IDENTITY STABILITY AND CHANGE AMONG ETHNIC MINORITY

ADOLESCENTS AND THE DYNAMICS OF STIGMA AND IDENTITY IN THE

CONTEXT OF SCHOOLS AND ACADEMIC ACHIEVEMENT

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IDENTITY STABILITY AND CHANGE AMONG ETHNIC MINORITY ADOLESCENTS AND THE DYNAMICS OF STIGMA AND IDENTITY IN THE CONTEXT OF SCHOOLS AND ACADEMIC ACHIEVEMENT

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A range of conceptual models exist relating to stigma and identity. However, only recently have simultaneous advancements in both design and analytic strategy made it possible to test these dynamic multifaceted theories. Capitalizing on person-centered, repeated measures designs and multilevel analytic strategies, this dissertation examines factors influencing changes in identity over time, and explores the dynamics of stigma and identity in the context of schools and academic achievement. Study 1 considers the effects of discrimination and national identity on trajectories of ethnic identity among Latino college students. Findings from this study suggest that discrimination is positively associated with changes in ethnic identity among students with a weaker national identity, but negatively associated with ethnic identity among students with a stronger national identity. Furthermore, a main effect was also observed such that national identity was associated with greater increases in ethnic identity over time. Study 2 considers the election of Barack Obama as a discrete event influencing the racial identity of African American college students. Findings from this study indicate that the election stimulated identity exploration and had important immediate and longer-term influences on racial identity. Furthermore, identity exploration immediately following the election was an important predictor of longer term identity change. Study 3 addresses a foundation question relating to stigma and

identity in school contexts by exploring the longitudinal association between academic achievement and social acceptance across ethnic groups in a nationally representative sample of adolescents. Results show that African American and Native American adolescents experience greater social costs with academic success than Whites. Pertaining to school context, findings suggest that the differential social consequences of achievement experienced by African Americans are greatest in more highly achieving schools, but only when these schools have a smaller percentage of Black students. Students from Mexican decent also showed differential social costs with achievement in particular school contexts. This study provides a reminder that racial dynamics are important within schools and should not be ignored.

BIOGRAPHICAL SKETCH

Thomas Fuller-Rowell attended the University of Colorado at Boulder, where he received a B.A. in Biochemistry and Psychology in 2003 with interdisciplinary and psychology honors (summa cum laude). He then worked full time as a community outreach specialist for a civil rights organization in Buffalo, New York before beginning graduate work in the Department of Human Development at Cornell University. He received a masters degree in Human Development in 2007, and a doctorate in Developmental Psychology in 2010, both from Cornell University. Dr. Fuller-Rowell will start a postdoctoral position in the Developmental Psychology Program at the University of Michigan in January 2010.

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CHAPTER 1

NATIONAL IDENTITY AND PERCEIVED DISCRIMINATION AS PREDICTORS

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Abstract

The current study tests the effects of discrimination and national identity on trajectories of ethnic identity among Latino college students. Ethnic identity was measured longitudinally across seven consecutive semesters. Findings indicate the effects of perceived discrimination on ethnic identity are conditioned by national identity. Specifically, discrimination was positively associated with changes in ethnic identity among students with a weaker national identity, but negatively associated with ethnic identity among students with a stronger national identity. Furthermore, higher levels of national identity were positively associated with changes in ethnic identity over time.

Introduction

Ethnic identity plays an important role in the adjustment and well-being of ethnic minority adolescents and youth (Phinney, 1990). Focusing on a sample of Latino college students, the current study considers the effects of two important constructs on the development of ethnic identity over time: (1) perceived discrimination and (2) national identity. In line with acculturation research, the current study defines ethnic identity as a person's psychological affiliation to their cultural heritage, while national identity is defined as a person's psychological affiliation to their country of residence (David & Bar-Tal, 2009; Phinney, Horenczyk, Liebkind, & Vedder, 2001).

A range of research has considered the effects of discrimination on ethnic identity (e.g., Branscombe, Schmitt, & Harvey 1999; Cross, 1991). However, the role of national identity in determining the effect of perceived discrimination has not been explored, despite evidence suggesting that how discrimination is perceived and experienced may be related to a person's identification with the majority group (Brown, 2000; Stangor, Sechrist, & Jost, 2001; Tajfel & Turner, 1986). The current study seeks to address this gap in the literature. Furthermore, the direct effects of national identity on the development of ethnic identity were also explored.

Discrimination and Ethnic Identity

Discrimination is a frequent experience in the lives of Latino adolescents and emerging adults (Cabrera & Nora, 1994; Greene, Way, & Pahl, 2006; Nora & Cabrera, 1996; Portes, 1990; Portes & Rumbaut, 2001). However, little clarity exists relating to the effects of discrimination on ethnic identity among Latinos. The rejection-identification model introduced by Branscombe, Schmitt, and Harvey (1999), offers one perspective on this relationship, suggesting that experiences of discrimination may lead to increases in ethnic identity over time. Furthermore, empirical research in support of this model has shown that discrimination is associated with higher levels of ethnic identity among African Americans and other stigmatized groups (Branscombe et al., 1999; Garstka, Schmitt, Branscombe, & Hummert, 2004; Jetten, Branscombe, Schmitt, & Spears, 2001; Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Schmitt, Spears, & Branscombe, 2003). However, an association between discrimination and ethnic identity has not been found among Latinos. Paul and Way (2006), for example, found that, although discrimination was associated with increases in ethnic identity among African Americans, discrimination was not significantly associated with changes in ethnic identity among Latinos. Similarly, a recent study of Latino adolescents also found no direct relationship between discrimination and ethnic

identity (Armenta & Hunt, 2009). Although these findings suggest that discrimination has very little effect on ethnic identity development among Latinos, it is possible that the effects are masked by individual differences.

For example, foundational theories suggest that individuals vary in their responses to discrimination (Alport, 1954; Tajfel & Turner, 1986). Along these lines, Allport (1954) details various possible psychological responses to being a member of a minority group that is devalued or discriminated against by the larger society. Specifically, Allport describes responses to discrimination fitting into two broad categories: intropunitive and extropunitive (p. 160). Intropunitive responses are said to be associated with self-blame, in-group blame, and group disidentification, whereas extropunitive responses are associated with increased group identification, and anger or hostility towards the dominant group (Alport, 1954).

Building on this perspective, social identity theory (Tajfel & Turner, 1986) also suggests diversity in responses to discrimination. In particular, empirical research demonstrates that the effects of discrimination on ethnic identity are moderated by individual factors, such as the perceived stability or legitimacy of group relations (Brown, 2000; Hogg, 2003). While these findings offer support for specific aspects of social identity theory, national identity has not been explored as a moderator of discrimination, despite important implications of this construct to acculturation theory and to the adjustment of minority and immigrant youth (e.g., Berry, Phinney, Sam, & Vedder, 2006; Phinney et al., 2001). The current study will therefore explore the effects of discrimination on changes in ethnic identity, and assess national identity as a predictor of variability in this relationship.

Important research provides insight into the role that national identity might play in modifying the effects of discrimination on ethnic identity. Specifically, theory and research suggests that the perspectives and preferences of in-group members have

a greater influence on beliefs than the perspectives of out-group members (Brown, 2000; Stangor et al., 2001; Tajfel & Turner, 1986). For example, Stanger and colleagues (2001) have shown that when students are exposed to the perspectives of other students who attend the same college, they show greater change in their own attitudes than when they are exposed to the perspectives of students from a rival college. Extending this work, we expect that the more individuals identify as American (i.e. have a strong national identity), the more damage discrimination (inflicted by Americans) would be expected to have on the maintenance and development of their ethnic self-concept. Based on these premises, we therefore hypothesize that individuals with a strong national identity will tend to identify less strongly with their ethnic group over time in response to discrimination; however, those with a weak national identity will be expected to follow the rejection-identification model, and identify more strongly with their ethnic group in response to discrimination (Branscombe et al., 1999). A conceptual model depicting the hypothesized relationship between discrimination and ethnic identity with national identity as a moderator is shown in Figure 1.1. The negative path on the figure (relating to the moderating effects of national identity) elucidates our expectation that higher levels of national identity will be associated with a more negative (or less positive) association between discrimination and ethnic identity.

```
Discrimination                      Δ Ethnic Identity

              -
                         +
National Identity
```
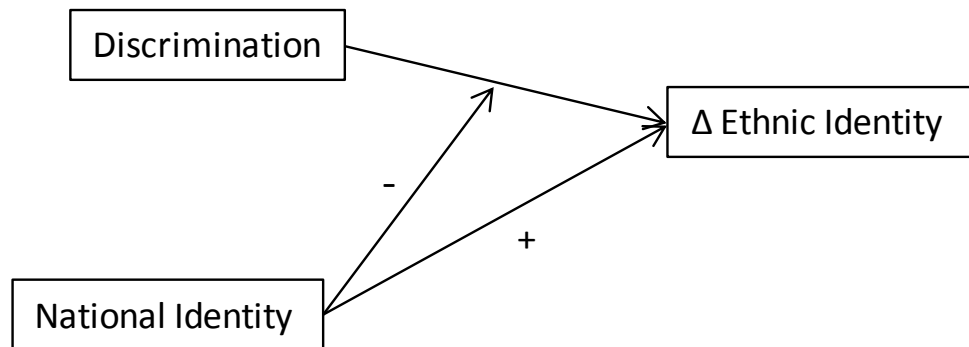
Figure 1.1. Conceptual model depicting the hypothesized effects of discrimination and national identity on ethnic identity development.

Direct Effects of National Identity on Changes in Ethnic Identity

Studies on acculturation suggest that having a strong psychological affiliation with both ethnic and national cultures—an integrated or bicultural identity—is the most adaptive identity profile (Berry et al., 2006; Phinney et al., 2001; Phinney, Cantu, & Kurtz, 1997; LaFramboise, Coleman, & Gerton, 1993). However, the dynamics of developing or maintaining such an identity are not yet well understood (Amiot, de la Sablonnière, Terry, & Smith, 2007). Specifically, although ethnic and national orientations have been shown to represent unique dimensions (Ryder et al., 2000), the question of how national identity might directly effect the development of ethnic identity over time has not been explored, despite the importance of this question to understanding the acculturation and adaptation of Latinos and other minority groups (e.g., Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). To address this question, we will also consider the direct influence of national identity on the development of ethnic identity over time.

While we are not aware of any empirical research that has addressed this question, some theoretical perspectives are of direct relevance. For example, a range

of work suggests that the inherent "twoness" of maintaining a national identity alongside an ethnic identity is a fundamentally challenging predicament for minority youth (Cross, 1991; DuBois, 1903/1989, Lafromboise, et al., 1993; Phinney, 1990). Along these lines, research has suggested that the process of acculturating into a mainstream national culture may lead to decreases in ethnic identity (Amiot et al., 2007; Lambert, 1977; Lambert & Taylor 1983; Noels & Clement, 1996). However, other lines of work also suggest that, while balancing different identities may be a challenging task of adolescence and emerging adulthood, specific group identities need not be conflictual (Cross & Cross, 2007; Frable, 1997; Howard, 2000); and more specifically, national identity need not be in conflict with ethnic identity, especially in the context of a pluralistic society (Berry, 1997; Berry et al., 2006; Phinney, 2008; Verkuyten, 1997).

In addition to the idea that national identity may not hinder the development ethnic identity, another important consideration is that identification in one domain may actually be positively associated with identity development in other domains. Along these lines, one possibility is that individuals who have already developed a strong national identity may have more psychological resources to focus on ethnic identity development. Furthermore, foundational theory and research suggests that, regardless of domain, group identification is generally experienced as positive (Berry et al., 2006; Hogg, 2003; Lara et al., 2005; Phinney et al., 1997; Tajfel & Turner, 1986) and that positive experiences create a flexible psychological state (e.g., Isen, Niedenthal, & Cantor, 1992), which may be conducive to further identity development. In particular, research has suggested that positive affect leads to more expansive thinking (Isen, Johnson, Mertz, & Robinson, 1985; Isen, Daubman, & Nowicki, 1987) and to the broadening of "through-action repertoires" (Fredrickson & Joiner, 2002, p. 172). Moreover, empirical evidence also suggests that individuals

think more inclusively and reflectively about their social identifications following a positive experience (Isen, et al., 1992). Based on these perspectives—as well as on the more general multicultural perspective that national identity need not be in conflict with the development of ethnic identity—we hypothesize that national identity will contribute positively to the subsequent development of ethnic identity over time. The direct effects of national identity on the development of ethnic identity are depicted in Figure 1.1

Summary and Integration of Hypotheses

Overall, we have discussed two ways in which national identity can influence changes in ethnic identity (both depicted in Figure 1.1). Firstly, we have predicted that national identity moderates the relationship between discrimination and ethnic identity, such that individuals with a strong national identity will experience greater decreases (or less increases) in ethnic identity following experiences of discrimination. Additionally, we have also hypothesized that national identity will have a direct positive influence on the development of ethnic identity over time. Putting these two predictions together, we expect that at low levels of discrimination, the effects of strong national identity on ethnic identity will be entirely positive (because at low levels of discrimination the negative pathway from discrimination is not expected to have a substantial subtractive influence). However, at higher levels of discrimination we expect that the direct positive influence of national identity on ethnic identity will be cancelled out by the negative influence of discrimination on ethnic identity. At higher levels of discrimination, we therefore expect that changes in ethnic identity will not vary as greatly across individuals with different levels of national identity.

Methods

Participants

Participants in the current study were 101 first-time freshman college students (73% female; 83% US born) attending a large, ethnically diverse urban university in southern California. All participants self-identified as Hispanic or Latino. The majority of students reported that their ethnic background was Mexican (83%), while the remaining students reported that their ethnic background was either Central American (12%; primarily Guatemala, and El Salvador) or half Mexican and half Central American (5%). Parent education in the current sample ranged from no formal education (1) to some college education (6), with some high school education as the mean (M = 3.55). Participants were followed for four years.

Procedure

Participants were asked to complete a self-report questionnaire once each semester for eight consecutive semesters, starting with their first semester at college. Various background and trait measures, including gender, immigrant status, SES, and national identity were assessed in the initial questionnaire only, while other measures, including ethnic identity, were assessed longitudinally. Perceived discrimination at college was measured once, during the second semester of student's freshman year. For this reason, longitudinal analyses for the current investigation draw on seven waves of measurement, starting in the second semester of students' freshman year (when discrimination was measured) and going through students' senior year.

Measures

Ethnic identity. Ethnic identity was assessed each semester using the three item commitment subscale of the Revised Multi-group Ethnic Identity Measure (MEIM-R; Phinney & Ong, 2007). Ethnic identity commitment refers to the strength of an individual's ties with their ethnic group, and their sense of clarity surrounding the

meaning of their ethnic group membership (Phinney & Ong, 2007; Berzonsky, 2003).

Items for the subscale scale are, "I feel a strong attachment towards my own ethnic

group", "I have a strong sense of belonging to my own ethnic group", and "I

understand pretty well what my ethnic group membership means to me". Participants

reported on a five point scale how strongly they agree or disagree with each of the

items. Cronbach's α was between .85 and .88 across the seven waves used in our

analyses.

Discrimination. Perceptions of discrimination were assessed during the second

semester of participant's freshman year using three items. The items measured the

frequency with which students had been "treated negatively or unfairly because of

[their] race" by "other students", "professors/instructors", and "staff (office personnel,

administrators)" since arriving at college. Similar items have been used in previous

studies as valid measures of discrimination among Latino college students (Ancis,

Sedlacek, & Mohr, 2000; Cabrera, & Nora, 1994; Helm, Sedlacek, & Prieto, 1998;

Hurtado, Carter, & Spuler, 1996; Nora & Cabrera, 1996). Response options were on a

five point scale ranging from "never" (0) to "very frequently" (4). A sum score for the

three items was taken as an estimate of perceived discrimination. The three

discrimination items tended to be correlated such that the Cronbach's α of the three-

item scale was .79.

National Identity. National identity was assessed during in the first semester of

participant's freshman year, one semester prior to assessing experiences of

discrimination. Three items measured the degree to which participants endorse the

values of mainstream American society, and the degree to which they feel part of

American culture (Phinney & Devich-Navarro, 1997). Items were "I strongly endorse

the values of mainstream American culture", "I have a strong feeling of belonging to,

or being part of, American culture", and "I feel strongly attached to American society

or culture". Response options were on a five point scale ranging from "strongly disagree" (1) to "strongly agree" (5). A mean score was calculated from the three items such that higher scores indicated a stronger national identity. Cronbach's α of the scale was .86.

Demographics. SES, immigrant status, and gender were reported by participants in the initial questionnaire administered during their freshman year. SES was assessed from adolescent reports of their parents' levels of education on an eight point scale ranging from no formal education (1) to beyond a college education (8). Immigrant status was assessed through participant reports of whether they, and each of their parents, were born in the US. Sixteen percent of participants were foreign born (first generation). The majority of participants (74%) were born in the US and had parents who were born abroad (second generation), and a small number (7%) were born in the US and had parents who were also born in the US (third generation). Since there were only a small number of third generation immigrants in the sample, the immigrant status variable was dummy coded such that US born participants were coded as zero (second or third generation) and foreign born participants were coded as one (first generation). Gender was coded dichotomously with male coded as one.

Descriptive statistics for all study variables (before standardization) are shown in Table 1.1. All continuous variables (SES, national identity, and discrimination) were standardized to have a mean of 0 and a standard deviation of 1 before entering them in the models described below.

Table 1.1. Descriptive Statistics

Variables	Mean (%)	SD	Min	Max
Gender (1 = Male)	(27)		0	1
Immigrant Status (1 = Foreign Born)	(17)		0	1
SES	3.55	1.12	1	6
National Identity	3.63	.85	1.67	5.00
Discrimination	.89	1.29	0.00	4.00
Ethnic Identity	3.77	.93	1.00	5.00

Note. Descriptive statistics are based on the 97 individuals included in the final analyses. Background variables and national identity were measured in the initial survey. The discrimination and ethnic identity measures presented in the table were measured in the Wave 2 survey.

Analysis Overview

We tested our hypotheses using Multilevel Random Coefficient Modeling (Raudenbush & Bryk, 2002). A multilevel-modeling approach allows for the simultaneous estimation of within and between-person effects. At level 1 (within-person), outcomes are estimated as a function of time and time-varying covariates, and at level 2 (between-person), variability in the level 1 coefficients are modeled as a function of person-level time-invariant covariates. The strengths of this approach to longitudinal data analysis have been established, and are discussed in detail elsewhere (e.g., Raudenbush & Bryk, 2002; Singer &Willett, 2003).

Four models were estimated for the current study. An unconditional (null) model, with no predictors, was initially estimated in order to determine the proportion of variance in ethnic identity that could be attributed to within and between person differences, and to calculate an intraclass correlation coefficient. Next, a "slope only" model was estimated to test for a linear time trend in ethnic identity across the college years, and to determine the variance across individuals in this slope. Two conditional models where then estimated to test our primary questions of interest. First, a main effects model was estimated with national identity and discrimination as predictors of

the intercept and slope of ethnic identity. The purpose of this model was to determine the main effects of national identity and discrimination on ethnic identity development. Background and demographic variables (gender, SES, and immigrant status) were also controlled to account for their possible associations with ethnic identity. A final model then added an interaction term to determine whether the effects of discrimination on the slope of ethnic identity depend on national identity.

Participants in the study completed an average of approximately 5 of the 7 longitudinal surveys where ethnic identity was measured (M = 5.28, SD = 1.99). Missingness at level 1 (number of questionnaires out of seven that were not completed) was not associated with any of the demographic or substantive variables of interest (all zero-order correlations were non-significant). At level 2, nine subjects had missing data on one or more of the variables of interest (immigrant status, SES, national identity, or perceived discrimination). To avoid the exclusion of all of these cases from the analysis (through listwise deletion), missing data at level 2 was imputed using pattern matching (Jöreskog & Sörbom, 1996-2002). This procedure involves matching missing-value cases with a subset of subjects that have a similar pattern of responses on non-missing variables (Kline, 2005). The matched cases are then used to substitute each missing value when enough similar cases are available to accurately do so. After this procedure was implemented, 97 individuals could be included in the final analyses. Imputation was conducted using PRELIS (Jöreskog & Sörbom, 1996-2002), and multilevel models were estimated using HLM (Raudenbush, Bryk, Cheong, & Congdon, 2004).

Results

Establishing Unconditional Trajectories and Variance Components

In order to obtain the variance components necessary to calculate an intra-class correlation coefficient (ICC), an unconditional (null) model was initially estimated.

The ICC is calculated from the null model by dividing the between-person (intercept) variance (.496) by the total variance (.795). The ICC for ethnic identity in the current sample was .62. This suggests that the remaining 38% of the total variability in ethnic identity can be accounted for by within-person changes across time. Thus, within-person measures of ethnic identity showed sufficient variability to allow for the possibility of modeling a linear slope parameter.

A "slope only" model was estimated by adding a linear time parameter to the model at level 1. Each unit of time was defined to be 1 year (2 semesters). Results from this model suggested that, on average, no significant overall increase in ethnic identity occurred across the study period (B = .033, SE = .032, ns). However, the random slope coefficient showed significant variability in the slope across individuals (U1 = .036, SE = .014, p < .05), suggesting that variance in the slope could be modeled as a function of person-level covariates. All models (except the null model, reported above) are shown in Table 1.2. Nonlinearity in trajectories was also explored by entering quadratic and cubic growth factors at level 1. None of these effects were found to be significant, suggesting that a linear random slope model was the most appropriate model.

Table 1.2. Multilevel Parameter Estimates for Ethnic Identity

	Unconditional Slope Model	Conditional Model 1	Conditional Model 2
	B(SE)	B(SE)	B(SE)
Initial Status:			
Intercept	3.79(.085)***	3.84(.107)***	3.84(.107)***
Gender	-	-.093(.197)	-.089(.197)
Immigrant status	-	-.097(.233)	-.095(.232)
SES	-	-.160(.088)	-.159(.088)
Discrimination	-	-.016(.089)	.010(.087)
National Identity	-	-.065(.088)	-.016(.089)
Slope:			
Intercept	.033(.032)	.040(.039)	.033(.038)
Gender	-	.070 (.076)	.082 (.073)
Immigrant status	-	-.174(.089)*	-.185(.086)*
SES	-	-.017(.032)	-.022(.031)
Discrimination	-	.021(.033)	.016(.032)
National Identity	-	.089(.032)**	.075(.031)*
Discrim.X Nat.Identity	-	-	-.065(.031)*
Variance Components :			
Initial status	.547(.099)***	.516(.095)***	.513(.095)***
Slope	.036(.014)*	.027(.012)*	.020(.011)
Residual	.261	.261	.262

Note. Gender and immigrant status are dummy coded (female=0, male=1; US born=0, foreign born=1); all other predictors are standardized to have a mean of 0 and a standard deviation of 1. *$p < .05$. **$p < .01$. ***$p < .001$.

Effects of Discrimination on Ethnic Identity as a Function of National Identity

Having established variance components for the intercept and slope, conditional models were estimated to determine the effects of our variables of interest on trajectories of ethnic identity. Our first question was to consider the effects of discrimination on the development of ethnic identity and whether national identity might moderate this relationship. The second conditional model (shown in Table 1.2) was used to test these effects. In line with previous work in Latino populations, no overall effects of discrimination on the intercept or slope of ethnic identity were found

(intercept: B = -.016, SE = .089, ns; slope: B = .021, SE = .033, ns). However, as expected, the interaction between discrimination and national identity was found to have an important influence on the development of ethnic identity across the college years (B = -.065, SE = .031, p < .05). As depicted in Figure 1.2A, for those with a weak national identity (-1 SD), higher levels of discrimination (+1 SD) were positively associated with the development of ethnic identity over time (.065 units greater increase in ethnic identity per year). As shown in Figure 1.2B, however, for those with a strong national identity (+1 SD), higher level of discrimination (+1 SD) were negatively associated with changes in ethnic identity (.065 units less increase in ethnic identity per year). Interactions between discrimination and demographic variables (gender, SES, and immigrant status) were also explored but were not found to be significant.

The Direct Effects of National Identity on Development of Ethnic Identity

Our second question focused on whether national identity also had a direct effect on the development of ethnic identity. Parameter estimates from the first conditional model (shown in Table 1.2 as "Conditional Model 1") showed that while national identity was not related to initial levels of ethnic identity (B = -.065, SE = .088, ns), it was positively associated with changes in ethnic identity over time (B = .089, SE = .032, p < .01). Thus, on average, those with a stronger national identity (+1 SD) had .089 units greater increase in ethnic identity each year than those with an average national identity, and .178 units greater increase in ethnic identity each year than those with a weaker national identity (-1 SD).

(A) Low National Identity (-1 SD)
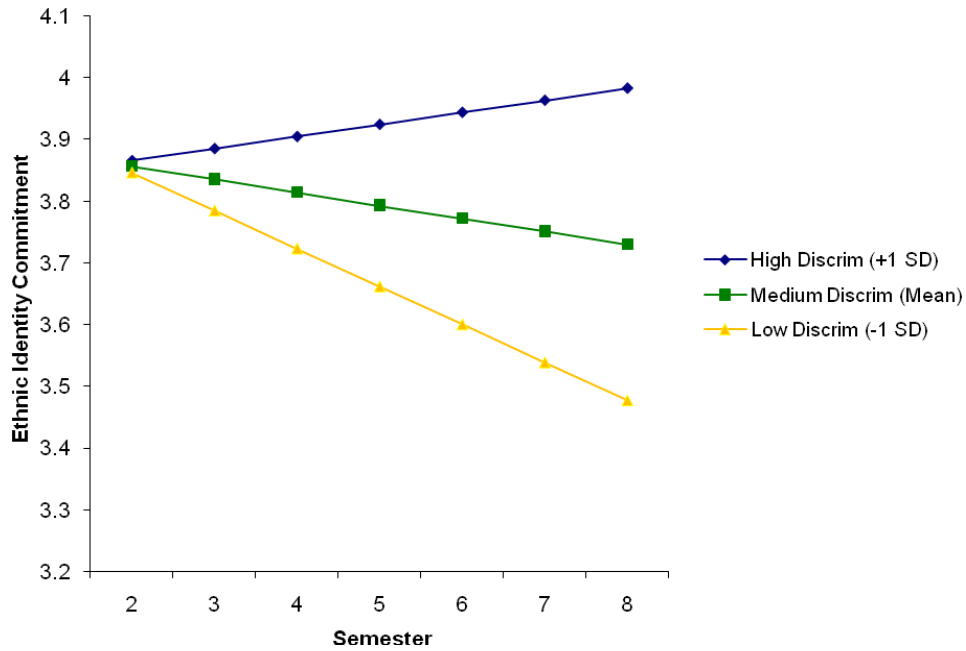
(B) High National Identity (+1 SD)
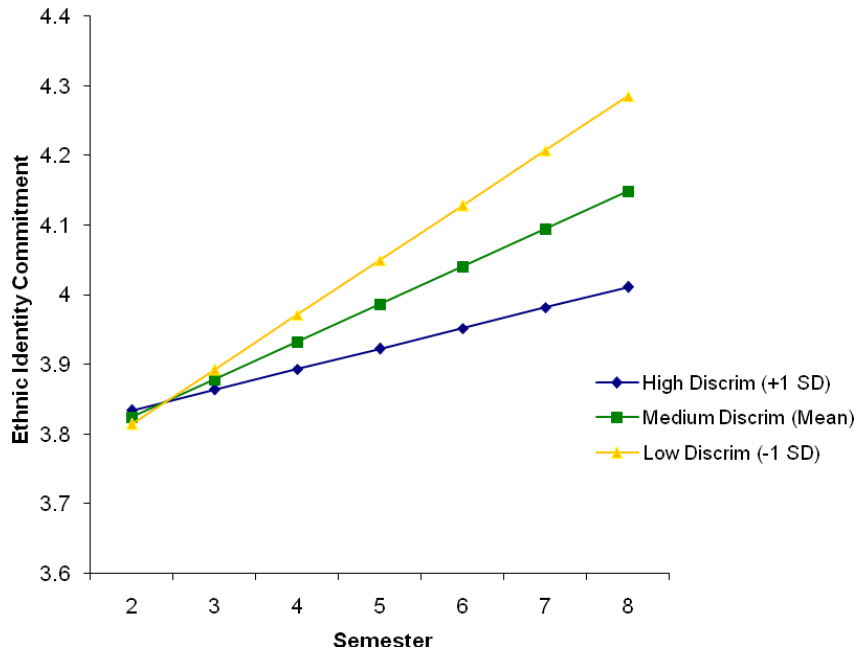
Figure 1.2. Fitted interaction plot depicting the effect of three levels of discrimination on the development of ethnic identity for those with (A) low national identity, and (B) high national identity.

While these findings suggest that national identity has a direct positive impact on the development of ethnic identity, it is also important to note that this direct effect operates alongside the indirect (moderated) effect. Specifically, since our overall model predicted that, at higher levels of discrimination, the direct positive influence of national identity on ethnic identity will be cancelled out by the negative influence of discrimination on ethnic identity, we predicted an increasingly small main effect at higher levels of discrimination. Our findings supported this prediction, and are evidenced in Figure 1.2 by the nearly identical slopes at high levels of discrimination for those with low levels of national identity (top line on Figure 1.2A) and high levels of national identity (bottom line on Figure 1.2B). On the other hand, at average and low levels of discrimination (bottom two lines on Figure 1.2A compared to top two lines on Figure 2B), the effects of national identity are highly significant (p's < .01).

While not the focus of this study, we also found a significant effect of immigrant status on the slope of ethnic identity (B = -.174, SE = .089, p < .05). The direction of this effect suggests that foreign born Latino students have less positive increases in ethnic identity across the college years. This finding is in line with previous work among late adolescent Latinos which has shown higher levels of ethnic identity among less recent immigrants (Ontai-Grzebik & Raffaelli, 2004).

Discussion

In order to expand current research on acculturation processes among Latinos, the current study explored the roles of national identity and perceived discrimination in the development of ethnic identity over time. First, we looked at the effects of discrimination on ethnic identity across this period and explored national identity as a possible factor that could explain variability in this relationship. We then sought to determine whether national identity has a positive influence on trajectories of ethnic identity across the college years.

Results of the study suggest that the influence of discrimination on ethnic identity is moderated by national identity. Specifically, as hypothesized, at low levels of national identity, the findings are consistent with the model proposed by Branscombe and colleagues (1999), which suggests a positive association between discrimination and ethnic identity. However, at high levels of national identity, an opposite trend was observed, such that discrimination was negatively associated with ethnic group identification. This later finding suggests support for earlier theories of minority responses to discrimination (Allport, 1954; Tajfel & Turner, 1986), which state that some individuals may disidentify (or identify less strongly) with their ethnic group in response to identity threat. Furthermore, as hypothesized, these finding are consistent with theory and research suggesting that in-group members have a greater influence on beliefs (including identity related beliefs) than out-group members (Brown, 2000; Stangor et al., 2001; Tajfel & Turner, 1986). Specifically, the current study demonstrated that discrimination tended to have a larger negative impact on the ethnic identification when individuals identified more strongly as American.

Results of the study also suggest that national identity has a direct positive influence on the development of ethnicity identity over time. Specifically, findings suggest that Latino students who started college with a stronger national identity increased more in their levels of ethnic identity across the college period than those who started with a weaker national identity. This finding undermines the notion that ethnic identity may be difficult to maintain over time when a strong national identity is also present. Additionally, since national identity does not seem to hinder the subsequent development of ethnic identity, the current findings leave intact the idea that an integration orientation towards acculturation, where individuals focus on developing connections to the mainstream national society while also maintaining and developing their ethnic identity, may be the most effective acculturation strategy

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(Berry, 2001; Berry et al., 2006). Furthermore, findings are consistent with the idea that positive identification in one identity domain leads to the further expansion of identity development in other domains. In particular, the main contribution of this aspect of the study was to establish that a stronger national identity is associated with more positive increases in ethnic identity over time. However, future research will be necessary to determine the reasons for this effect.

We suggest specific explanations for this relationship, which will be important for future research to address. In particular, we suggest that since social identification is thought to be experienced as positive (Hogg, 2003; Tajfel & Turner, 1986), it may result in more flexible, open-minded, and exploratory ways of thinking (Fredrickson & Joiner, 2002; Isen et al., 1992), which would be associated with more identity development across domains. Furthermore, we also note that an already developed identity in a frequently encountered social identity domain (i.e. American identity), may also free psychological resources for development within other domains (i.e. ethnic identity). Future research will be necessary to test these explanations for the positive effects of national identity the development of ethnic identity over time. Although the design of the study allowed for longitudinal investigation of the effects of national identity on subsequent changes in ethnic identity, since national identity was not measured longitudinally the opposite effects could not be explored. Future research should therefore also consider the effects of ethnic identity on the development of national identity over time. Such research would complement the current investigation by offering further insight into the mutual interdependence of ethnic and national identities.

Because of a lack of previous work demonstrating the importance of discrimination to ethnic identity development in Latino samples, one impetus for the current study was to explain variability in the effects of discrimination for Latinos.

While national identity was found to explain between-person differences in the effects of discrimination, a variety of further work in this area would be useful. Firstly, because the current study draws on data collected with late adolescents in one particular context (a diverse college campus), an important next step will be to determine the extent to which the current findings are present across other Latino samples in the United States (e.g., other college contexts, other age groups, other regions of the country, etc.) and elsewhere.

Equally important will be to test the stability of these findings across other ethnic groups. For example, although African American populations have, on average, shown stronger positive associations between discrimination and ethnic identity, given the current findings, it is possible that national identity could also serve as a moderator of discrimination for this group, as well as others. Finally, future studies should explore longer, more nuanced measures of discrimination in order to determine whether particular types or sources of discrimination might have differential effects.

Conclusions

The current study adds to an important literature on the identity development and acculturation of minority individuals. The two sets of findings presented suggest that national identity plays a multifaceted role in the development of ethnic identity over time. On the one hand, those with a strong national identity generally show more positive development in ethnic identity over time. On the other hand, however, a strong national identity is also associated with decreases (or less increases) in ethnic identity when racial discrimination is experienced. Taken together, these findings show that, under conditions of low discrimination, a strong national identity may be a very adaptive strategy, in the sense that it does not hinder the development of ethnic identity over time. However, in contexts where high levels of discrimination might be expected, a strong national identity may lead to adverse "intropunitive" reactions

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(Alport, 1954, p. 160) leading to less increases in ethnic identity. Future research will be important to validate and extend the findings of this study.

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CHAPTER 2

SHORT AND LONGER-TERM CHANGES IN RACIAL IDENTITY AMONG

AFRICAN AMERICAN COLLEGE STUDENTS FOLLOWING THE ELECTION

OF BARACK OBAMA

Abstract

The current study considers the election of Barack Obama as a discrete event influencing the racial identity of African American college students. In particular, we considered (1) the immediate influences of the election on racial identity exploration, (2) the extent to which exploration following the election depended on identity centrality, (3) the immediate and longer-term influences of the election on three components of racial identity (centrality, private regard, and public regard), and (4) the extent to which identity exploration immediately following the election influenced longer term identity change. Findings indicate that the election served as an "encounter" experience (Cross, 1991) that stimulated identity exploration. Furthermore, increases in exploration were most pronounced among individuals who reported higher levels of racial identity centrality prior to the election. With respect to immediate changes, levels of centrality, private regard, and public regard all substantially increased in the days following the election. However, five months after the election only public regard remained elevated above pre-election levels. While no overall changes in private regard and centrality were evident in the five month follow up, changes in both constructs were conditioned in expected ways by levels of exploration immediately following the election. The implications of these findings are discussed.

Introduction

Anecdotal evidence suggests that important race-related events can have a substantial influence on racial identity. For example, the death of Martin Luther King, Jr. was said to have stimulated profound changes in identity among many Black Americans and shifted the nature of race-relations in the United States (Cross, 1991, 1995; Dawson, 2001). While studies conducted after this period suggest that shifts in racial identity may have been taking place (e.g., Hraba & Grant, 1970; Mahan, 1976), to our knowledge no studies were conducted to empirically document these changes using longitudinal methods.

The 2008 presidential election—the election of Barack Obama as the first Black president of the United States—was perhaps an equally significant race-related event, offering another important opportunity to study the processes of identity change. Capitalizing on this event, the current study considers four questions relating to the election in a sample of African American college students: (1) did the election serve as an "encounter" experience (Cross, 1991) that stimulated identity exploration, (2) did identity characteristics measured prior to the election predict levels of identity exploration following the election, (3) did the election stimulate short term fluctuations or longer term changes in identity, and (4) what where the consequences of greater racial identity exploration on longer-term identity change? Such questions are of theoretical relevance to understanding the dynamics of social identity formation and change. Furthermore, the content of identity changes following the election is also of practical importance to understanding the current status of race-relations in the United States.

Identity Exploration: Theoretical Perspectives

Foundational theories of identity development (Erikson, 1963, 1968; Marcia, 1966, 1980) as well as leading models of racial and ethnic identity development (e.g.

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Cross, 1971, 1991; Helms, 1995; Phinney, 1990) emphasize the importance of identity exploration in healthy identity formation. Cross's Nigrescence model (1971, 1991) was born out of works on oppression and liberation struggle (e.g., Franz Fannon [1963, 1967]), and was developed to describe the psychological development of Black Americans as members of a devalued racial group. Overall Cross's model describes a process through which individuals move from having an unexamined low (and sometimes negative) emphasis on Black identity, to a high-emphasis, positive and internalized perspective. Since the model was originally presented (Cross, 1971), it has been revised and expanded (Cross, 1991; Cross 1995; Cross & Vandiver, 2001; Cross & Cross, 2008).

The current Nigrescence model describes various possible identities clustered within four stages: (1) pre-encounter, (2) encounter, (3) immersion/emersion, and (4) internalization. The first stage—pre-encounter—is often characterized by a tendency to deemphasize ones racial identity and is associated with three identity perspectives: *assimilation* (an orientation towards the dominant culture), *miseducation* (an internalized negative mindset about Black people in American) and *self-hatred* (negative views about being Black). The second stage—encounter—does not have specific set of identity perspectives associated with it, but rather discusses the transitional importance of life experiences that lead an individual to reexamine how they think about their race, and how they relate to both the dominant and Black cultures. The third stage—immersion/emersion—is described as a process of internal struggle and exploration stimulated by the experiences (or "encounters") associated with the previous stage. The immersion/emersion stage is characterized by *intense black involvement* and *anti-white* sentiments, where on the surface extreme perspectives are present, but on the inside an unresolved "in-between-ness" still exists. The final stage—internalization—is characterized by the process of crystallizing a

positive black identity. This stage is described as being associated with an *Afrocentric, multiculturalist, or biculturalist* identity. The individual with an *Afrocentric* identity is focused on empowering the black community from the inside, the *multiculturalist* is focused on building coalitions beyond the black community, and the *biculturalist* is focused on being active in one other identity domain in addition to their black identity (e.g. gender, sexuality). All three of these identities are characterized by a positive focus on being black.

While Cross's model was originally developed to describe identity conversions among adults, it has since also been applied to changes that take place from childhood to late adolescence (e.g., Spencer, 1995; Tatum, 1997). Along these lines, young children are discussed in relation to Cross's pre-encounter stage in the sense that they start out being naïve to the realities of discrimination and institutional racism. In their daily lives, children are then gradually exposed to various experiences relating to race. These experiences are interpreted through the perspectives of the family and other influential figures to create an initial system of meaning relating to race (still pre-encounter). During adolescence, individuals may then experience encounters that move them into a period of exploration (immersion-emersion) where they question the meaning systems given to them, and consider various other possible perspectives. While a range of identity exploration processes are likely to be still taking place during late adolescence, by this stage some individuals would be expected to have arrived at a racial identity that is at least partially internalized or achieved (Cross & Cross, 2008; Phinney, 1989, 1990; Phinney & Alipuria, 1990).

The process of identity development is not, however, complete when an "achieved" or "internalized" identity has been reached. In fact, because any individual's identity is only able to adequately interpret a finite set of experiences, individuals may have additional encounters which challenge their existing

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perspectives on race, and lead them to recycle back through the stages of identity development (Parham, 1989; Cross & Cross, 2008). In particular, specific important race-related events can push individuals back into a period of exploration, moratorium, or immersion, resulting in the modification of an existing racial identity, and the emergence of a newly internalized identity that is capable of more adequately interpreting a broader range of situations or events. In the current study, we predict that, as an important race-related event, the election of Barack Obama will tend to stimulate identity exploration among African American college students. In particular we hypothesize that levels of identity exploration will increase significantly in the days immediately following the election.

Identity Centrality as a Predictor of Exploration

The extent to which an important race-related event would be expected to influence identity exploration may also depend on identity centrality ("the extent to which a person normatively defines her or himself with regard to race" [Sellers, Rowley, Chavous, Shelton, & Smith, 1997, p. 806]). However, conflicting perspectives exist on the direction of this effect. Cross's Nigrescence model offers one perspective on this relationship suggesting that individuals whose identity does not emphasize race are more likely to experience an identity conversion, (characterized by a period of exploration or immersion into issues of race following an encounter; Cross, 1991, 1995; Cross & Cross, 2008). One possible interpretation of this theory is therefore that those who report lower levels of racial centrality, would be more likely to experience an important race-related event as an encounter, and therefore more likely to show increases in exploration immediately following the election.

However, another perspective on how identity centrality might influence exploration following an event is suggested by a social-cognitive perspective. This perspective views the self as a set of knowledge structures or self-schemas (Markus &

Wurf, 1987) within which specific domains of social identity can be activated by particular events or features of the social environment (Turner, Hogg, Oakes, Reicher, and Wetherell, 1987). Furthermore, the tendency of a particular domain of identity to be activated is thought to depend on the existing identity characteristics of the individual (McCall, & Simmons, 1978; Stryker & Serpe, 1982, 1994; Turner, Oakes, Haslam, & McGarty, 1994). For example, individuals who emphasize their racial identity as an important domain of their self-concept would be expected to be more likely to interpret events through a racial lens (Shelton & Sellers, 2000; Yip, 2008). In line with this perspective, research has shown that individuals with higher levels of racial centrality are more likely to attribute ambiguous negative events to racism (Operario and Fiske 2001; Sellers & Shelton, 2003; Shelton & Sellers, 2000), and more likely to report awareness of their race following everyday interactions (Aires et al., 1998; Yip, 2005). Following this logic, since individuals who normatively define themselves with respect to race would be more likely to interpret the events surrounding the election through a racial lens, these events would be more likely to stimulate exploration in the racial identity domain. Since identity conversions are thought to occur infrequently, and mostly beyond the late-adolescent period, we feel that this social-cognitive perspective is more likely to be operating in the current study than the identity conversion interpretation. We therefore expect that individuals with higher levels of centrality will show greater increases in exploration immediately following the election.

Influences of the Election on Racial Identity

Drawing on the Multidimensional Model of Racial Identity (Seller et al., 1997), the current study considers short and longer term changes in three established dimensions of racial identity among African Americans: centrality, private regard, and public regard. *Centrality*, as defined above, refers to "the extent to which a person

normatively defines her or himself with regard to race" and "[the extent to which] race is a core part of an individual's self-concept" (p. 806). Private and public regard are an individual's affective and evaluative judgments of her or his race. In particular, *private regard* is defined as "the extent to which individuals feel positively or negatively toward African Americans and their membership in that group" (p. 807), and *public regard* refers to the "the extent to which individuals feel that others view African Americans positively or negatively" (p. 807).

Changes in Identity

A range of perspectives exist relating to how racial identity may have been affected by the presidential election. Firstly, self-categorization theory suggests that important race-related events will tend to make race salient and thus activate the racial domain of the social self-concept (Turner, Oakes, Haslam, & McGarty, 1994). Based on this perspective, an event of historic racial significance such as the election of the first Black president in the United States, would be expected to lead to increases in reports of racial centrality. However, these increases would not be expected to be enduring, but rather a short term consequence of the racial-messages that individuals would be bombarded with in the days immediately following the election.

A second theoretical perspective suggests that the effects of the election on racial identity relate to its significance as a shift in the social power structure. In particular, social identity theory suggests that how an individual conceives of their group's status in relation to other groups influences their group identity (Tajfel & Turner, 1986; Hogg & Abrams, 1988). Along these lines, research has shown that increases in group power or status are associated with increases in group identification, and more positive feelings towards group membership (e.g., Doosje, Ellemers, & Spears, 1995; Doosje, Spears, & Ellemers, 2002). Because the election of first Black president has been widely viewed as a monumental accomplishment for the

Black civil rights movement, and a profound step towards full representation and equality for African Americans, this theoretical perspective suggests that the election would lead to immediate increases in positive feelings towards group membership, and increases in centrality. However, since the effects of group status changes have only been shown in short-term lab-based settings (e.g., Doosje, et al., 2002) the extent to which increases in centrality and private regard would be enduring following the election is not clear.

A third perspective, however, suggests that increases in private regard may be enduring for those who explore their identity following the election. In particular, theories of racial identity development suggest that identity exploration serves as a mechanism for minority individuals to work through internalized racism and develop a more positive perspective on their group membership (Cross & Cross, 2008; Helms, 1995; Helms & Cook, 1999). Any event which stimulates substantial identity exploration may therefore increase the extent to which individuals feel positively about their race. Therefore, enduring increases in private regard are expected for those who engage in more exploration immediately following the election.

A fourth perspective on how the election might influence identity can be derived from existing research on ethnic identity. In particular, a range of work suggests that members of marginalized minority groups are not able to take their racial/ethnic identity for granted, and therefore tend to report higher levels of group identification than majority group members (French, Seidman, Allen, & Aber, 2006; Phinney & Alipuria, 1990; Syed & Azmitia, 2009). Extending the logic of this work, when members of a devalued minority group experiences a significant increase in sociopolitical power, towards greater equality, the identity of group members may shift towards looking more like the identity of majority group members (i.e. less emphasis on racial identity). Following this perspective, although centrality would still

be expected to increase immediately following the election (due to activation of the racial self-concept), decreases in centrality would be expected on a longer timeframe. However, is may also be expected that decreases in centrality following such an event may depend on the extent to which the event stimulated identity exploration. In particular, since lower levels of exploration imply that individuals are reflecting less on the importance of the event to their racial identity, less pronounced influences would be expected at lower levels of exploration. Therefore, on a longer timeframe, greater decreases in centrality would be expected for individuals who explore more following the election, and little or no enduring changes in centrality would be expected for individuals who report lower levels of exploration.

Having considered changes in centrality and private regard, the last measure of identity that we consider is public regard. Relating to this construct, a large amount of anecdotal evidence in the popular media suggests that, regardless of race, many individuals held some level of doubt that the broader society was capable of electing a black president. This suggests that the election of Barack Obama may have challenged peoples existing perspectives, and influenced individual's assessments of how African Americans are viewed (or valued) by the broader society. In particular, since the broader society was responsible for electing a Black president, we believe that perceptions of public regard will show immediate and enduring increases following the election. Furthermore, because the election may generally have a more enduring influence for those who explored their racial identity more following the election, we expect that longer-term increases in public regard will be more pronounced at higher levels of exploration.

In summary, because the election of the first Black president was an important race-related event, an historic accomplishment for African Americans, and an act of the broader society, we expect immediate increases in centrality, private regard, and

public regard in the days following the election. However, we expect that longer term changes in identity will be more varied. In particular, based on theories of racial identity development (Cross & Cross, 2008; Helms, 1995; Helms & Cook, 1999), we predict that private regard will show enduring increases following the election, but that these increases will be conditioned by the extent to which individuals explored their identity following the election. Furthermore, based on ethnic identity research (French et al., 2006; Phinney & Alipuria, 1990; Syed & Azmitia, 2009), we hypothesize that centrality will show enduring decreases following the election. However, we again predict that these decreases will be conditioned by levels of exploration, such that election will lead to greater decreases in centrality for those who explore their identity more following the election. Lastly, since the election of the first Black president was an act of the broader society, we expect that perception of public regard—individual's assessments of how African Americans are viewed by the broader society—will increase.

Methods

Design and Participants

Participants were African American undergraduate students from two large research universities in the northeastern United States ($N = 324$; 26.3% male; M age = 19.3, $SD = 1.8$). Both universities had predominantly White student bodies, and both contained approximately 11 percent underrepresented minorities. The student population at one of the universities was approximately 5 percent Black, and the other was approximately 7 percent Black. As expected within the college sample, the socioeconomic backgrounds of participants were above the national average, with 51 percent of mothers having completed at least a four year degree.

The design of the study consisted of two components: longitudinal and daily. For the longitudinal component, students completed self-report measures once each

semester for four consecutive semesters starting in the fall of 2007 (wave 1: October 2007; wave 2: March/April 2008; wave 3: October 2008; wave 4: March/April 2009). The third and fourth waves of data were collected approximately two weeks before and five months after the 2008 presidential election. Of the 324 individuals who agreed to participate in the longitudinal study, 209 completed waves 3 and 4. These individuals ($n = 209$) were included in analyses for the current study relating to the longitudinal component. Those who did not complete waves 3 and 4 were compared to those who did on demographic variables and on the substantive variables of interest. No significant differences were found between the two groups.

In order to also consider the immediate effects of the election, a sub-sample of participants in the longitudinal study were recruited to participate in a daily diary study. In this component of the study, participants completed measures at the end of each day, on the days immediately before and after the election. Analyses relating to this component included those who had pre and post data, from the two days before and two days after the election ($n = 108$). Those who participated in the longitudinal study but not the daily study were slightly younger than those who participated in both components (Mean Age Difference = .58 years; $p < .05$). No other differences were found on any of the demographic or substantive variables of interest between the two groups.

Longitudinal Measures

Racial identity. The 20-item Multidimensional Inventory of Black Identity (MIBI) was used to measure racial identity (Sellers et al., 1997). Three dimensions of racial identity are included in the scale. Eight items were used to measure centrality, and six items were used to measure private regard, and six items were used to measure public regard. Items for centrality include "Being Black is an important part of my self-image", and "Being Black is an important reflection of who I am". Items for

private regard include "I feel good about being Black", and "I am happy that I am Black". Items for public regard include "Blacks are not respected by the broader society" and "In general, others respect Black people". Response options are on a seven point scale ranging from strongly disagree (0) to strongly agree (7) with neither agree nor disagree as the neutral point. Cronbach's α's for centrality, private regard, and public regard were .77, .78, and .79.

Daily Measures

Racial identity. Daily measures of racial identity were modified for daily use from the MIBI (Sellers et al., 1997). Specifically, participants were asked to report how strongly they agree or disagree with a series of statements relating to that particular day. Six items were used to measure daily racial identity centrality. Example items for this scale are "Today, being Black was an important part of my self-image", and "Today, I had a strong sense of belonging to Black people". For salience, Chronbach's α on any particular day ranged from .79 to .88, and the reliability of within-person changes across days was .55 (see Cranford et al., 2006 for details on reliability of daily measures across time). Four items were used to measure daily private regard. Example items are "Today, I felt good about being Black" and "Today, I often regretted that I am Black" (reverse scored). Chronbach's α for private regard on any particular day ranged from .80 to .93, and the reliability of within-person changes across days was .61. Four items were used to measure daily public regard. Example items are "Today, I felt that others respect Black people", and "Today, I felt that society views Black people as an asset". For daily public regard, Chronbach's α on any particular day ranged from .79 to .87, and the reliability of within-person changes across days was .64. Response options for all daily racial identity scales were on a five point scale ranging from strongly disagree (1) to strongly agree (5). A

complete list of the items used for each scale is available from the first author upon request.

Racial identity exploration. Five items were used to measure daily racial/ethnic identity exploration. Specifically, participants were asked to report how strongly they agree or disagree with a series of statements relating to that particular day. Example items for this scale are "Today, I reflected on issues of race and how they relate to my life", and "Today, I considered how closely I want to relate to my own or other racial/ethnic groups". Items that were deemed relevant for daily use were modified from previously established measures of identity exploration (Phinney, 1992). Chronbach's α on any particular day ranged from .85 to .92, and the reliability of within-person changes across days was .83. A complete list of items in this scale is available from the first author.

Descriptive statistics for study variables are presented in Table 2.1.

Table 2.1. Descriptive Statistics.

	Pre-Election		Post-Election		Paired Sample
	Mean	*SD*	*Mean*	*SD*	*t* Statistic (*df*)
Daily Variables:					
Exploration	2.720	0.830	3.496	0.839	8.72 (107)***
Centrality	3.186	0.734	3.691	0.777	9.38 (107)***
Private Regard	4.119	0.688	4.436	0.564	6.62 (107)***
Public Regard	3.113	0.704	3.661	0.746	8.27 (107)***
Longitudinal Variables:					
Centrality	4.507	1.191	4.399	1.148	-0.703 (208)
Private Regard	5.964	1.022	5.912	0.838	-0.353 (208)
Public Regard	3.367	1.057	3.725	1.214	4.66 (208)***

Note. For daily variables *N* = 108, and for longitudinal variables N = 209. *p < .05. **p < .01. ***p < .001.

Analysis Overview

Our initial focus was to consider the immediate effects of the presidential election on racial identity exploration, and the extent to which initial levels of identity centrality (measured in the wave three longitudinal survey approximately two weeks prior to the election) predicted the strength of these changes. Short term changes in exploration were considered by averaging the measures of exploration from the two days before the election (pre), and the two days after the election (post). Paired samples t-tests were then employed in order to test for the significance of changes from pre to post, and longitudinal OLS regression models were used to test for racial identity centrality as a predictor of change.

After considering changes in exploration immediately following the election, our second focus was to consider short and longer-term effects of the presidential election on racial identity. Short term changes in the three racial identity constructs were considered in the same manner as for exploration: by averaging the measures from the two days before and after the election and comparing the pre and post measures using paired sample t-tests. Longer term changes in racial identity between waves three and four of the longitudinal study, measured approximately two weeks before and five months after the election, were also tested using paired sample t-tests. (Analyses looking at changes in identity between waves three and four utilize a sample size of 209. All of the other models described utilize the daily data and therefore involve a sample size of 108.)

Our final focus was to look at initial levels of exploration following the election as a predictor of longer-term identity change in each of our three identity constructs. In order to test these models, a variable representing the short term changes in exploration was created by regressing post exploration score (averaged from the two days after the election) on the pre exploration score (averaged from the

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two days prior to the election) and saving the residuals. This variable was then used as a predictor of longer term changes in identity in longitudinal OLS regression models.

Results

Identity Exploration Following the Election

Our first hypothesis was that levels of racial identity exploration would increases immediately following the election. In support of this prediction, a paired sample t-test showed that levels of exploration were significantly higher in the days after the election than in the two days before the election (*Mean Difference* = .776, *SE* = .089, t (107)= 8.72, $p < .001$). This increase in exploration corresponds to .93 *SD* units on the scale.

Centrality as a Predictor of Increases in Exploration Following the Election

Our second hypothesis was that individuals with higher levels of centrality would be more likely to experience the election as an encounter and therefore more likely to increase in their levels of exploration immediately following the election. In support of this prediction, results of a longitudinal regression model adjusting for initial levels of exploration showed that higher levels of centrality, measured prior to the election, were associated with greater increases in exploration immediately following the election (b = .350, *SE* = .073, $p < .001$). The influence of centrality on levels of exploration following the election is depicted in Figure 2.1. As evidenced by the figure, individuals with higher levels of centrality (+1 *SD*), showed an estimated increase of 1.126 units on exploration (1.349 *SD* units). However, individuals with lower levels of centrality (-1 *SD*) showed smaller increases in exploration following the election (.426 units; .510 *SD* units).

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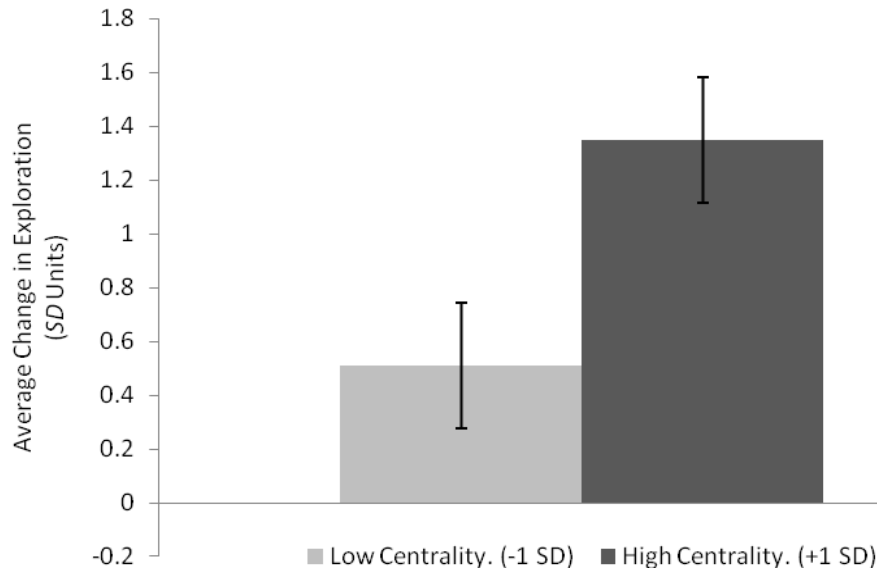
Figure 2.1. Fitted interaction plot depicting changes in exploration at lower (-1 SD) and higher (+1 SD) levels of centrality measured prior to the election. Error bars represent plus and minus 1.96 standard errors of each point estimate.

Changes in Racial Identity Following the Election

We considered short and longer-term changes in racial identity following the election. Short-term changes were considered using the sub-sample of participants who completed the daily study ($n = 108$), and longer-term changes were considered using the larger longitudinal sample ($n = 209$). With respect to short term changes, we hypothesized that levels of centrality, private regard, and public regard would all increase in the days immediately following the election. Paired sample t-tests supported this prediction. In particular, public regard showed the largest increases (*Mean Difference* = .549 [.757 *SD* units], *SE* = .066, *t* (107) = 8.27, *p* < .001),

followed by centrality (*Mean Difference* = .505 [.668 *SD* units], *SE* = .054, *t* (107) = 9.38, *p* < .001), and private regard (*Mean Difference* = .316 [.505 *SD* units], *SE* = .048, *t* (107) = 6.62, *p* < .001). The magnitude of immediate increases in each racial identity construct is depicted in Figure 2.2.
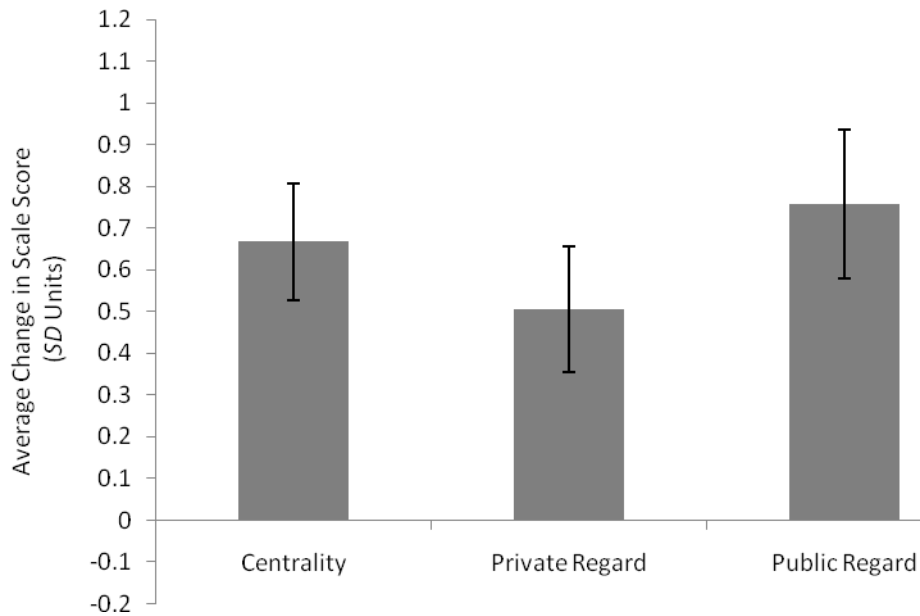
Figure2. 2. Average magnitude of increase centrality, private regard, and public regard from the two days immediately before to the two days immediately after the election. *Note*. Error bars represent plus and minus 1.96 standard errors of each point estimate.

We also considered longer term changes in racial identity from two weeks before to five months after the election. Specifically, paired sample t-tests showed that levels of centrality did not change (*Mean Difference* = -.037 [-.031 *SD* units], *SE* = .052, *t* (208) = -.703, *p* = *ns*), nor did levels of private regard (*Mean Difference* = -.016 [-.018 *SD* units], *SE* = .056, *t* (208) = -.353, *p* = *ns*). However, as predicted, public regard did show enduring increases five months after the election (*Mean Difference* = .253 [.210 *SD* units], *SE* = .054, *t* (208) = 4.66, *p* < .001). The magnitude of longer-term increases in each racial identity construct is depicted in Figure 2.3.
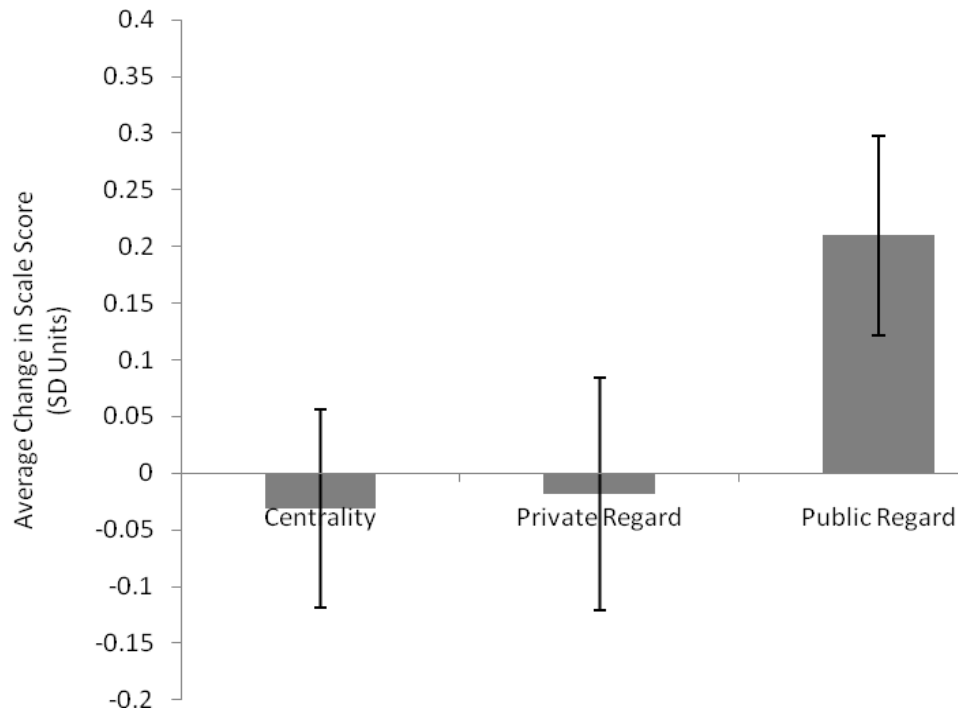
Figure 2.3. Average magnitude of longer-term changes in centrality, private regard, and public regard from two weeks before to five months after the election. *Note.* Error bars represent plus and minus 1.96 standard errors of each point estimate.

Exploration Following the Election as a Predictor of Longer-term Identity Change

Our final set of hypotheses predicted that longer-term changes in racial identity would depend on levels of exploration immediately following the election. Results from longitudinal regression models, adjusting for initial levels of each racial identity construct are shown in Table 2.2. In support of our hypothesis that identity exploration leads to more positive feelings towards group membership, the second model in Table 2.2 shows that more exploration following the election was positively associated with changes in private regard ($b = .130$, $SE = .053$, $p < .05$). Elucidating this finding, post hoc analyses suggests that individuals with higher levels of exploration following the election ($+1$ SD) increased in levels of private regard by an average of .078 units (.089

SD units), whereas those with lower levels of exploration (-1 *SD*) decreased by an average of .182 units (.208 SD units). Since individuals showing lower levels of exploration following the election decreased, these findings suggests that exploration following the election was necessary to maintain levels of private regard reported prior to the election.

Table 2.2. Results of Regression Models with "Change in Exploration" as a Predictor of Changes in Centrality, Private Regard, and Public Regard from Two Weeks Before to Five Months After the Election.

Variables	Estimate	SE	Standardized β
Wave 4 Centrality:			
Intercept	-.093	.061	
Wave 3 Centrality	1.004***	.067	.879
Change in Exploration	-.136*	.067	-.119
Wave 4 Private Regard:			
Intercept	-.052	.052	
Wave 3 Centrality	.613***	.053	.732
Change in Exploration	.130*	.053	.155
Wave 4 Public Regard:			
Intercept	.358	.074	
Wave 3 Public Regard	.940***	.076	.774
Change in Exploration	-.036	.076	-.030

Note. The wave 3 autoregressive control variable and the change in exploration variable are z-scored in all models. Wave 4 outcome variables are centered on wave 3 scale means so that the intercept represents mean change in the sample across the two waves. $n = 108$ for all models. *$p < .05$. **$p < .01$. ***$p < .001$.

With respect to centrality, we had hypothesized that individuals who explored their racial identity more following the election would decrease more in the extent to which they normatively defined themselves with respect to race. In support of this hypothesis, model results suggest that more exploration following the election was associated with less increases (or more decreases) in centrality ($b = -.136$, *SE* $= .067$, *p*

< .05). Post hoc analyses relating to this finding suggest that individuals with higher levels of exploration following the election (+1 *SD*) decreased in levels of centrality by an average of .229 units (.196 *SD* units), whereas those with lower levels of exploration (-1 *SD*) increased slightly, by an average of .043 units (.037 *SD* units). Levels of exploration did not predict longer-term changes in public regard (*b* = -.036, *SE* = .076, *p* = *ns*).

Discussion

The current study established several important findings relating to the effects of the presidential election. Firstly, the election was found to have stimulated increases in racial identity exploration, as well as immediate increases in all three of the racial identity constructs considered. Furthermore, increases in exploration were conditioned by the extent to which individuals normatively defined themselves with respect to race. Relating to longer-term changes in identity, results suggested enduring overall increases in public regard following the election. However, longer-term changes in private regard and centrality were found to depend on exploration. In particular, those who explored their racial identity more following the election were more likely to decrease in the their levels of centrality, and more likely to increase in their levels of private regard.

While previous work has shown that reports of discrimination are positively associated with ethnic identity exploration (Pahl & Way, 2006), to our knowledge, the current study is the first to show increases in identity exploration following a discrete event. This finding therefore provides important support for existing theories of identity development. In particular, findings are in line with Cross's Nigrescence theory, which suggests that important race-related events can serve as encounters which stimulate identity exploration or immersion into issues of race (Cross, 1971, 1991; Cross & Cross, 2008).

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Relating to this finding, we were also able to show that participants with higher levels of centrality showed greater increases in exploration following the election. This finding extends previous work (Aires et al., 1998; Shelton & Sellers, 2000; Yip, 2005), by showing that, in addition to being more likely to interpret experiences through a racial lens, race-central individuals are also more likely to explore their racial identity following a discrete event. This suggests that race-central individuals are likely to develop a nuanced understanding of racial issues over time.

Another important focus of the current study was to test for changes in racial identity following the election. Relating to centrality, our findings are in line with work suggesting that the racial domain of the self-concept is made salient when individuals are faced with a race-related event (Turner, Oakes, Haslam, & McGarty, 1994). Specifically, we found that levels of centrality were substantially elevated immediately following the election. This finding was expected, and essentially confirms that the election was viewed through a racial lens by most Black college students.

Furthermore, beyond domain activation, it is likely that perceived status changes following the election also contributed to immediate increases in identity centrality. In particular, research relating to social identity theory suggests that an event which is widely perceived as a positive shift in group status will lead to increases in group identification as well as increases in positive feelings towards group membership (e.g., Doosje et al., 2002). The observed increases in centrality and private regard immediately following the election therefore provide support for this theoretical perspective. Furthermore, findings relating to immediate increases in private regard suggest that affective judgments of group membership may tend to fluctuate in response to status-related events. This is notable given that, to our

knowledge, only identity centrality has been discussed as an event-contingent construct (e.g., Shelton & Sellers, 2000).

With respect to longer term changes in centrality, individuals who explored their identity more following the election decreased in their levels of centrality while individuals who explored less showed little change. These findings are consistent with the idea that enduring changes in identity are the result of the deliberation and internal grappling that defines identity exploration (Erikson, 1968; Phinney, 1990; Cross, 1991). Furthermore, these findings are in line with research on ethnic identity, which shows that higher status groups report lower levels of group identification (French et al., 2006; Phinney & Alipuria, 1990; Syed & Azmitia, 2009). In particular, our findings extend this work by showing decreases in group identification following an event that was widely perceived as an increase in group status. Our longer-term findings are not, therefore, consistent with research from a social identity theory perspective, which suggests that increases in group status lead to increase in group identification (Doosje et al., 1995, 2002). This is not, however, entirely surprising given that research in this area has considered the short term influence of status changes among artificially created groups, and is therefore somewhat distal from the concept of longer-term identity change.

As was the case with centrality, longer-term changes in private regard were also conditioned by levels of exploration following the election, such that exploration was positively associated with changes in private regard. To our knowledge, this study was therefore the first to provide longitudinal support for the notion that identity exploration serves as a mechanism for minority individuals to work through internalized racism and develop or maintain a positive perspective on their group membership. This is a foundational assumption behind leading theories of racial identity development (e.g., Cross & Cross, 2008; Helms, 1995; Helms & Cook, 1999).

Relating to this finding, it is important to note that at lower levels of exploration following the election individuals actually decreased in their levels of private regard in the five month follow-up. This suggests that substantial continued identity exploration or identity "recycling" (Parham, 1989; Cross & Cross, 2008) is important for the maintenance of a positive racial self-concept.

With respect to public regard, clear increases were observed immediately following the election which remained highly significant in the five month follow-up. This finding supports our prediction that the election of the first Black president had an important influence on individual's assessments of how African Americans are viewed (or valued) by the broader society. The magnitude of this effect is notable, especially given that normative racial identity development would suggest decreases in public regard: with the growing awareness of racism and societal oppression that would be expected to occur across the late adolescent college years (Sellers, Smith, Shelton, Rowley, & Chavous, 1998; Yip, Seaton, & Sellers, 2006). Based on this perspective, the estimated magnitude of the longer term increases in public regard following the election is probably conservative.

The implications of these increases in public regard are also worth noting. In particular, since previous research suggests that lower levels of public regard are protective against the adverse affect of discrimination on mental health (e.g., Sellers & Shelton, 2003), increases in public regard may make African Americans more vulnerable to experiences of discrimination. Since it is unlikely that the election had any parallel influence on levels of discrimination towards African Americans, it is possible that the election may turn out to have an adverse influence on the mental health of African Americans. This will be an important area for future research.

Conclusion

  The current investigation has shown that the study of identity changes following specific events can provide important insight into the dynamics of identity change. However, with multiple dimensions of identity and a diverse set of theoretical perspectives to consider, clearly much more work is needed in this area. Where possible, more studies of discrete sociopolitical events would be useful. However, the study of unique race-related events that occur in people's daily lives (e.g., Yip, 2005) will also be important in understanding fluctuations in identity as well as the antecedents of longer term identity change.

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CHAPTER 3

THE SOCIAL COSTS OF ACADEMIC SUCCESS ACROSS ETHNIC GROUPS

Abstract

This study explores the longitudinal association between academic achievement and social acceptance across ethnic groups in a nationally representative sample of adolescents. The effects of school context are also considered. Results show that African American and Native American adolescents experience greater social costs with academic success than Whites. Pertaining to school context, findings suggest that the differential social consequences of achievement experienced by African Americans are greatest in more highly achieving schools, but only when these schools have a smaller percentage of Black students. Students from Mexican decent also showed differential social costs with achievement in particular contexts. The implications of these findings to theory, policy, and future research are discussed.

Introduction

Despite significant progress being made toward closing ethnic gaps in achievement, their relative stability over the past two decades has raised their priority within the broader political agenda and caused them to become recognized as one of the most important civil rights issues of the 21st century (Paige, 2004). Across virtually all measures, Black, Hispanic, and Native American students in the United States earn lower grades, drop out more often, and attain less education than Whites and other ethnic groups (Perie & Moran, 2005). While structural and social burdens, often experienced disproportionately by minorities, such as socio-economic status (McLoyd, 1990), single parent families (Pong, 1998), and school or neighborhood disadvantage (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993) are important factors to consider, the dynamics of social acceptance among stigmatized groups are

also of theoretical and practical interest (Ogbu, 2004; Spencer, Cross, Harpalani, & Goss, 2003; Steele, 1998).

Social acceptance is considered a basic need, closely tied to motivation and behaviors (Baumeister & Leary, 1995). It is particularly critical during adolescence, when the opinions and judgments of others become increasingly important, and peer social relations take up an increasing portion of adolescents lives (Steinberg & Morris, 2000). Research exploring the association between achievement and social acceptance suggests a positive cyclical relationship; achievement leading to greater social acceptance and social acceptance leading to greater levels of achievement (Chen, Rubin, & Li, 1997; Wentzel, 1991, 2005). These findings, combined with evidence that social acceptance is an essential component of adolescent self-worth (Harter, 1999), suggest that any breakdown in this relationship could have particularly adverse consequences to development. The extent to which particular ethnic groups experience differential social costs with achievement is therefore an important area of research and theory.

Theories Predicting Differences across Ethnic Groups in the Social Costs of Achievement

In order to understand the current experiences and perspectives of a particular minority group, it is important to consider the history of the group's relationship to the dominant culture (Ogbu, 1978; Fordham & Ogbu, 1986; Ogbu, 1999; Ogbu, 2004). Specifically, in their oft-cited paper, Fordham and Ogbu (1986) argue that involuntary minority groups, such as African Americans and Native Americans, whose presence in the U.S. stems back to historical colonization and enslavement, have developed a collective identity in opposition to the mainstream White culture. Furthermore, Ogbu and colleagues suggest that, for these groups, academic success may be stigmatized by

peers as "acting White", and thus attainment of higher grades in school may have differential social consequences (Ogbu & Simons, 1998).

Several scholars, however, have challenged the conceptual underpinnings of this perspective. Cross (2003), for example, has argued that resistance to education is in no way fundamental to African American culture, and that the roots of achievement problems lie not in the legacy of slavery, but within specific structural inequalities that have and still continue to directly affect minority groups. Furthermore, Spencer and colleagues (e.g., Spencer & Harpalani, 2008) have argued that Ogbu and colleagues make broad unwarranted assumptions which de-contextualize and over-generalize the experiences of African American youth, while also ignoring the importance of meaning-making processes. In particular, Spencer and Harpalani (2008) emphasize that the "acting white" phenomenon is not a cultural syndrome that is pervasive, but rather a coping mechanism: a reaction to stereotypes and experiences of discrimination experienced in particular contexts.

Spencer and colleagues therefore articulate an alternative interpretation of the "acting White" phenomenon which focuses on processes of identity development, and experiences with stigma and discrimination (e.g., Spencer, Noll, Stoltzfus, & Harpalani, 2001; Spencer et al., 2003; Spencer & Harpalani, 2008). Important to this perspective are normative developmental processes during adolescence. Specifically, adolescence is an important time for youth to engage in identity exploration in various domains (e.g., career, family, political ideology, ethnic identity). While members of the majority group generally take their ethnic identity for granted, ethnic minority adolescents have the additional task of having to negotiate the meaning of their membership in a group whose customs may often be devalued by mainstream society (Cross, 1991; Phinney, 1990; Phinney & Alipuria, 1990; Spencer & Markstrom-Adams, 1990). As part of this identity formation process, Cross (1991) has described

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that ethnic minorities often go through a stage referred to as immersion-emersion, in which they immerse themselves within their own ethnic culture and have a tendency to reject the perspectives of the dominant group.

During this sensitive stage of identity development, minority adolescents tend to react to negative academic stereotypes directed toward their group in a particular context by labeling behaviors associated with success within that context as "acting White" (Spencer, et al., 2003). Spencer and colleagues, therefore suggest that the "acting White" phenomenon is not the result of a broad cultural frame of reference (as Ogbu's theory suggests), but rather the result of a particular coping response to negative stereotypes that are experienced in specific contexts. From this perspective, it is the current stigmatization of minority groups that drives some adolescents to reject expectations and values of the dominant group, rather than any inherent oppositional orientation towards schooling. Under Spencer's framework, stigmatized minority groups other than African Americans, would therefore also be expected to experience social costs with academic success. Furthermore, contextual factors, such as school characteristics, would also be expected to play an important role.

The theory of stereotype threat is also of direct relevance to the proposition that academic achievement may be coming at a greater social cost for particular groups. Steele (1997, 1998) has discussed how the burden of academic stereotypes, and the prolonged exposure to such stereotypes at the group level, may create social costs with achievement for members of stigmatized groups. According to this perspective, when an individual becomes aware of a negative stereotype directed towards their group, they experience anxiety related to the possibility of conforming to the stereotype, which in turn affects their performance. Thus, as a self-protective mechanism, prolonged exposure to negative stereotypes in a particular domain is thought to be associated with psychological disengagement from that domain (Davies,

Spencer, & Steele, 2005; Osborne, 1997; Steele, 1997). Steele's work, therefore, suggests that the collective devaluing of academics among stereotyped groups may lead individuals who are part of those groups to experience greater social costs with achievement (Steele, 1997). With respect to its emphasis on the role of current stereotypes in the social dynamics of achievement, Steel's perspective is in the same vein as the work by Spencer and colleagues described above.

Related Empirical Findings

Support for the "acting White" proposition has been derived from several ethnographic studies of African American students, conducted across multiple contexts (e.g., Ogbu, 1974; Fordham & Ogbu, 1986; Ogbu, 1999). These studies generally found that attitudes and behaviors conducive to academic attainment, such as studying, reading, and participating in class, are often stigmatized as "selling out" or "acting White" (e.g., Fordham & Ogbu, 1986). Other more recent qualitative studies, however, have failed to find that Black adolescents experience any oppositional orientation towards achievement (e.g., Akom, 2003; Tyson, 2002).

Additionally, the few quantitative studies that have examined the social costs of academic success have thus far failed to establish the idea that achievement leads to greater social costs for particular groups. Specifically, using data from the National Educational Longitudinal Study (NELS), two studies have attempted to test the proposition that African Americans experience greater social costs with academic success (Ainsworth-Darnell & Downey, 1998; Cook & Ludwig, 1997). The NELS survey included self-report measures of academic achievement, popularity, and harassment. Using these measures, both studies found no evidence to suggest that African American students experienced greater social costs with achievement.

While this research calls into question the social costs proposition, finding from these studies are limited in several ways. Firstly, both studies are based on the

same dataset and therefore do not offer an independent replication of findings. Secondly, neither study uses a longitudinal design to test the association between achievement and social acceptance: both studies only considered associations between self-report items within a single time-point. Furthermore, these studies only look at a narrow age range and do not compare social costs across all of the major U.S. pan-ethnic groups. Finally, neither study uses multilevel modeling techniques, which allow for a more adequate consideration of individual and school-level variables (Raudenbush & Bryk, 2002).

The Importance of School Context

Individuals develop within particular environmental contexts and these contexts play a pivotal role in development (Bronfenbrenner, 1979; Spencer, 1999). The environment of a school, specifically its achievement level and the proportion of same-race students in the school, may play an important role in moderating the relationship between achievement and social acceptance. Research examining inter-group relations, for example, has demonstrated that in competitive or high achieving contexts, where both groups are being evaluated on the same criterion, racial tensions and discrimination are likely to increase (see Brewer & Kramer, 1985 for a review). Furthermore, recent qualitative data suggest that competitive schools may breed an environment of animosity, particularly when there is a disproportionate under-representation of disadvantaged students (Tyson, Darity, & Castellino, 2005).

The proportion of same-race students in a school is therefore also an important factor that may influence the social costs of academic success for minority adolescents. Specifically, with more same-race students present, it is possible that experiences of stigmatization and discrimination may occur less often or be less pronounced. Along these lines, researchers have argued that, in largely Black schools, students are less likely to associate racial characteristics with achievement and

therefore less likely to stigmatize "acting White" (O'Connor, Fernandez, & Girard, 2007). Furthermore, students in largely Black schools have been found to hold more pro-school attitudes (Goldsmith, 2004), and higher levels of school attachment (Johnson, Crosnoe, & Elder, 2001). This work suggests that the social costs of academic success may be ameliorated for minority students in schools with a higher proportion of same-race students.

Purposes of the Current Study

The purpose of this paper is to explore the association between achievement and social acceptance across ethnic groups in a nationally representative sample of adolescents. Specifically, we will consider the social costs of achievement for all of the major pan-ethnic groups in the United States (Non-Hispanic Whites, African Americans, Hispanics, Asians, and Native Americans), as well as sub-groups within the Hispanic and Asian pan-ethnic categories. We will then determine whether socioeconomic and contextual factors (family SES, school SES, family structure, school-level achievement, school safety, school type, and school size) are able to account for any differences in social costs across groups. Based on the theories discussed (Ogbu & Simons, 1998; Spencer & Harpalani, 2008; Steele, 1998), we hypothesize that, even after accounting for background factors, stigmatized ethnic groups, such as African Americans, Hispanic Americans, and Native Americans, will, on average, experience greater social costs with achievement than the historically dominant group (Whites).

Having established differences across groups, we will then explore factors that may account for variation in social costs within groups. Specifically, we will look at gender and immigrant status as potential moderators of social costs. With respect to gender, previous work suggests that the dynamics of stigma and achievement are somewhat more problematic for African American males than females (e.g., Graham,

Taylor, & Hudley, 1998; Osborn, 1997). Based on this work, we will test the hypothesis that social costs are greater for African American males than for females. Gender will also be explored as a potential moderator for other groups.

A number of scholars have argued that immigrant status is an important factor explaining differences in attitudes towards academic attainment (e.g., A. Portes & Zhou, 1993; Spencer et al., 2003). Additionally, research has indicated that immigrant status influences the extent to which discrimination is perceived (Finch, Kolody, & Vega, 2000). Based on this work, we will test the hypothesis that more recent Hispanic, Asian, or Black immigrants experience less social costs with academic success than their more recent immigrant counterparts.

Our final analyses will focus on exploring whether social costs are dependent on school context. Specifically, based on the research discussed above, we will considered whether the racial composition and achievement level of a school moderate the relation between academic achievement and social acceptance. In relation to school context, we hypothesize that minority groups will show higher social costs with academic success in higher achieving schools. We also hypothesize that the presence of same-race students will serve as a protective factor in these contexts, buffering the level of social costs experienced with academic achievement.

Method

Data

The current study utilizes data from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is an ongoing nationally representative study of 7th through 12th graders selected from 80 high schools and 52 feeder (middle and junior high) schools in 1994. All available students in each of the participating schools initially completed the In-School Questionnaire ($n = 90,118$). A sub-sample of students then completed the Wave I In-Home Interview ($n = 20,745$) in 1995,

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followed by the Wave II In-Home Interview in 1996 (n = 14,738). In-Home Interviews can also be linked to school-level data reported by school administrators, as well as to data from parent interviews.

Sample

The sample for the current study consisted of adolescents who participated in both the Wave I and Wave II In-Home Interviews, and were assigned a valid sample weight as part of the Add Health nationally representative sample (n = 13,570) (see Chantala & Tabor, 1999 for details on the Add Health sampling procedures). Sample descriptive statistics by pan-ethnic group are presented in Table 3.1, and are described in the results section.

Models containing only individual-level variables (models 1-3, 5, 6) excluded 5% of cases due to missing values on one or more covariates. Additional models (model 4, and models 7 thru 15), also excluded schools with missing school-level data and therefore had slightly higher levels of overall missingness (approximately 7% of cases). Those who were excluded from analyses due to missing data were not found to be different from those included in the analysis on any of the background or substantive variables considered in the study (all point-biserial and phi correlations were below a magnitude of .10). The exclusion of cases with missing data was therefore assumed to add little substantive bias to the reported results.

Table 3.1. Descriptive Statistics by Ethnic Group.

		White	Black	Hispanic	Asian	Native	Mixed	Other	$F_{(6, 123)}$	η^2
1.	Age	15.46	15.71	15.63	15.77	15.38	15.38	15.22	1.36	.005
2.	Male (%)	50.0	49.2	51.1	53.8	64.0	49.4	52.2	1.31	.001
3.	SES	2.89_a	2.54_b	2.11_c	3.06_a	2.42_b	2.72_b	2.70_b	17.79***	.063
4.	Single Parent Family (%)	26.1_b	58.1_a	33.2_b	16.5_c	46.6_a	38.3_b	35.8_b	50.28***	.061
5.	Foreign Born Parent (%)	3.6_d	3.3_d	55.9_b	82.2_a	1.2_d	14.7_c	46.6_b	60.55***	.399
6.	GPA (Wave I)	2.87_b	2.58_d	2.61_d	3.19_a	2.49_d	2.70_c	$2.80_{b,c}$	22.74***	.036
7.	Social Accept. (Wave I)	$.051_a$	$-.068_b$	$-.030_a$	$-.116_b$	$-.184_{a,b}$	$-.071_{a,b}$	$-.051_{a,b}$	2.81**	.003
8.	Social Accept. (Wave II)	$.070_a$	$-.033_b$	$-.119_b$	$-.126_b$	$-.039_{a,b}$	$-.158_b$	$-.224_{a,b}$	7.20***	.007
n		7,051	2,663	2,132	843	78	688	104		

Note. Table values are population point estimates or proportions which account for the Add Health sampling strategy. Different subscripts across rows represent ethnic group contrasts that are significant at the 95% confidence level.
*$p < .05$. **$p < .01$. ***$p < .001$.

Measures

   Race/ethnicity. Racial/ethnic categories were created based on self-report items from the Wave I In-Home Interview. The first item asked participants to report whether or not they are of Hispanic origin. A separate item then asked participants to indicate which racial/ethnic category or categories they belong to ("Asian or Pacifica Islander", "Black or African American", "American Indian or Native American",

"White", or "Other"). Following previous conventions for classifying race/ethnicity, those who reported being Hispanic were categorized as such, as long as they did not report being part of more than one other racial/ethnic category. Those who reported being part of two or more racial/ethnic categories on the second question were classified as mixed racial, and the remaining individuals were classified into the standard categories of non-Hispanic Black, non-Hispanic White, non-Hispanic Asian, non-Hispanic Native American, and other. Sample sizes and demographics for each race/ethnicity are included in Table 3.1.

In addition to the pan-ethnic groups described above, individuals who identified themselves as Hispanic or Asian also identified the specific sub-group(s) that they belong to. For Hispanics, we were able to consider Mexican ($n = 1041$), Puerto Rican ($n = 336$), Cuban ($n = 294$), and Central or South American ($n = 195$) groups separately for some analyses. For Asians we were able to consider the Chinese ($n = 191$) and Filipino ($n = 360$) groups separately. Other Asian sub-groups were not considered due to small sample sizes.

Grade point average. Grade averages at Wave I were calculated from self-reports of achievement in each of the four major subject areas ("English or language arts", "history or social studies", "mathematics", and "science"). Participants were asked to report their grade at the most recent grading period on a four point scale from "A" to "D or lower". The four items were averaged to create an overall score ranging from 1 (all D's or lower) to 4 (all A's) representing each participant's GPA at Wave I (Cronbach's $\alpha = .75$). The four item scale was then standardized for use in the reported models. Self-reported GPA has been shown to be highly correlated with actual GPA and therefore can be considered an adequate proxy for actual levels of achievement (Gonzales, Cauce, Friedman & Mason, 1996).

Social acceptance. Social acceptance was measured using four items from the Wave I and Wave II In-Home Interviews. Scale items map closely onto established conceptualizations of perceived social support (Vaux et al., 1986), loneliness (Russell, 1996), and sense of belonging (Hagerty & Patusky, 1995). The term social acceptance is therefore used broadly in this paper to encompass all three of these closely related concepts. The first item asked participants how strongly they agree or disagree that they "feel socially accepted". Responses for this item were on a five point scale ranging from "strongly agree" to "strongly disagree". The remaining three items asked participants to report how often in the past week "people were unfriendly" to them, how often they "felt that people disliked" them, and how often they "felt lonely". Responses to these items were on a four point scale ranging from "never or rarely" to "most of the time or all of the time". Items were standardized, and averaged such that higher scores indicated higher levels of social acceptance (lower levels of social isolation). A log transformation was also performed to reduce skewness and robust standard errors were used in all reported models to account for remaining deviations from normality (robust standard errors are calculated using the Huber/White/sandwich estimation method [White, 1980]). The average inter-item correlation for the four item social acceptance measure was .32, and the internal reliability of the scale was .65 at Wave I, and .66 at Wave II. These are equivalent to reliabilities of .79 and .81 for an 8-item scale with equivalent inter-item correlations (Cronbach, 1951). Internal reliability of the scale was also very similar across ethnic groups. Specifically, based on the average of waves 1 and 2, Cronbach's α was .66 for Whites, .64 for African Americans, .65 for Hispanics, .63 for Asians, and .63 for Native Americans. Furthermore, exploratory and confirmatory factor analyses both suggested that a single factor structure was the most appropriate solution for all five pan-ethnic groups. The

internal reliability and factor structure of our social acceptance scale was therefore not found to vary substantially across groups.

Individual-level disadvantage. Socioeconomic status (SES) and family structure were obtained as indicators of individual level disadvantage. SES was measured from youth reports of the highest level of education obtained by a currently residing parent. Level of education was recoded to the following four point scale: (1) less than high school (2) graduated from high school or obtained a GED, (3) some college or post-high-school technical training, and (4) graduated from college or more. Where youth reports were missing, parent self-reports were used in order to minimize missing data (parents responded to an identical question with the same response categories). Family structure was dummy coded with "0" indicating a two parent family and "1" indicating a single parent family.

Other individual-level variables. Age, gender, and immigrant status were also included in multi-level models. Immigrant status and age were based on youth reports. Immigrant status was dummy coded such that "1" indicated a foreign born mother (or primary caregiver). Coding immigrant status in this manner is synonymous with comparing first and second generation adolescents (foreign born parents) to third generation or greater adolescents (U.S. born parents). Age was mean centered so that the model intercepts remained interpretable as the average aged adolescent. Gender was recorded by the Add Health interviewer during the Wave I In-Home Interview and was dummy coded with "1" indicating male. Population means and standard deviations for all individual-level variables are reported in Table 3.2.

Table 3.2, Correlations and Descriptive Statistics for Individual-level Variables (Level 1).

Variables	1	2	3	4	5	6	7	8
1. Age	–							
2. Male	.05	–						
3. SES	-.06	$.02_{ns}$	–					
4. Single Parent	.05	$-.02_{ns}$	-.23	–				
5. Foreign Born Parent	.05	$.01_{ns}$	-.12	-.04	–			
6. GPA (Wave I)	-.13	-.14	.27	-.17	.03	–		
7. Social Accept.(Wave I)	-.11	.09	.09	-.08	$-.02_{ns}$	.13	–	
8. Social Accept.(Wave II)	-.07	.08	.10	-.08	-.04	.13	.49	–
M	15.52	.503	2.74	.319	.130	2.79	.012	.015
SD	1.61	.500	1.06	.466	.336	.775	1.00	1.00

Note. All table values are population estimates which account for the Add Health sampling strategy. All correlations with a magnitude of .03 or larger are significant at the 95% confidence level. *ns* = non-significant.

School-level variables. At the school level, five measures of school disadvantage were considered: safety, SES, achievement, size, and type (public vs. private or catholic). Means and standard deviations for all school-level variables are reported in Table 3.3. With respect to safety, all students who completed the In-School Survey (a near census of each school) were asked how strongly they agree or disagree that they "feel safe at school". By aggregating responses to this item, average levels of safety were calculated for each school. An identical procedure was also carried out to compute an aggregated school-level SES score based on student reports of parent education from the In School Survey. This aggregation method is akin to techniques used in previous Add health studies (e.g., Crosnoe, Cavanagh, & Elder, 2003).

Table 3.3. Correlations and Descriptive Statistics for School-level Variables (Level 2)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Black School[a]	–										
2. % Black	.87**	–									
3. Hispanic School[b]	.01	.00	–								
4. % Hispanic	.05	.08	.75**	–							
5. % Asian	-.07	-.05	.42**	.31**	–						
6. % Native Am.	-.09	-.13	.03	.19*	-.11	–					
7. SchSES	-.08	.02	-.24**	-.24**	.17*	-.25**	–				
8. SchSafety	-.48**	-.40***	-.12	-.25**	-.11	-.16*	.40**	–			
9. SchAchieve	-.30*	-.30**	-.05	-.28**	.00	-.13	.55**	.57**	–		
10. Log Size	.29*	.24**	.17*	.21*	.25**	-.12	-.08	-.56**	-.27**	–	
11. Not Public[c]	-.13	-.08	.07	.05	.12	-.14	.33**	.36**	.18*	-.16*	–
M	.202	.134	.111	.092	.018	.016	2.839	3.939	.310	5.380	.144
SD	.403	.230	.315	.116	.043	.028	.381	.340	.885	1.284	.352

Note. All table values are population estimates which account for the Add Health sampling strategy. [a]Black School: 0 = lower three quartiles of percent Black; 1 = top quartile percent Black. [b]Hispanic School: 0 = lower three quartiles of percent Hispanic; 1 = top quartile percent Hispanic. [b]Not Public: 0 = public; 1 = private or catholic. *p < .05. **p < .01.

School-level achievement was measured using indicators of both grades and test scores. While both grades and test scores have unique limitations as measures of school-level achievement (Hanushek & Taylor, 1990; Willingham, Pollack, & Lewis, 2002), the two measures together are better able to capture achievement at the school level (Clark & Watson, 1995). School-level grades were calculated by aggregating student reports of their GPA from the In-School Survey. School test scores, on the other hand, were taken from school administrator reports of the percentage of students testing above and below grade level. The percentage of students testing below grade level was subtracted from the percentage of students testing above grade level, yielding a measure of the extent to which there was a preponderance of students in a given school with high test scores. These two indicators of school-level achievement were then standardized and averaged (*r* = .46, *p* < .001).

School size, and school type were based on school administrator reports of the size of the school (total student enrollment), and whether the school was public, private or catholic. The school size variable was log transformed to reduce right

skewness/outliers, and an indicator variable was created for school type such that "1" indicated a school that was not public (i.e. private or catholic).

With respect to the percentage of Black students, a dichotomous school-level variable was created indicating a school in the top quartile with respect to the percentage of Black students. Of the 132 schools surveyed as part of the Add Health nationally representative sample, 33 fell into this category. These schools had student bodies with an average of 47% Black students ($SD = 20.7$). This variable therefore indicates schools where Black students are either the majority ethnic group in the school, or a substantial portion of the overall student body. The use of a dichotomous variable in this context is in line with the perspective that a critical mass of a particular group is necessary to change intergroup dynamics (Etzkowitz, Kernelgor, Neuschatz, Uzzi, & Alonzo, 1994). A second dummy variable was also created to indicate schools in the top quartile with respect to the percentage of Hispanic students. Twenty four schools fell into this category. These schools had an average of 42% Hispanic students ($SD = 20.6$). While continuous variables relating to the percentage of Black and Hispanic students in a school were also explored, we found that dichotomous variables were better able to capture differences between schools in social costs for particular groups. The indicator variables are therefore used in the analyses presented in this paper. All continuous variables were z-scored in the models presented.

Analysis Plan

Analyses for the current study involved multilevel modeling of individual and school-level variables (Raudenbush & Bryk, 2002). Because Add Health data collection was school based, we included a random effect for school in each of our models as well as a random slope component for the relationship between grades and social acceptance. Including random effects allowed us to account for within-school clustering of the data and therefore to accurately assess the significance of model

parameters. Multi-level models also allowed us to consider individual-level variables, school-level variables, and cross-level interactions simultaneously.

Four multilevel models were estimated to address questions relating to ethnic group differences in the relationship between achievement and social acceptance: model 1 focused on establishing the overall effect of GPA at Wave I on subsequent changes in social acceptance; model 2 tested whether this relationship differed across ethnic groups; and models 3 and 4 determined whether differences across groups could be explained by other individual and school-level factors. After establishing the relationship between grades and social acceptance for each ethnic group, the next model focused on testing whether immigrant status may be affecting social costs for particular ethnic groups. Specifically, model 5 considered whether Hispanic, Asian, or Black youth from immigrant families show less social costs with achievement than those from families with U.S. born parents. Model 6 then considered whether African American males experienced more social costs than females.

The last set of models focused on exploring potential school-level contingencies of the relationship between grades and social acceptance: model 7 looked at whether social costs for Black students were greater in schools with higher levels of achievement; model 8 looked at whether Black students in largely Black schools experienced less social costs than those in less Black schools; and finally, model 9 considered whether the effects of school achievement on social costs depended on the proportion of Black students in the school.

Similar models also tested the social consequences of achievement for Hispanic students as a function of school-level achievement and the percentage of Hispanic students in the school (models 10, 11, and 12). The effects of school context were also considered for individual Hispanic ethnic groups (Mexican, Puerto Rican, Cuban, and Central/South American) and Asian ethnic groups (Chinese, and Filipino).

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Models 13, 14, and 15, for example, tested the effects of school contexts for adolescents from Mexican decent, and subsequent models tested context effects for the other Hispanic and Asian ethnic groups. Context effects could not be considered for Native Americans due to sample size limitations.

Because the Add Health sampling frame was stratified by various school characteristics (size, region, type, location, percent White), and because various subgroups of individuals were over-sampled (e.g., high income Black, Puerto Rican, Chinese, and Cuban), it was important to account for sample weights in all of our analyses. In addition to adjusting for the probability of selection at the level of both school and individual, sample weights also adjust for survey non-response between the Wave I and Wave II In-Home Interviews (Chantala & Tabor, 1999). Adjusting for non-response, corrects for any potential bias to the sample, which may have been added with attrition between the first and second waves of measurement. All of the models presented in the current study are estimated using the gllamm procedure within Stata (Rabe-Hesketh, Pickles, & Skrondal, 2001; StataCorp, 2007).

Results

Descriptive Analysis

All analyses presented in this paper account for the Add Health sampling strategy and are therefore representative of the adolescent population in the United States at the time the data was collected. Ethnic group differences among individual-level variables are presented in Table 3.1. Overall, ethnicity accounted for a significant portion of the variance in each of the variables considered. Specifically, ethnicity predicted 6.3 % of the variance in SES, 6.1 % of variance in single parent family, 39.9% of variance in immigrant status (whether an adolescent's primary caregiver was foreign born or not), 3.6% of the variance in GPA, and less than 1% of the variance in

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social acceptance. All significant contrasts between ethnic groups are reported in Table 3.1.

With respect to SES, White and Asian parents were significantly more educated than parents of other ethnic groups. Additionally, Hispanic parents had significantly less education than parents of other races. With respect to the percentage of adolescents living in single parent families, Black and Native American adolescents were significantly more likely than any other group to be living with a single parent (58.1%; 46.6%), and Asians were less likely than any other group (16.5%). Compared to Whites, Blacks, and Native Americans, Hispanics and Asian are much more likely to have parents who were born outside of the U.S. Additionally, Asians are much likely than Hispanics to have foreign born parents. Blacks, Native Americans, and Hispanics had significantly lower average GPAs than all other groups. Additionally, Asians had significantly higher GPA's than Whites.

Correlations

Associations between individual-level variables are presented in Table 3.2 along with estimated population means and standard deviations for each variable. All correlations above .02 are significant at the 95% confidence level. As expected, social acceptance was found to be positively correlated with GPA ($r = .13$, $p < .001$).

Associations between school-level variables are presented in Table 3.3 along with estimated population means and standard deviations. Schools with a higher percentage of Black students were less likely to be safe, tended to have a lower average GPA, and tended to be larger than schools with less Black students. These same associations were also present for the dummy-coded *Black school* variable indicating schools in the top quartile with respect to their percentage of Black students. Schools with a higher percentage of Hispanic students had a significantly lower average SES, lower average reports of school safety, lower average GPA, and

tended to be larger with respect to student enrollment. The dummy coded Hispanic school variable was also associated with lower average SES and larger school size.

Multilevel Models

Longitudinal association between GPA and social acceptance. A series of models were estimated in order to address the questions of interest. Random effects for the intercept and slope were included in all models. Models 1 through 4 are presented in Table 3.4. Model 1 estimated the overall relationship between grades and social support controlling for individual-level covariates. Based on previous research (Chen et al., 1997; Wentzel, 1991, 2005), we had expected that, on average, there would be a positive association between GPA and subsequent increases in social acceptance. As expected, GPA at Wave I did significantly predict positive changes in social acceptance ($B = .051$, $SE = .014$, $p < .001$).

Several demographic variables were also found to be predictive of changes in social acceptance. Specifically, males were found to have more positive changes than females ($B = .092$, $SE = .025$, $p < .001$), and Asians had greater decreases in social acceptance than Whites ($B = -.131$, $SE = .059$, $p < .05$). The effect of SES was also found to be significant such that higher SES individuals tended to have more positive changes in social acceptance ($B = .031$, $SE = .012$, $p < .05$). There was also a trend towards those in single parent families having less positive increases in social acceptance over time ($B = -.063$, $SE = .032$, $p < .10$). Additionally, older adolescents tended to have slightly less positive increases in social acceptance than younger adolescents ($B = -.017$, $SE = .007$, $p < .05$).

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Table 3.4. Multilevel Parameter Estimates Showing the Effects of GPA on Subsequent Changes in Social Acceptance as a Function of Ethnicity, Controlling for Individual and School-level Disadvantage

	Model 1	Model 2	Model 3	Model 4
	B(SE)	B(SE)	B(SE)	B(SE)
Intercept	-.009(.021)	-.013(.022)	-.016(.022)	-.010(.024)
Level 1 Predictors:				
Social Accept. (Wave I)	.485(.013)***	.484(.013)***	.484(.013)***	.483(.014)***
Age	-.017(.007)*	-.017(.007)*	-.017(.007)*	-.018(.009)*
Male	.091(.025)***	.090(.024)***	.090(.024)***	.090(.024)
Black	.008(.045)	.006(.043)	.008(.043)	.000(.048)
Hispanic	-.089(.046)	-.081(.048)	-.079(.048)	-.082(.048)
Asian	-.136(.058)*	-.124(.068)	-.120(.070)	-.125(.070)
Native	-.044(.106)	-.140(.110)	-.138(.110)	-.135(.112)
Mixed	-.108(.062)	-.099(.061)	-.097(.062)	-.099(.063)
Other	-.247(.145)	-.271(.149)	-.260(.148)	-.121(.148)
SES	.032(.012)*	.032(.012)**	.031(.012)*	.030(.013)*
Single Parent	-.061(.033)	-.059(.032)	-.061(.032)*	-.057(.032)*
GPA	.051(.014)***	.070(.016)***	.077(.017)***	.092(.020)***
Level 2 Predictors:				
SchSES			.	.015(.019)
SchSafety				.007(.023)
SchAchieve				-.001(.018)
Log Size				.001(.021)
Not Public				-.023(.042)
Level 1 Interactions:				
GPAxBlack		-.119(.042)**	-.112(.043)**	-.122(.042)**
GPAxHispanic		-.007(.041)	.000(.042)	-.018(.045)
GPAxAsian		-.034(.050)	-.040(.049)	-.059(.052)
GPAxNative		-.291(.127)*	-.284(.130)*	-.309(.129)*
GPAxMixed		.011(.064)	.013(.064)	-.001(.063)
GPAxOther		.056(.125)	.052(.123)	.025(.121)
GPAxSES			.008(.013)	.008(.014)
GPAxSingle Parent			-.025(.028)	-.030(.030)
Cross-Level Interactions				
GPAxSchSES				.001(.020)
GPAxSchSafety				-.015(.021)
GPAxSchAchieve				.019(.016)
GPAxLog Size				.005(.011)
GPAxNot Public				.063(.035)
Variance Components:				
Intercept	.0040(.0018)*	.0039(.0018)*	.0039(.0017)*	.0033(.0017)*
Slope (GPA)	.0064(.0019)***	.0065(.0020)***	.0064(.0020)***	.0060(.0019)***
Int-Slope Covariance	-.0031(.0011)**	-.0031(.0011)**	-.0029(.0013)**	-.0031(.0012)**
LogLikelihood	-2,914,578	-2,911,903	-2,911,581	-2,830,667
N(level 1)	12,936	12,936	12,936	12,567
N(level 2)	132	132	132	127

Note. SchSES = school-level SES. SchSafety = school-level safety. SchAchieve = school-level achievement. *$p < .05$. **$p < .01$. ***$p < .001$.

Finally, the variance component associated with the random slope coefficient in model 1 was also found to be significant ($p < .001$). This indicates that the relationship between Wave I GPA and Wave II social acceptance does vary

significantly across schools, and therefore provides justification for later models which look at school-level characteristics as moderators of this relationship.

Ethnic-group differences in the relationship between GPA and social acceptance. Having established the direct association between GPA and social acceptance, model 2 added the GPA by race interaction terms in order to test for ethnic group differences in social costs with academic success. Parameter estimates for model 2 indicated that African American adolescents have a significantly weaker (more negative) relationship between GPA and subsequent changes in social acceptance (GPA x Black: $B = -.120$, $SE = .041$, $p < .01$). Therefore, while Whites (the reference group in model 2) show a relatively strong positive association between GPA and social acceptance ($B = .071$, $SE = .016$, $p < .001$), the association for African Americans is negative ($.071 - .120 = -.049$), suggesting that there are differential social consequences with achievement for African Americans. While relatively few Native Americans were present in the sample, as compared to Whites, they also showed significant social costs with academic success (GPA x Native: $B = -.291$, $SE = .127$, $p < .05$). Based on parameter estimates from model 2, Figure 3.1 shows the effect of Wave I GPA on subsequent changes in social acceptance for Whites, African Americans, and Native Americans. It should be noted that, although the relationship between achievement and social acceptance was most negative for Native Americans, the difference between African Americans and Native Americans was not significant. Interaction terms for Hispanics and Asians in model 2 were not significant, suggesting that the relationship between grades and social acceptance for these groups tend, on average, to be the same as for Whites. In separate analyses, Hispanic and Asian sub-groups were also considered. However, no differential social consequences with achievement were found for these groups.
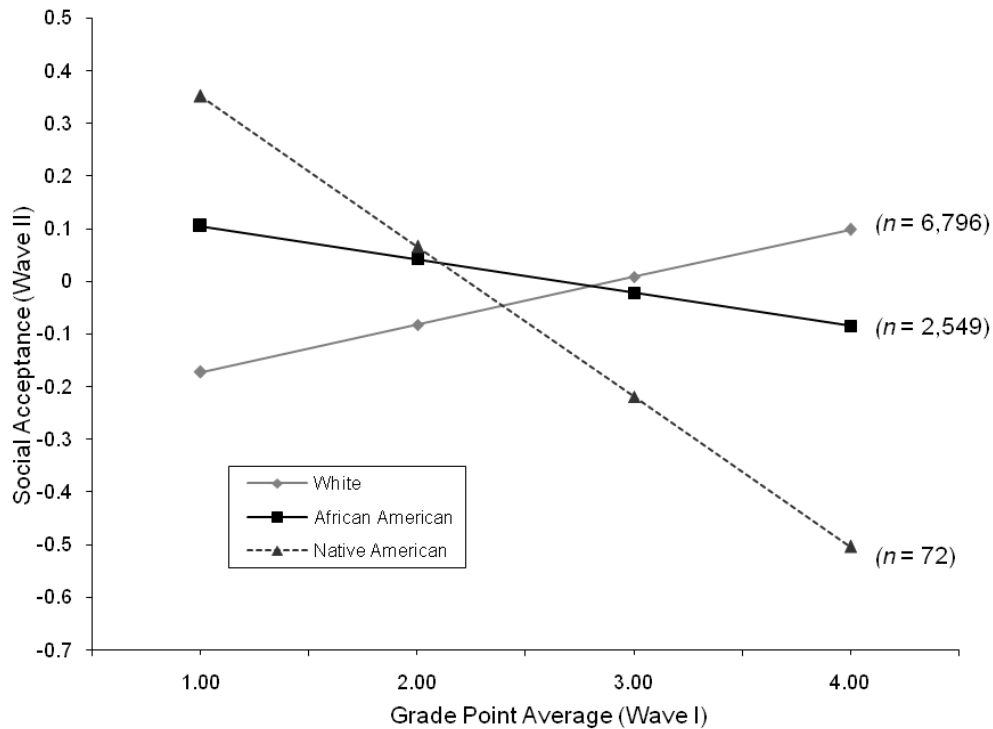
Figure 3.1. Fitted interaction plot depicting the relationship between Wave I GPA and Wave II social acceptance for Black, Native American, and White adolescents. *Note.* This figure is based on parameter estimates from model 2 (Table 3.4), with GPA converted back to its original four point scale.

Does disadvantage account for ethnic group differences in social costs? Since African American and Native American adolescents are more likely than Whites to be from low-SES families, single-parent families, and disadvantaged schools, and since these variables could be influencing the social costs of academic success, our next goal was determine whether the significant interaction effect for African Americans and Native Americans might be accounted for by controlling for individual and school-level disadvantage. Model 3 therefore added individual-level interactions (GPA x SES and GPA x Single Parent) as competing moderators and found that although the GPA x Black and GPA x Native terms decreased slightly (by 6% and 2%,

respectively), both effects remained significant ($B = -.112$, $SE = .043$, $p < .01$; $B = -.284$, $SE = .130$, $p < .05$). Model 4 then controlled for the effects of school disadvantage on the relationship between grades and social acceptance. However, the GPA x Black interaction term remained highly significant ($B = -.122$, $SE = .042$, $p < .01$), as did the GPA x Native term ($B = -.309$, $SE = .129$, $p < .05$). Findings from these models suggest that individual and school-level factors do not account for the differential social costs with academic success found for African Americans and Native Americans.

Is immigrant status a key variable influencing social costs? Having established differences in the relationship between GPA and social acceptance for African Americans and Native Americans, the next model considered whether less recent Hispanic, Asian, or Black immigrants might show more social costs with academic success than their more recent immigrant counterparts. To test these effects, model 5 therefore included three way interactions between GPA, race, and immigrant status. Parameter estimates for this model suggested that immigrant status did not play an important role for any of these groups. Specifically, with respect to the relationship between grades and social acceptance, Hispanic adolescents with foreign born parents (FBP) are not significantly different from Hispanic adolescents with U.S. born parents (GPA x Hisp. x FBP: $B = -.080$, $SE = .115$, $p = ns$). Asian and Black adolescents also showed no differences in social costs with respect to immigrant status (GPA x Asian x FBP: $B = -.031$, $SE = .148$, $p = ns$; GPA x Black x FBP: $B = -.167$, $SE = .157$, $p = ns$).

Unrelated to hypotheses for the current study, we also inadvertently discovered, in model 5, that the main effect for Asians reported in model 1, suggesting greater decreases in social acceptance, is being entirely driven by the effect for Asians with foreign born parents (Asian x FBP: $B = -.338$, $SE = .148$, $p < .05$). This suggests that Asian adolescents growing up in families with foreign born parents (1st and 2nd

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generation) tend to be experiencing greater decreases in social acceptance across the adolescent period than Whites, while Asians adolescents from families with U.S. born parents (3rd generation or greater) do not show greater decreases.

Does the social costs effect depend on gender? Model 6 focused on testing for differences in social costs for African American males and females. Parameter estimates for this model suggest that no significant differences were present between males and females (GPA x Male x Black: $B = .040$, $SE = .065$, $p = ns$) and that in fact, African American females actually show slightly greater social costs than males (Female: .080 - .141 = -.061; Male: .080 - .141 - .019 + .040 = -.04). Gender differences were also explored for each of the other ethnic groups and none were found to be significant. Models 5 and 6 (relating to immigrant status and gender) were not included as a table due to non-significant findings. A table detailing the parameter estimates for these models is available from the first author upon request.

School-level moderators of social costs for African Americans. The next set of models focused on exploring potential contingencies of the relationship between grades and social acceptance for African Americans. (Because of the small sample size for Native Americans, it was not possible to consider differences across schools for this group.) Models 7 through 9 are presented in Table 3.5.

Table 3.5. Multilevel Parameter Estimates Showing the Effects of GPA on Subsequent Changes in Social Acceptance as a Function of Race, School-level Achievement, and the Proportion of Black Students in a School.

	Model 7 B(SE)	Model 8 B(SE)	Model 9 B(SE)
Intercept	-.017(.023)	-.009(.023)	-.016(.024)
Level 1 Predictors:			
Social Accept. (Wave I)	.483(.014)***	.483(.014)***	.483(.014)***
Age	-.019(.007)*	-.017(.008)*	-.017(.007)*
Male	.090(.025)***	.092(.025)***	.092(.025)**
Black	.007(.045)	.019(.105)	.022(.086)
Hispanic	-.083(.048)*	-.081(.050)	-.083(.048)
Asian	-.124(.067)	-.120(.070)	-.124(.068)
Native	-.134(.111)	-.146(.110)	-.138(.112)
Mixed	-.097(.061)	-.100(.064)	-.010(.062)
Other	-.256(.149)	-.266(.149)	-.258(.149)
SES	.035(.012)**	.034(.012)**	.035(.012)**
Single Parent	-.053(.033)	-.054(.033)	-.051(.033)
GPA	.074(.017)**	.067(.018)***	.072(.019)***
Level 2 Predictors:			
BlkSch		-.016(.038)	-.006(.036)
SchAchieve	.017(.012)		.017(.013)
Level 1 Interactions:			
GPAxBlack	-.117(.044)**	-.182(.108)	-.155(.085)*
GPAxHispanic	-.015(.043)	-.011(.042)	-.011(.044)
GPAxAsian	-.037(.048)	-.047(.048)	-.040(.045)
GPAxNative	-.305(.123)*	-.293(.128)*	-.302(.123)*
GPAxMixed	.004(.064)	.005(.064)	.002(.064)
GPAxOther	-.048(.124)	.054(.126)	.048(.124)
Level 2 and Cross-level Interactions:			
GPA*BlkSch		.033(.039)	.021(.036)
GPA*SchAchieve	-.014(.012)		-.016(.012)
Black*BlkSch		-.021(.119)	-.037(.103)
Black*SchAchieve	-.043(.041)		-.046(.105)
BlkSch*SchAchieve			.006(.036)
Black*BlkSch*SchAchieve			-.019(.115)
GPA*BlkSch*SchAchieve			.023(.040)
GPA*Black*BlkSch		.069(.118)	.059(.096)
GPA*Black*SchAchieve	-.042(.032)		-.232(.098)*
GPA*Black*BlkSch*SchAchieve			.222(.105)*
Variance Components:			
Intercept	.0035(.0018)*	.0037(.0018)*	.0032(.0017)*
Slope (GPA)	.0068(.0020)***	.0063(.0019)***	.0064(.0019)***
Int-Slope Covariance	-.0034(.0011)*	-.0030(.0013)*	-.0031(.0010)*
LogLikelihood	-2,835,865	-2,832,819	-2,829,456
N(level 1)	12,649	12,572	12,567
N(level 2)	128	128	127

Note. BlkSch = Black school (school in top quartile with respect to the percentage of Black students). SchAchieve = school-level achievement.
*$p < .05$. **$p < .01$. ***$p < .001$.

Model 7 focused on the interaction between GPA, Black race, and school-level achievement in order to determine whether being in a higher achieving school is

associated with more social costs for African Americans. Results for this model suggested that, when considered alone, school-level achievement did not significantly effect the social costs of academic success for African Americans (B = -.042, SE = .032, p = ns). Model 8 focused on the interaction between GPA, Black race, and Black school in order to determine whether being in a largely Black school might be protective against the social costs of academic success for African Americans. Results for this model also proved non-significant (B = .069, SE = .118, p = ns) suggesting that, overall, the social costs of academic success for African Americans are not significantly different in largely Black schools.

Model 9 focused on testing whether the effects of being in a high achieving school might depend on the proportion of Black students in the school, or in other words, whether it is important to consider school-level achievement and school racial context simultaneously. Parameter estimates from this model showed a significant interaction effect such that Black students in more high achieving schools had greater social costs, but only when the school had a smaller percentage of Black students. This model therefore suggests that a more Black school context is protective against social costs when the school is high achieving.

With respect to model parameters, because the Black school variable (BlkSch) is dummy code, the significant GPA x Blk x SchAch term in model 9 suggests that African American students in higher achieving non-Black schools have greater social costs with academic success than Black students in lower achieving non-Black schools (B = -.232, SE = .098, p < .05). The GPA x Blk x BlkSch x SchAch term shows that the increase in social costs due to being in a high achieving school is almost completely eliminated if the school is largely Black (B = .222, SE = .015, p < .05). In other words, African Americans in higher achieving (+1 SD on School-level achievement), less Black schools are experiencing the greatest social costs with

academic success (slope = .072 - .155 - .016 - .232 = -.331), whereas African Americans in high achieving Black schools are experiencing less social costs (slope= .072 - .155 - .016 - .232 + .222 + .059 + .023 = -.027). Note that the slope calculations of -.331 and –.027 represent the change in social acceptance for each standard deviation of change in GPA. Figure 3.2 illustrates the school-level findings for four groups of Black students: Black students in *high-achieving non-Black schools*; Black students in *high-achieving Black schools*; Black students in *low-achieving non-Black schools*; and Black students in *low-achieving Black schools*. The slopes of the lines for Black students in low-achieving Black and non-Black schools are not significantly different from each other, or from the slope of the line for Blacks in high-achieving Black schools. On the other hand, as indicated above, the slope of the line for Black students in high-achieving non-Black schools, is significantly different from the others, indicating that Black students in these schools, on average, experience the greatest social costs with achievement.
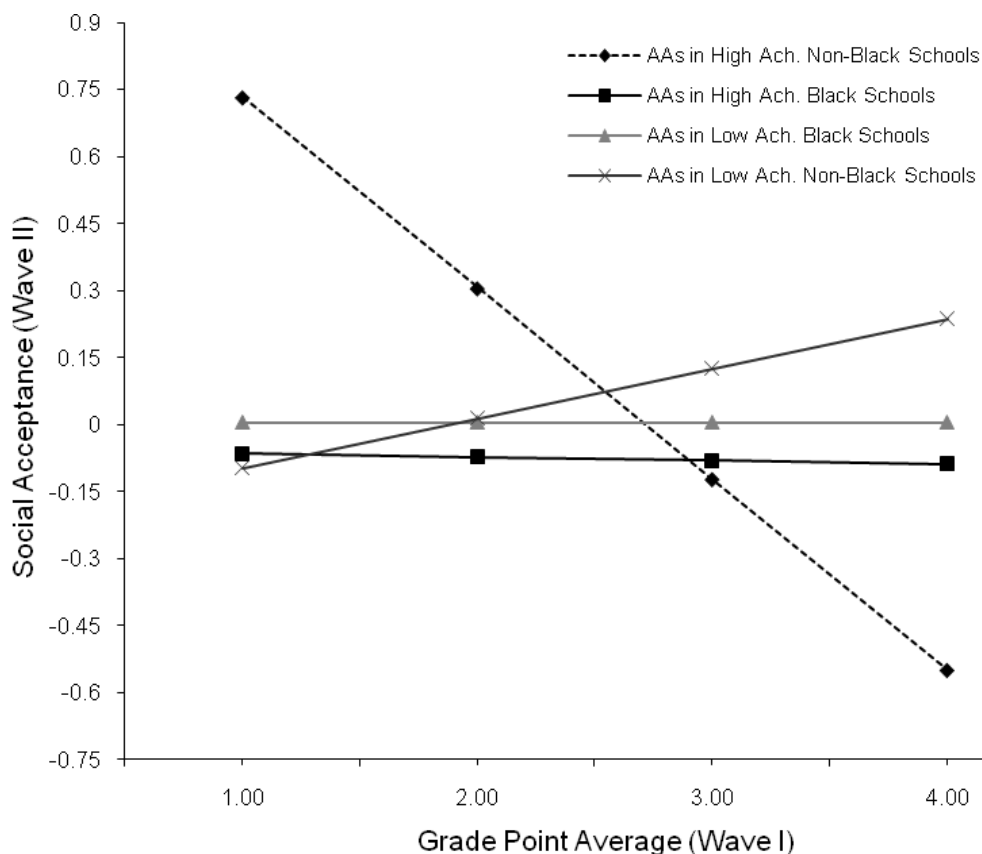
Figure 3.2. Fitted interaction plot depicting the relationship between Wave I GPA and Wave II social acceptance for Black adolescents in four school contexts. *Note*. This figure is based on parameter estimates from model 9 (Table 3.5), with GPA converted back to its original four point scale. Sixty eight percent of Black students ($n = 1{,}708$) are in Black schools (top quartile of percent Black), and 32% percent ($n = 801$) are in less Black schools. Since school-level achievement is a continuous variable, specific sample sizes cannot be associated with each of the lines: High achieving school = +1 *SD* from mean, Low achieving school = -1 *SD* from mean. AAs = African Americans.

School-level moderators of social costs for Hispanics. Additional models focused on the effects of school context for Hispanic students as well as for individual Hispanic ethnic groups. Specifically, our first set of models looked at the social consequences of achievement for Hispanic students as a function of school-level achievement and the percentage of Hispanic students in the school. Results of these

analyses (models 10, 11, and 12) suggested that school-level achievement and the proportion of Hispanic students in a school do not play a role for Hispanics. That is, there were no significant differences in social costs for Hispanic students as a function of the school characteristics considered.

Having established these null findings for Hispanics, we then considered whether school characteristics may have differential consequences for the different Hispanic sub-groups. Specifically, we considered Mexican, Puerto Rican, Cuban, and Central/South American groups separately in order to determine whether school-level achievement and the proportion of Hispanic students in a school play an important role for particular groups. Analyses for the individual groups revealed interesting effects. Most notably, the school-context findings reported for Black students were replicated for Mexican students (models 13, 14, and 15). These models are presented in Table 3.6. Models 13 and 14 showed that school level achievement and the percentage of Hispanic students in the school, when considered separately, did not significantly moderate the relationship between achievement and social acceptance. However, when considered together in model 15, the same findings emerged as for African American students. Specifically, model parameters showed that Mexican students experience greater social costs with achievement in high achieving schools ($B = -.236$, $SE = .107$, $p < .05$), but only when these schools do not have a substantial portion of Hispanic students ($B = .277$, $SE = .109$, $p < .05$). In other words, just as Black students experienced less social costs with achievement in higher achieving Black schools, Mexican students also experienced less social costs in higher achieving Hispanic schools.

Table 3.6. Multilevel Parameter Estimates Showing the Effects of GPA on Subsequent Changes in Social Acceptance as a Function of Ethnicity, School-level Achievement, and the Proportion of Hispanic Students in a School.

	Model 13	Model 14	Model 15
	B(SE)	*B*(SE)	*B(SE)*
Intercept	-.011(.022)	-.001(.022)	-.003(.023)
Level 1 Predictors:			
Social Accept. (Wave I)	.482(.013)***	.481(.014)***	.482(.014)***
Age	-.018(.008)**	-.018(.008)*	-.018(.008)*
Male	.088(.024)***	.088(.024)***	.088(.023)***
Black	.003(.047)	.003(.043)	.007(.046)
Mexican	.111(.056)*	.182(.090)*	.117(.104)
Other Hispanic	-.017(.060)	-.027(.074)	-.026(.073)
Asian	-.124(.071)	-.091(.066)	-.085(.068)
Native	-.144(.113)	-.080(.111)	-.077(.114)
Mixed	-.100(.062)	-.060(.145)	-.085(.059)
Other	-.256(.149)	-.239(.151)	-.234(.151)
SES	.032(.012)**	.034(.012)**	.034(.012)**
Single Parent	-.058(.033)	-.056(.032)	-.057(.033)
GPA	.076(.017)***	.067(.017)***	.074(.017)***
Level 2 Predictors:			
HispSch		-.130(.059)*	-.148(.068)*
SchAchieve	.011(.014)		.010(.014)
Level 1 Interactions:			
GPAxBlack	-.121(.042)**	-.117(.042)**	-.124(.042)**
GPAxMexican	-.007(.050)	-.010(.107)	-.089(.064)
GPAxOtherHispanic	-.018(.054)	-.020(.053)	-.022(.054)
GPAxAsian	-.037(.050)	-.048(.051)	-.053(.052)
GPAxNative	-.288(.124)*	-.323(.116)**	-.294(.116)*
GPAxMixed	.006(.064)	.001(.065)	.001(.065)
GPAxOther	-.049(.123)	.042(.128)	.036(.125)
Level 2 and Cross-level Interactions:			
GPA*HispSch		.068(.039)	.072(.042)
GPA*SchAchieve	-.015(.011)		-.022(.012)
Mex.*HispSch		-.201(.115)	-.170(.137)
Mex.*SchAchieve	-.040(.068)		-.072(.114)
HispSch*SchAchieve			.023(.055)
Mexican*HispSch*SchAchieve			-.142(.153)
GPA*HispSch*SchAchieve			.074(.035)*
GPA*Mex.*HispSch		.001(.113)	.076(.067)
GPA*Mex.*SchAchieve	-.106(.090)		-.236(.107)*
GPA*Mex.*HispSch*SchAchieve			.277(.109)*
Variance Components:			
Intercept	.0036(.0018)*	.0033(.0018)*	.0033(.0018)*
Slope (GPA)	.0064(.0020)***	.0070(.0012)***	.0065(.0021)***
Int-Slope Covariance	-.0028(.0012)*	-.0030(.0012)*	-.0031(.0011)*
LogLikelihood	-2,837,430	-2,833,306	-2,829,976
N(level 1)	12,673	12,596	12,591
N(level 2)	128	128	127

Note. HispSch = Hispanic school (school in top quartile with respect to the percentage of Hispanic students). SchAchieve = school-level achievement. *p < .05. **p < .01. ***p < .001.

Figure 3.3 illustrates the school-level findings for students from Mexican decent. Specifically, Mexican students in higher achieving (+1 *SD* on School-level achievement) less Hispanic schools are shown to be experiencing the greatest social costs with achievement (slope = .074 - .124 - .022 - .236 = -.308), whereas Mexican adolescents in other school contexts enjoy a positive association between achievement and social acceptance (as evidenced by the positive slopes for the other three lines). The slopes of the lines for Mexican students in low-achieving Hispanic and non-Hispanic schools are not significantly different from each other, or from the slope of the line for Mexican students in high-achieving Hispanic schools. On the other hand, as indicated above, the slope of the line for Mexican students in high-achieving non-Hispanic schools is significantly different from the others, indicating that Mexican students in these schools, on average, experience the greatest social costs with achievement.

Other Hispanic ethnic groups were also considered across school contexts. Findings for Puerto Rican, Central/South American, and Cuban adolescents were, however, quite different. The percentage of Hispanic students was found not to influence the social costs of achievement for any of these groups. Furthermore, school level achievement did not lead to increased social costs for any of these groups, regardless of whether or not the school was high achieving. In fact, for Puerto Rican and Central/South American adolescents school-level achievement was associated with less social costs (more social acceptance) with achievement (GPA x Puerto Rican x SchAchieve: $B = .196$, $SE = .099$, $p < .05$; GPA x Central/South American x SchAchieve: $B = .124$, $SE = .045$, $p < .01$).
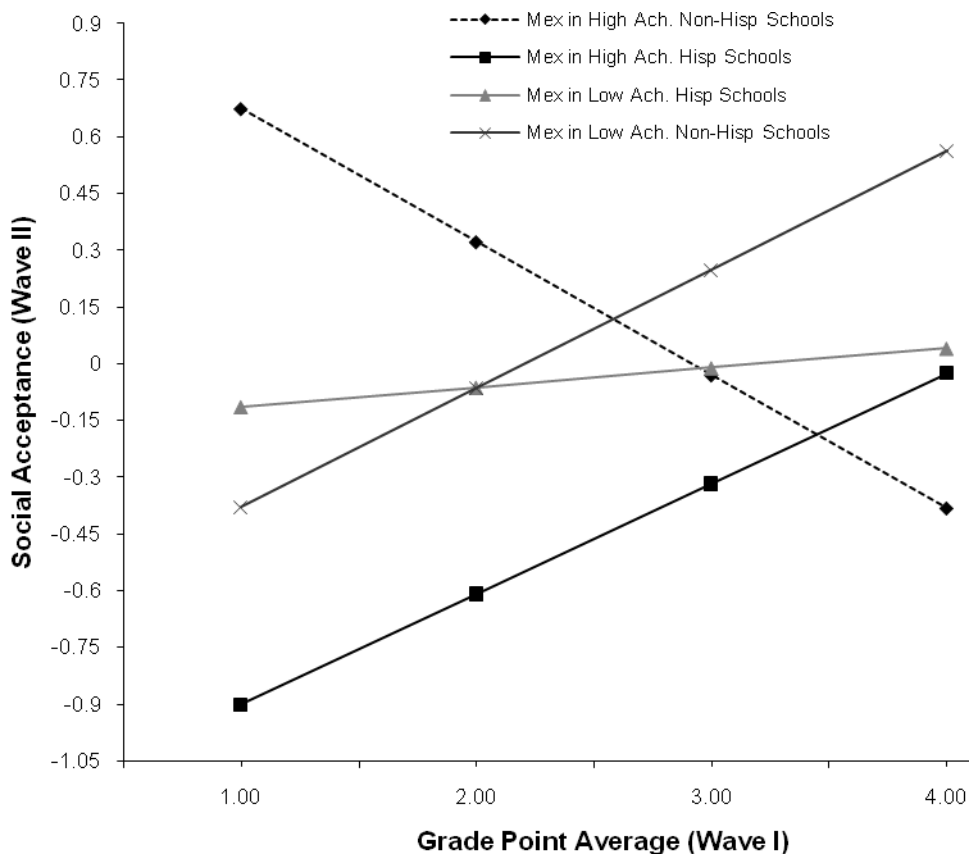
Figure 3.3. Fitted interaction plot depicting the relationship between Wave I GPA and Wave II social acceptance for adolescents from Mexican decent in four school contexts. *Note.* This figure is based on parameter estimates from model 15 (Table 3.6), with GPA converted back to its original four point scale. Seventy seven percent of Mexican students (*n* = 689) are in Hispanic schools (top quartile of percent Hispanic), and 23% percent (*n* = 207) are in less Hispanic schools. Since school-level achievement is a continuous variable, specific sample sizes cannot be associated with each of the lines: High achieving school = +1 *SD* from mean, Low achieving school = -1 *SD* from mean. Mex = Adolescents from Mexican decent.

School context effects were also considered for Asians, but no significant differences were found. Furthermore, the relationship between achievement and social acceptance was considered for Black students as a function of the percentage of Hispanic students in the school and vice versa. No significant effects were found, suggesting the importance of same-race minority peers, as opposed to minority peers in general. The percentage of Whites students in a school was also explored, but was

not found to influence the effects of achievement on social acceptance for any of the groups considered.

Discussion

The current study explored the longitudinal association between achievement and social acceptance across ethnic groups in order to test the proposition that some minority groups experience greater social costs with academic success. Furthermore the effects of school-level variables on the relationship between achievement and social acceptance were examined. To our knowledge, this study is the first to quantitatively demonstrate differential social costs with academic success across ethnic group. In particular, results suggest that, as compared to Whites, Black and Native American adolescents experience more social costs with achievement, even after controlling for individual and school-level disadvantage. These findings are in line with theory and research suggesting that greater social consequences may exist among currently stigmatized and historically oppressed groups (Fordham & Ogbu, 1986; Spencer & Harpalani, 2008; Steele, 1998).

An additional focus of the present study was to consider school-level contingencies of social costs. In particular, on the basis of existing work (Brewer & Kramer, 1985; Goldsmith, 2004), we explored school-level achievement and the proportion of same-race students in a school as potential moderators of the relationship between achievement and social acceptance. Findings suggested that social costs associated with achievement were greater for African Americans in higher achieving schools, but only when these schools had a smaller proportion of Black students. Specifically, for Black students, the social consequences of achievement were most severe in higher achieving schools with less Black students. However, when schools did have a substantial percentage of same-race peers, the social costs

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were relatively low, regardless of the levels of achievement within the school (see Figure 3.1).

Consistent with our hypotheses, these findings suggest that the social consequences of achievement for African Americans are largely contingent on contextual factors (Cross, 2003; Spencer et al., 2001), and therefore are not likely to be the result of a wide-spread cultural orientation in opposition to achievement. Furthermore, results are in line with research suggesting that inter-racial tensions are more pronounced in competitive or high achieving contexts (Brewer & Kramer, 1985), as well as with work suggesting that it is important for minority students to be exposed to a significant number of same-race peers. Goldsmith (2004), for example, demonstrated that Black students in schools where minority peers predominate are more likely to have higher occupational aspirations, higher educational aspirations, and more positive attitudes about daily school experiences. Taken together, our own and previous findings therefore suggest that the presence of a critical mass of same-race students may reduce the social costs experienced with academic success for African Americans in higher achieving schools.

It is important to note that, while our findings demonstrate that the highest social costs with achievement for African American students are present in high achieving schools with a smaller proportion of Black students, the results also show that, for Black students in predominantly Black schools, the relationship between achievement and social acceptance is still not positive (see Figure 3.2). This is in contrast to a significant positive association between achievement and social acceptance for the majority group found in this study, as well as in previous work (Chen et al., 1997; Wentzel, 1991, 2005). The lack of a positive relationship between achievement and social acceptance for African American adolescents in predominantly Black schools therefore suggests there are still some social costs with

academic success for these students, relative the majority group. This finding could be interpreted as in line with previous qualitative work conducted in predominantly Black schools (e.g. Fordham & Ogbu, 1986; Fordham, 1988). However, because the relationship between achievement and social acceptance is significantly more negative in competitive contexts, current situational characteristics seem to be an important driving force behind the social consequences of achievement.

The school-level findings for African Americans were also replicated for students from Mexican decent. Specifically, Mexican students experienced substantially more social costs in higher achieving schools, but only when these schools did not contain a substantial portion of Hispanic students (Figure 3.3). The effects of school-level achievement and the presence of same-race peers seem to be operating similarly for students from Mexican decent as for African Americans. However, other Hispanic groups did not show equivalent trends. In fact, the percentage of Hispanic students in a school had no effects for the Cuban, Puerto Rican, or Central/South American groups. Additionally, school-level achievement had no effect for Cubans and had a different effect for adolescents from Puerto Rican and Central/South American decent than for Mexicans or Blacks. Specifically, higher achieving schools were associated with less social costs for Puerto Rican and Central/South American adolescents.

While this diversity in the social consequences of achievement among Hispanic groups was not predicted, a range of work is helpful in explaining these effects. In particular, a variety of research suggests that Mexicans and Mexican-Americans have a history of stigmatization, economic exploitation, and racial exclusion in the U.S. (e.g., Gutierrez, 1995; Lopez & Stanton-Salazar, 2001; A. Portes & Rumbaut, 2001). Furthermore, in the words of De Genova and Ramos-Zayas (2003), "the coupling of 'Mexican'-ness and migrant 'illegality' has rendered

Mexicans in the U.S. as permanent outsiders" (p. 6). Along these lines, other researchers have also argued that, with respect to subordination and disenfranchisement, the history of Mexican-Americans is in many ways similar to that of Black Americans, and that the two groups are often similar in their reactions to discrimination (A. Portes, 1990). Given these perspectives, it is not surprising that Mexicans show similar tends to African Americans across school contexts.

However, other Hispanic groups did not show the same pattern of results across school contexts as Mexican students. For example, Cubans students did not exhibit any differential social costs with achievement across any of the contexts considered. The lack of social costs experienced by this group may be due to the fact that almost all Cubans in our sample were in schools with a substantial proportion of Hispanic students. Moreover, other researchers have suggested that adolescents from Cuban decent have shown fewer academic adjustment problems than adolescents from Mexican decent (A. Portes & MacLeod, 1996; P. R. Portes, 1999). This has been attributed to more social capital and a more favorable reception by the dominant group (P. R. Portes, 1999).

Additionally, Puerto Rican and Central/South American students also did not exhibit differential social costs with achievement in any of the school contexts considered. With respect to Puerto Ricans, researchers have argued that their legal status as U.S. citizens may lead to less stigmatization, fewer experiences of discrimination, and less problematic achievement dynamics than adolescents of Mexican decent (Flores-Gonzalez, 1999; De Genova & Ramos-Zayas, 2003). This is one possible explanation for the lack of social costs found for this group. Future work will be needed to test the various potential mechanisms behind the differential social costs experienced by particular groups. Overall, our findings relating to Hispanics are in line with the idea that acculturation experiences vary substantially across the

individual ethnic groups within the Hispanic pan-ethnic category (e.g., Arcia, Skinner, Bailey, Correa, 2001).

In addition to school context, the current study also tested the possibility that immigrant status, may be accounting for differences in social costs. This was explored by examining the relationship between achievement and social acceptance for the Black, Hispanic, and Asian groups as a function of immigrant status. Results of these analyses suggested that adolescents whose families have been in the United States for multiple generations did not show any greater social costs than their more recent immigrant counterparts. These findings, therefore, failed to provide support the idea that length of time in the U.S. accounts for differences in social costs across groups (A. Portes & Zhou, 1993; Spencer et al., 2003).

Based on previous research (Osborn, 1997; Graham, Taylor, & Hudley, 1998), an additional hypothesis of the current study was that African American males might show greater social costs than females. Findings, however, showed no gender effect for African Americans, or for any of the other ethnic groups. This suggests that gender is not playing a direct role in the link between achievement and social acceptance across adolescence.

Limitations and Future Directions

While the findings of this study suggest that differential social costs do exist for particular groups, it was not within the scope of this research to determine the detailed mechanisms for these effects. It will therefore be important for future studies to develop a more detailed understanding of group differences, especially in school contexts where the discrepancies in social costs across groups were found to be most pronounced. Initial work in this area has suggested that some differences in achievement values are present during early adolescence (e.g., Graham, Taylor, & Hudley, 1998). However, the role of peer attitudes and norms in the relationship

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between achievement and social acceptance is not well understood. It will therefore be of particular importance for future work to explore these effects as well as to examine contextual factors that may be influencing the achievement values of minority peer groups (e.g., stereotypes and discrimination from the majority group, or socialization messages from families and communities).

Another area of future research will be to explore the role of identity in the social costs of achievement. This is of particular importance given that racial and ethnic identity are thought to influence perceptions of racism, as well as its consequences. Furthermore, since differences in social costs across ethnic groups may be the result of attitudes and norms within peer groups, network techniques, which aggregate the characteristics of peers (e.g., Kiesner, Cadinu, Poulin, & Bucci, 2002), will be necessary to test these effects. Contextual factors such as socialization and experiences with discrimination will also be important to consider—particularly in relation to their role as predictors of group identity (Hughes et al., 2006; Sellers & Shelton, 2003).

Finally, it is unclear from the current study whether the social consequences of achievement experienced by particular groups comes from same-race peers or from members of the dominant group. Distinguishing the particular source of social consequences with achievement will therefore be an important issue for future studies to consider. In particular, it will be necessary to consider the possibility that the greater social costs experienced by particular groups may be the result of increased hostility from the majority group at higher levels of achievement. That is, White adolescents may feel particularly threatened when members of specific groups achieve academically and therefore may express more hostility towards high achieving members of these groups. Given that Whites have been shown to direct their prejudice unequally among ethnic minorities as a function of individual characteristics (Kaiser

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& Pratt-Hyatt, 2009), this explanation is certainly plausible. Future research will be necessary in order to distinguish these various possible sources of social costs.

Conclusion

In closing, we wish to emphasize that, although the findings of this study indicate that ethnic group differences do exist, it is by no means our intention to insinuate that such differences are set in stone. Quite the opposite, our hope is that a more nuanced understanding of ethnic group differences, and the complex dynamics behind them, will stimulate actions to address these issues within education systems at multiple levels. While many researchers have argued for a color-blind perspective, suggesting that ethnic issues are irrelevant when background and contextual factors are considered (e.g., Cook & Ludwig, 1997; Rothstein, 2004), results of the current study suggest strongly otherwise. An important implication of this paper is therefore that, in order to redress ethnic gaps in achievement, in addition to focusing on socioeconomic and structural problems, schools and communities will need to understand and address issues of race.

Furthermore, while our results suggest that schools with more same-ethnic peers may be protective against social costs in more high achieving settings, we do not wish to imply that segregated schools are a necessity for particular students to maintain healthy social relations alongside academic achievement. We feel that a more appropriate implication of these findings is that schools with characteristics associated with differential social costs should seek to develop a greater awareness of unacknowledged stereotypes, and take additional measures to maintain healthy racial dynamics. Specifically, previous recommendations for school personnel to focus on earning and maintaining the trust of minority students, and to create an environment of "identity safety" (Davies, Spencer, & Steele, 2005; Ogbu & Simons, 1998) may be of

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particular importance in high achieving schools where stigmatized minority groups are a clear numeric minority.

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