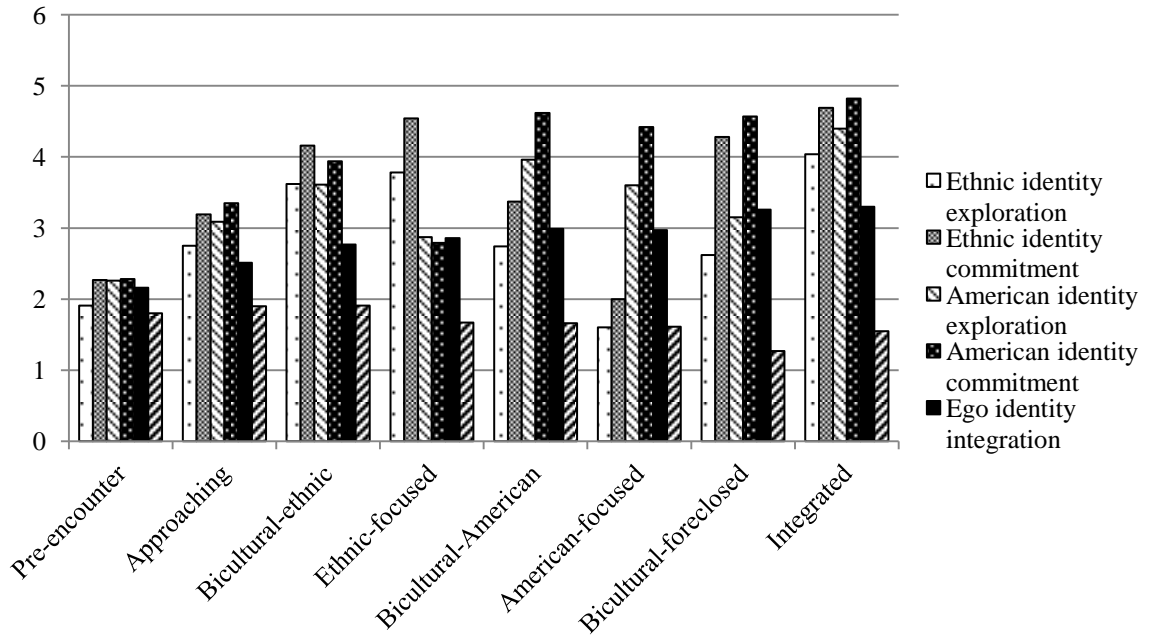
Table 11

*University ethnic composition predicting college grades by ego-social identity profile (N = 397).*

		Restricted Model			Full Model					
		Proportion	$\beta$	SE	Log Likelihood	Proportion	$\beta$	SE	Log Likelihood	$\chi^2$ Difference*
Independent Variable: Latino Proportion of University Student Body										
					-3183.25				-3183.16	1.00
Approaching	47.4% (n = 188)	-.01	.04		46.9% (n = 186)	.02	.06			
Integrated	52.6% (n = 209)	-.02	.05		53.1% (n = 211)	-.03	.07			
Independent Variable: European American Proportion of University Student Body										
					-3182.80				-3182.79	1.00
Approaching	47.1% (n = 187)	.04	.04		47.1% (n = 187)	.05	.08			
Integrated	52.9% (n = 210)	.06	.06		52.9% (n = 210)	.05	.08			

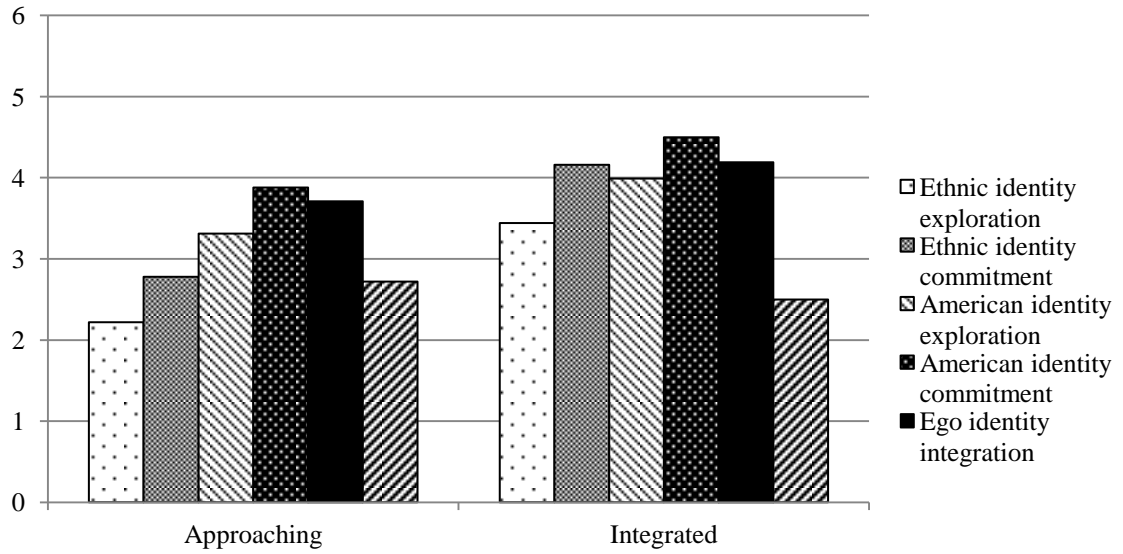
*Note:* The association between university ethnic composition and college grades was held constant across latent profiles in the restricted models and allowed to vary across latent profiles in the full models. The variance of college grades was allowed to vary across profile in all models.

\**df* = 1.



*Figure 1.* Estimated means of indicators of latent ego-social identity profiles from Study 1. Ethnic identity exploration and commitment and American identity exploration and commitment are on a 1-5 Likert scale. Ego identity integration and confusion are on a 0-4 Likert scale.





*Figure 2.* Estimated means of indicators of latent ego-social identity profiles from Study 2. Ethnic identity exploration and commitment and American identity exploration and commitment are on a 1-5 Likert scale. Ego identity integration and confusion are on a 0-4 Likert scale.