

## Racial-Ethnic Self-Schemas and Segmented Assimilation: Identity and the Academic Achievement of Hispanic Youth\*

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*How are racial-ethnic identity and acculturation processes linked, and when do they have positive consequences for academic achievement and assimilation trajectory? To address these issues this study integrates two frameworks—segmented assimilation (Portes and Rumbaut 2001) and racial-ethnic self-schema (Oyserman et al. 2003)—that focus on how immigrant and minority youth identify with their in-group and American society at large and link these patterns of racial-ethnic identity with academic outcomes. Segmented assimilation describes how context influences identity and subsequently assimilation trajectory, while racial-ethnic self-schema theory relates differences in identity content to academic achievement. Integration of the two frameworks provides a more robust model of identity influences across contexts. Predicted relationships within inhospitable contexts were tested using structural equation models connecting three measures of acculturation—immigrant generation in the United States, Spanish-use, and identity—to academic achievement of Hispanic youth ( $n = 185$ ) living in low-income, urban neighborhoods. “Thick” in-group focused identities, and “thin” aschematic identities were associated with lower achievement, while bridging identities linking connection to one’s in-group with overcoming obstacles in broader society were associated with positive outcomes. Endorsement of aschematic identities increased with generation in the U.S., suggesting that downward mobility is facilitated by “thin” rather than “thick” identities. Content of identity was the most important predictor of achievement.*

At the turn of the twenty-first century, the United States is once again experiencing record levels of immigration. As with European immigrants arriving a century ago, concerns have been raised about the ultimate success of the new arrivals from Latin

America and Asia (Suárez-Orozco and Suárez-Orozco 2001). Of particular concern are future prospects for children of immigrants who arrive with few human-capital resources and settle in racially segregated, low-income neighborhoods with few community resources (Portes and Rumbaut 2001). Will acculturation lead to upward economic mobility for this growing population of immigrant youth, as it did for immigrant youth a century ago? Or will cultural assimilation into a bifurcated society lead to long-term economic and social marginalization?

### THEORY

We begin to address these questions by integrating two theoretical frameworks—racial-ethnic self-schema (Oyserman et al. 2003) and segmented assimilation (Portes and

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Zhou 1993; Portes and Rumbaut 2001). The two frameworks are derived from different literatures, one on self-concept and identity of racial-ethnic minority youth and the other on immigration and assimilation. The segmented assimilation framework describes patterns of U.S. immigrant assimilation in relation to a wide range of structural and individual factors including racial-ethnic identity. The racial-ethnic self-schema framework focuses on the relation of racial-ethnic self-schemas to behavioral and cognitive outcomes among racial-ethnic minority youth. Despite their differing origins, both frameworks converge in proposing that content of racial-ethnic identity is an important contributor to academic outcomes for youth of color, immigrant and otherwise, who are targeted by discrimination and negative stereotypes and live in low-income neighborhoods with little social capital. We propose that by combining the two frameworks we can gain a greater understanding of how racial-ethnic identity promotes or hampers academic success and predicts future assimilation outcomes for this population of youth. We focus our examination on the connection between racial-ethnic identity and assimilation trajectory within what Portes and Rumbaut (2001) describe as inhospitable contexts of reception—low-income neighborhoods with large proportions of minority residents.

### Segmented Assimilation Theory

Classical assimilation theory (Gordon 1964) and its variants (for a review see Alba and Nee 1997) posit that cultural assimilation to a mainstream, Anglo-Saxon norm is a prerequisite to structural assimilation of immigrants into social and economic institutions. In contrast, segmented assimilation theory proposes that immigrant groups assimilate into different segments of American society depending on both individual (e.g., human capital) and contextual (e.g., the host country's political, social, and economic climates, as well as presence of a coethnic community) factors (Portes and Rumbaut 2001). Within the segmented assimilation framework, racial-ethnic identity is described as both a response to

contexts of reception and as a potential predictor of outcomes such as academic achievement (Portes and Rumbaut 2001; Rumbaut 2005).

Similar to social identity theory (Tajfel and Turner 1986) and sociological examinations of racial-ethnic identity (e.g. Waters 1999), segmented assimilation and racial-ethnic self-schema frameworks define racial-ethnic identity in terms of both relationship to one's in-group and perceived relationships between the in-group and broader society. Specifically, segmented assimilation theory describes three patterns of racial-ethnic identity—"thin", "bicultural", and "thick". As outlined below, each pattern is associated with an assimilation trajectory (Portes and Rumbaut 2001; Portes 2003; Rumbaut 2005).

Thin racial-ethnic identities are associated with linear assimilation and involve declining salience of home identity and acculturation to mainstream norms. Over time, youth following this assimilation trajectory identify less with their culture of origin and more with being simply American, resulting in decreased in-group focus (Portes and Rumbaut 2001; Rumbaut 2005). Linear assimilation and a "thinning" of racial-ethnic identity are hypothesized to occur among immigrants who arrive with significant human capital into a favorable context of reception. Under these circumstances, a thin racial-ethnic identity is hypothesized to be positively associated with academic achievement and upward mobility (Portes and Rumbaut 2001).

Bicultural racial-ethnic identities are associated with selective assimilation and involve maintenance of a strong in-group identity within a context of substantial community social capital, in combination with aspirations to succeed in broader society (Portes 2003; Portes and Rumbaut 2001). Over time, youth following this trajectory continue to identify with their in-group but also identify with success in broader society. This identification is also posited to be associated with academic success (Portes and Rumbaut 2001).

Thick racial-ethnic identities are associated with downward assimilation and hypothesized to develop when an immigrant group

experiences an inhospitable context of reception. As youth experience discrimination and perceive their in-group to be devalued by mainstream U.S. society, their ethnic identities “thicken” over time and their connection to mainstream institutions and norms diminishes. This identity development process is termed reactive formation (Portes and Rumbaut 2001; Rumbaut 2005). When combined with low levels of human and social capital within youths’ in-group communities, this identity is hypothesized to be associated with negative outcomes such as poor academic achievement and ultimately downward assimilation (Portes 2003). Reactive identity formation is hypothesized to occur most readily in low-income, urban centers with large minority populations where immigrants are likely to experience a hostile context of reception (Portes 2003; Rumbaut 2005). Portes and Rumbaut (2001) posit that Mexican immigrants are most likely to experience this pattern of racial-ethnic identity, as well as downward assimilation.

A number of studies have used the segmented assimilation framework to focus on the relationship between content of racial-ethnic identity and the academic achievement of immigrant children. These studies examine when identification with the in-group is helpful, as well as when it is associated with negative academic outcomes. For example, in a New Orleans-based study of Vietnamese youth, Zhou & Bankston (1994) report a positive association between strong connection to the in-group and academic achievement as part of a bicultural identity associated with selective acculturation. They posit that strong identification with the culture of origin acts as a protective factor by keeping youth connected to the tight ethnic networks of the Vietnamese community, which strongly values achievement in broader society. Conversely, in a San Diego-based study Portes and Rumbaut (2001) report that Mexican-American youth are most likely to exhibit a “thick” in-group identity, demonstrated by use of a national-origin label like Mexican to identify oneself, as well as have low academic achievement. In this case, strong identification with the in-group is posited to be a

response to discrimination and acts as a risk factor by keeping youth from engaging with school as a broader societal institution.

There are, however, several gaps in the empirical evidence supporting these segmented assimilation hypotheses when considering the role of racial-ethnic identity. First, while the framework uses content of racial-ethnic identity as an explanatory factor, studies using this framework have not focused explicitly on content of identity in assessment. Secondly, studies have not empirically assessed the relationship between content of racial-ethnic identity and academic outcomes. For example, although Portes and Rumbaut (2001) demonstrate that Mexican-American youth have lower average academic achievement and are more likely to identify themselves with a national-origin label than other immigrant youth, they do not show that using national-origin labels relates to lower academic outcomes. Thus, in our integration of segmented assimilation and racial-ethnic self-schema frameworks we sought to provide a basis for the direct assessment of racial-ethnic identity among immigrant youth.

### Racial-Ethnic Self-Schema Theory

The racial-ethnic self-schema framework (Oyserman et al. 2003) was developed to provide a set of testable hypotheses about when racial-ethnic identity would be associated with positive or negative academic outcomes. The framework was developed with focus on the experiences of African Americans, Hispanic Americans, and American Indians, and has been applied to minorities in other countries (i.e., Arabs in Israel). Hypotheses within the racial-ethnic self-schema framework are based on two assumptions: that African American and Hispanic youth are exposed to negative stereotypes about their in-group’s academic abilities (for reviews see Oyserman, Bybee, and Terry 2003; Oyserman, Gant, and Ager 1995), and that for these groups, school success is stereotyped as part of mainstream norms, rather than as an in-group defining characteristic (Ogbu 1978, 1994; Steele 1997).

Two hypotheses emerge from these assumptions. First, that youth with no racial-ethnic schema with which to make sense of negative in-group stereotypes will be left vulnerable to the stereotype that school success is not an in-group norm (termed stereotype threat by Steele 1997) and will, therefore, have lower academic achievement. Second, that simply having a racial-ethnic schema is not sufficient; feeling connected to one's in-group motivates one to act like an in-group member, but does not necessarily provide effective strategies to work toward academic success. These strategies may be more readily available as part of what it means to be a member of broader society. Therefore, racial-ethnic self-schemas that include both sense of connection to in-group and to larger society are likely to be associated with positive academic achievement (Oyserman, Brickman, and Rhodes 2007).

Oyserman and colleagues (2003) distinguish among four racial-ethnic self-schema (RES) types that describe youths' orientations to their racial-ethnic groups and to broader society, and posit connection between RES type and academic achievement. Aschematic RES, the first type, involves not seeing racial-ethnic group membership as a self-defining characteristic. In contrast, membership in one's racial-ethnic in-group is salient for the other three RES types, which are termed In-group RES, Dual RES, and Minority RES. Only in-group connection, and not connection to broader society, is salient for In-group RES. Connection to both in-group and broader society is salient for Dual RES and Minority RES; although, both schemas focus on the bridge between in-group and larger society, Dual RES emphasizes the positive consequences of this dual status while Minority RES emphasizes the need to overcome obstacles to fully engage with broader society. Both Dual and Minority RES are posited to increase focus on school and therefore academic success, whereas both In-group and Aschematic RES are posited to increase vulnerability to stereotype threat and disengagement from school (Oyserman et al. 2003).

Five studies support the hypothesized relationships of racial-ethnic self-schemas to

academic outcomes among different populations of youth. In a study with American Indian, African American, and Latino/a eighth graders (Oyserman et al. 2003), youth who described Dual RES or Minority RES in the fall obtained better end-of-year grades than youth who were race-ethnicity aschematic or who described an in-group-only RES, even when controlling for prior grades. Racial-ethnic self-schemas were assessed with content-coded responses to the following open-ended question: "What does it mean to you to be a member of your race or ethnic group? You can use examples from your everyday life of things you do that make you feel like a member of this group." (Oyserman et al. 2003:337). In two studies with American-Indian and Arab-Israeli high-school students (Oyserman et al. 2003), math performance was shown to decline among Aschematic and In-group RES youth when they were asked the open-ended identity probe prior to completing a math task, in contrast to Minority and Dual RES youth for whom performance did not decline. Finally, two follow-up studies with African-American and Latino youth (Oyserman 2008) used a close-ended version of the RES measure and demonstrated that higher Dual RES and Minority RES scores were associated with more emotional and behavioral engagement with school both in an eighth-grade sample and in a longitudinal sample of ninth graders followed to the twelfth grade. Because effects are consistent across racial-ethnic groups, age, and design (whether racial-ethnic self-schemas are experimentally primed or simply assessed), the RES studies suggest a causal association between content of racial-ethnic identity and academic outcomes.

#### Integrating Segmented Assimilation and Racial-Ethnic Self-Schema Frameworks

Both racial-ethnic self-schema (Oyserman et al. 2003) and segmented assimilation (Portes and Rumbaut 2001) frameworks predict that for youth living in inhospitable contexts identifying only with one's in-group will have a negative impact on academic achievement and assimilation trajectory.

Segmented assimilation theory hypothesizes that this thick identity is the most likely response for youth living in inhospitable contexts; the impact of bicultural or thin racial identities in inhospitable contexts is not considered. However, racial-ethnic self-schema theory predicts positive effects of dual and minority (bicultural) identities in the presence of negative in-group stereotypes, a likely event in inhospitable contexts. Racial-ethnic self-schema theory also predicts that being aschematic is especially problematic in inhospitable contexts. By integrating these two frameworks, we derive a rich set of hypotheses about the relationship of racial-ethnic identity to academic and ultimately economic outcomes for immigrant youth living in inhospitable contexts characterized by poverty and discrimination. This integrated model expands the range of possible assimilation trajectories for immigrant youth living in inhospitable contexts.

### STUDY AND HYPOTHESES

Based on the integrated model, we hypothesize negative effects of thin (aschematic RES) and thick (in-group RES) identities and positive effects of both dual and minority RES (bicultural identities) on academic outcomes and assimilation trajectories of youth living in inhospitable contexts. In the current study, we test these hypotheses about the influence of content of racial-ethnic identity on academic achievement among immigrant and U.S.-born Hispanic youth attending eighth grade in low-income, urban neighborhoods.

Youth were asked about their identities in school, following other research using the racial-ethnic self-schema model; in this way, the proximal context in which youth described their identities was related to academic achievement and held constant. We used the four RES types proposed by the racial-ethnic self-schema framework (Oyserman et al. 2003) to operationalize content of racial-ethnic identity. We chose eighth grade because there is clear empirical evidence that content of racial-ethnic identity in eighth grade influences academic outcomes (Oyserman et al.

1995) and is fairly stable (Altschul, Oyserman, and Bybee 2006); at the same time, eighth grade is early enough that school drop-out is still relatively low among Latino/a students so that an in-school sample would not be overly selective (Rumberger 1995).

In addition to examining how content of racial-ethnic identity relates to academic achievement, an indication of future economic success, we also consider the effects of language use and generation of residence in the United States, examining both their direct association with school outcomes and the extent to which racial-ethnic identity mediates these effects. Although change in content of racial-ethnic identity is an important component of acculturation, it is rarely included in assessments of acculturation (Phinney 2003); instead acculturation is most often operationalized as immigrant generation and language use (see Kim and Abreu 2003; Zane and Mak 2003). In the current study, we assess each of these acculturation components separately and ask if generation of residence and language use had direct effects on academic achievement, and if endorsement of particular racial-ethnic self-schemas is associated with generation of residence and language use.

### METHODS

#### Participants

All eighth graders in three urban middle schools were surveyed as part of a larger anonymous study. The study took place in a large, Midwestern city; participating schools were located in low-income neighborhoods with a high percentage of Hispanic and other minority residents. Mexican Americans comprised 70% of the Hispanic population in the city (U.S. Census Bureau 2000). School compositions reflected neighborhood demographic characteristics with 79% to 86% of students receiving free or reduced lunch, and 68% to 84% of students identified as Hispanic or African American (Standard and Poor's 2005). The current study focused on students who identified themselves as Latino/a, Hispanic, or as members of Latino nationality-based groups (e.g., Mexican) ( $n = 185$ ,  $M$  age = 13.4,  $n = 95$  female,  $n = 89$  male,  $n = 1$  no gender

selected). The survey was conducted in English. Youth had a wide range of facility with English, from limited to full English proficiency.

About four in ten (39.5%) Hispanic students reported being born outside the United States, mostly in Mexico (77%), with small numbers of youth born in the Dominican Republic, Puerto Rico, and other Latin-American countries. The remaining students reported being Hispanic or Latino and U.S.-born. Among U.S.-born youth 75% of mothers and 78% of fathers were born outside of the U.S., with 72% and 73% of each group respectively, born in Mexico. These sample characteristics correspond with demographic data describing the overall Hispanic population in the city where the study took place (U.S. Census Bureau 2000). National ancestry for third-generation youth (those born in the U.S. to U.S.-born parents) was not obtained, so we cannot determine the exact number of Mexican-American youth in our sample.

### Procedures

Based on lists of seventh graders enrolled during the 2002–2003 academic year, all parents or guardians of potential participants were mailed letters in English and Spanish explaining the study, along with bilingual consent forms during the summer before students began eighth grade. Waiver of written documentation of informed consent was obtained from the University Institutional Review Board (see for example, Pokorny et al. 2001; Baker, Yardley, and McCaul 2001; Ellickson and Hawes 1989) because the survey focused on school-related matters that pose little risk to respondents and was administered during the school day. Only 2.4% of parents returned forms indicating that they declined to allow their students to participate, resulting in a 97.6% participation rate.

Surveys were administered twice, in September 2003 and April 2004, to all eighth graders enrolled in the three middle schools. Paper and pencil surveys were administered during homeroom or elective classes by trained facilitators. Students not present on survey administration days were asked to fill

out the survey at a later time, either one-on-one with a facilitator or in small groups. Grades were obtained directly from the schools at the end of second and fourth quarters, in January and June of 2004. All linked information was destroyed as soon as data were collected.

### Measures

*Racial-ethnic group membership.* In the fall and spring surveys, students were asked “How would you describe your race or ethnicity? Which one of the following describes you best?” and were given the option of marking “Black/African American,” “Latino/Hispanic,” “White,” and “Other” with space to write in another response. Responses for students in the current sample were as follows: Latino/Hispanic (88.7%), Latino/Hispanic and another racial-ethnic category—most often White (4.9%); “Other” with a Latino nationality group written in—Mexican (2.7%), Mexican American (1.1%), Mexican and another group (1.1%), or Puerto Rican and another group (0.5%); and “Other” with “Latina/Hispana” written (1.1%). In 14% of cases, there was a mismatch between answers provided in the fall and spring; in these cases, discrepancies were resolved using other information provided in the surveys.

*Generation.* In the fall, students were asked about their place of birth and the place of birth of their mother and father. To create a generation variable we coded first generation as non-U.S.-born students (39.5%), second generation as U.S.-born students with at least one non-U.S.-born parent (31.9%), and third generation as U.S.-born students with U.S.-born parents (15.7%). Data were missing for 13% of youth not present for the fall survey (9.2%) or not replying to this part of the survey (3.8%).

*Spanish-use.* In the spring survey, youth were asked: “In my home, we speak . . .,” “With my friends, I speak . . .,” and “When I have the choice, I prefer speaking. . . .” After each question, students were asked to choose one of five responses, 1 = 100% English–0% Spanish; 2 =

75% English–25% Spanish; 3 = 50% English–50% Spanish; 4 = 25% English–75% Spanish; and 5 = 0% English–100% Spanish. Means for the three items are: at home  $M = 3.21$ ,  $SD = 1.03$ ; with friends  $M = 2.39$ ,  $SD = .96$ ; general preference  $M = 2.74$ ,  $SD = 1.24$ . A composite of the three language items ( $M = 2.78$ ,  $SD = .91$ ,  $\alpha = .80$ ) suggests that on average youth used Spanish just less than fifty percent of the time.

*Racial-ethnic self-schemas (RES).* Following the protocol established by Oyserman et al. (2003), open-ended responses to the question “What does it mean to you to be a member of your racial-ethnic group? Use examples from your everyday life of things you do that make you feel like a member of this group” were collected in the fall and coded as Dual, Minority, In-Group, or Aschematic RES. Typical examples from these four groups of statements were used to develop sixteen close-ended items representing the four racial-ethnic self-schemas. These questionnaire items were then administered to students as part of the spring survey.

To confirm that the close-ended items represent four underlying racial-ethnic self-schema constructs, factor analysis with Varimax rotation was used; four factors were identified, corresponding to the four RES types. All four scale items loaded as expected for three of the four RES types (Minority, In-Group, and Aschematic). One of the Aschematic RES items was dropped nonetheless, because it showed a distinct response pattern suggesting a problem with item comprehension. With regard to Dual RES, three items loaded on the factor; the fourth item did not correlate with those items and was dropped.

The resulting racial-ethnic self-schema measures, assessed on a five-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, 5 = *strongly agree*), included three to four items each. In-Group RES items were: “It is better to be with my own group because sometimes other people don’t get how we are;” “I like to be mostly with people from my own group because we understand each other best;” “There is not much good in American culture,

so I try to stick mostly to my own culture;” and “It is hard to be American and true to my home culture” ( $M = 2.91$ ,  $SD = .92$ ,  $\alpha = .79$ ). Minority RES items were: “We have to try harder than others because as a member of my ethnic group it is not easy to make it in America;” “It is important for me to show others that when we set our mind to it, people in my group can do as well as anyone else;” “It is important for me to represent my group in the best possible way because not everyone sees my group positively;” and “Even though others may not expect much of us, there are people in my group who have shown America that we can accomplish a lot” ( $M = 3.85$ ,  $SD = .70$ ,  $\alpha = .64$ ). Dual RES items were: “As a member of my group it is important to me to share my culture and traditions with others;” “I am proud to be a member of my group because we as a people have made many contributions to society;” and “I am proud to be a member of my group and to be a part of this great country” ( $M = 4.00$ ,  $SD = .57$ ,  $\alpha = .59$ ). And, Aschematic RES items were: “Everyone is an individual, so my ethnic group does not matter to me;” “It does not mean anything to me to be part of an ethnic group;” and “I don’t feel part of any ethnic group” ( $M = 2.22$ ,  $SD = .96$ ,  $\alpha = .77$ ). Mean values for each RES type indicate that youth were most likely to endorse statements associated with Dual and Minority RES, less likely to endorse In-group RES, and least likely to endorse Aschematic RES statements.

While the open-ended RES probe used in previous studies (Oyserman et al. 2003) identifies one racial-ethnic self-schema type for each respondent, the close-ended RES measure used here allowed youth to express agreement or disagreement with multiple RES types simultaneously. Table 1 shows correlations between endorsement of the four RES types, as well as generation, language use, and GPA. Endorsements of the two bridging RES types (Minority and Dual) were positively correlated; meaning youth who endorsed statements associated with Minority RES were likely to also endorse Dual RES statements. Endorsement of Minority RES was positively correlated with In-group RES, and negatively correlated with Aschematic RES.

TABLE 1. Matrix of Correlations among Generation, Spanish-use, the Four RES Components, and Core GPA.

	Generation	Spanish Use	Dual RES	Minority RES	In-Group RES	Aschematic RES
Spanish-use	−0.69***					
Dual RES	−0.24*	0.27*				
Minority RES	−0.24*	0.33**	0.56***			
In-Group RES	−0.35***	0.55***	0.2	0.59***		
Aschematic RES	0.21*	−0.25*	−0.19	−0.27*	−0.02	
Core GPA	−0.18*	0.02	0.11	0.3**	−0.13	−.45***

\*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$

*Core Grade Point Average (GPA).* Using grades for the fourth quarter of eighth grade (April–June), a core GPA measure was computed by averaging grades for core subjects—English, math, science, and social studies ( $M = 2.22$ ,  $SD = 1.05$ ,  $\alpha = .84$ ).

### Analyses Plan

We used structural equation modeling to examine relationships between generation (assessed fall of eighth grade), Spanish use (assessed spring of eighth grade), racial-ethnic self-schemas (assessed spring of eighth grade), and end-of-year core GPA. Structural equation models are particularly useful for analyses involving the RES framework because it allows for the examination of relationships between observed variables and latent factors simultaneously and allows for the correlation of factors within a structural model (Kline 1998). Associations between RES factors are theoretically substantiated since In-group, Dual, and Minority RES include a positive sense of connection with one’s in-group. As discussed above, correlations between RES factors were identified in the data.

We assessed whether our sample size and data normality were adequate for use with structural equation modeling. Observed indicators showed acceptable normality with skew below 0.75 and kurtosis reaching 1 for only one exogenous variable, thus satisfying even conservative structural equation modeling normality assumptions (Kline 1998). Our sample size of 185 falls in the “medium” range of 100 to 200 cases when considering sample sizes appropriate for structural equation modeling (Kline 1998); the sample size

approaches the recommended size of 200 found to be optimal in terms of limiting bias in tests of model fit and estimates of parameters and their standard errors, with samples larger than 200 yielding relatively little additional reduction in bias (Jackson 2001, 2003). Historically some authors have suggested that the ratio of cases to estimated parameters ( $N:q$ ) should also be considered in determining adequate sample size (e.g. Bentler and Chou 1987; Kline 1998). However, recent Monte Carlo simulations testing this hypothesis have found the ratio of cases to parameters to influence result bias only slightly or not at all (Jackson 2001, 2003), instead finding total sample size to be substantially more important for bias minimization. Thus, despite the relatively high number of estimated parameters in our largest model ( $q = 54$ ), we believe our sample size to be adequate for assessing model fit and parameter estimates with acceptable bias.

Our sample consisted largely of Mexican-American youth; however, there was also a small proportion of youth from Puerto Rico and Central America, as well as third-generation youth for whom a national origin was not identified. On the one hand, contexts of reception including U.S. immigration policies and related social consequences differ substantially among Latino nationality groups, most notably for migrants from Mexico, Central America, Cuba, and Puerto Rico. Thus, it would be advantageous for our analyses to control for nationality, or use responses only from Mexican-American youth. On the other hand, we would like to maximize our sample size to increase the statistical power of our analyses. To resolve this dilemma we explored



whether endorsement of the four RES types varied by nationality using a sub-sample of first- and second-generation youth for whom nationality was known ( $n = 128$ ). We did not find a significant relationship between RES and nationality using analysis of variance (with 3 degrees of freedom the associated  $F$  values were: for RES-Minority = .48; RES-In-group = 2.41; RES-Aschematic = .98; RES-Dual = .45). We concluded that in our sample youth of Puerto Rican, other Caribbean, and Central-American ancestry did not significantly differ in endorsement of RES types from Mexican-American youth. Given that all youth in our sample lived in the same immediate high poverty context, it is likely that they experienced similarities in contexts of reception other than immigration policy and similar risks of downward assimilation. Thus, we included all Latino/a youth, regardless of nationality, in further analyses.

We considered whether generation could be modeled as a continuous rather than categorical variable in our analyses. Graphical examination of the data with a Loess smooth curve (Cleveland 1993), and preliminary regression analyses suggested that relationships between generation and language use, identity and GPA were essentially linear. We also found that generation had low (.49) skew (Coenders, Satorra, and Saris 1997). These analyses suggested that we could use generation as a continuous rather than categorical variable in SEM analyses. We chose to do so because this strategy improves power by reducing the number of estimated parameters and produces a more complete description of the nature of associations (Agresti 1989).

To evaluate fit between hypothesized models and the observed data, two indices, the Comparative Fit Index (CFI) and the root mean square error of approximation (RMSEA) were used, with cutoff values of .95 for CFI and .06 for RMSEA establishing good fit (Hu and Bentler 1999). Model chi-square and the Akaike Information Criterion (AIC) are also reported and used to compare the fit of alternate models. To handle missing data, full-information maximum-likelihood (FIML) estimation within AMOS 5.0 (Wothke 2000)

was utilized. Data were missing in 1.25% of all cases, with the majority of variables missing data in 0.6% of cases on average. The only exception was the generation variable, which was missing in 13% of cases as noted in the measures section.

## RESULTS

### The RES Measurement Model

We began model development by evaluating a number of possible measurement models to establish the four RES types as latent constructs defined by their scale items. A measurement model (Figure 1) with two parcels representing each RES component (Bandalos 2002) provided the best fit to the data (CFI = .980; RMSEA = .055; AIC = 81.95;  $\chi^2(14) = 21.95, p = .08$ ). For each RES latent factor, all loadings were significant. The model shows positive associations between Minority RES and In-Group RES ( $r = .58, p \leq .001$ ) and Minority RES and Dual RES ( $r = .56; p \leq .001$ ), and a negative association between Minority RES and Aschematic RES ( $r = -.27, p \leq .05$ ). Two alternative measurement models were tested to assess whether the RES scales represent fewer latent factors than the proposed four. Using AIC to compare fit across models (with lower AIC values representing better fit), we concluded that the model with four latent factors provides the best fit of the data, reproducing results of previous factor analyses.

### Generational Difference in Content of Racial-ethnic Identity

We assessed variation in content of racial-ethnic identity across generations using a structural equation model (Model 1) with paths connecting generation to each of the four RES factors (see Table 1 for correlations). This model provides a good fit to the data (CFI = .990; RMSEA = .036, AIC = 94.21;  $\chi^2(18) = 22.21, p = .223$ ). Table 2 lists the standardized path coefficients, significance levels, and squared correlations for Model 1 in column one. Generation is a significant predictor of each of the four RES factors. As generation increases, youth are

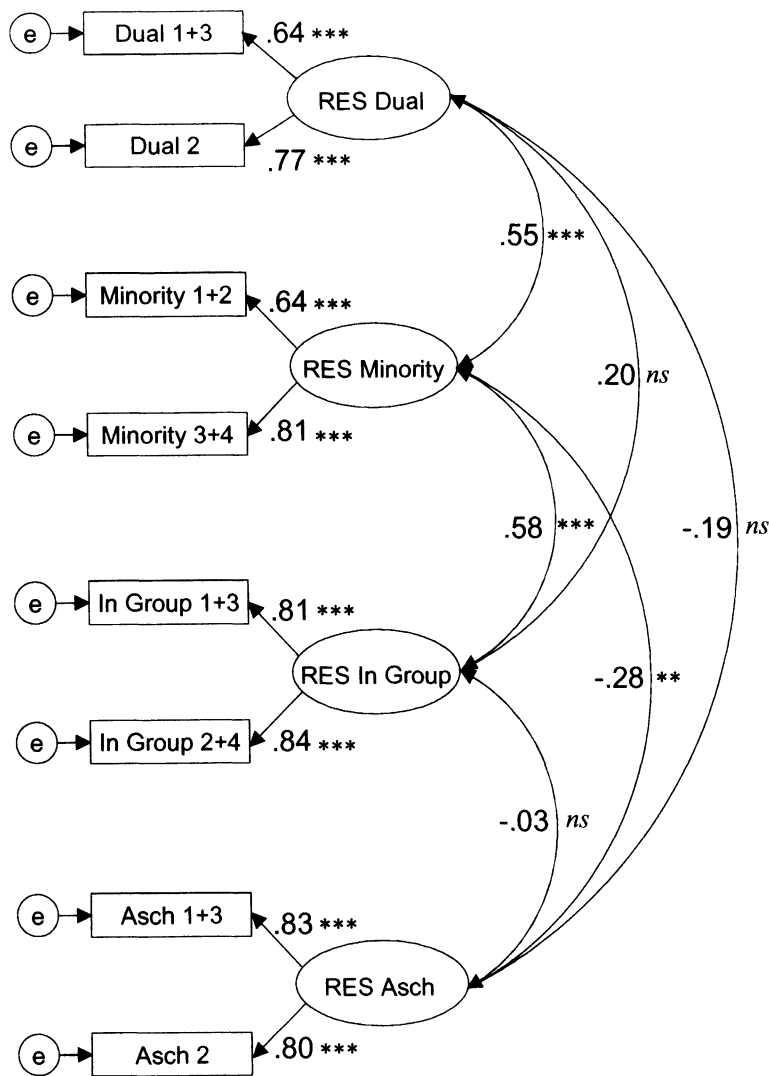


FIGURE 1. Measurement Model Representing The Four Racial-ethnic Self-schema Factors  
CFI=.980; RMSEA=.055; AIC=81.95;  $\chi^2(14)= 21.95$   
Significance levels: \*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$ ; ns – not significant.

less likely to endorse Dual RES, Minority RES, and In-Group RES, and more likely to endorse an Aschematic RES. Contrary to what is posited in segmented assimilation theory, identification with the in-group (In-Group RES) does not increase across generation for this sample of Latino youth.

*Building a More Robust Model of Acculturation*

Immigrant generation and language use

are frequently assessed in studies involving acculturation, while racial-ethnic identity is not (Phinney 2003). To build a more robust model of acculturation in our analyses, we examined relationships among these three acculturation factors. Using a series of nested structural equation models, we examined whether Spanish-use mediates the effects of generation on content of racial-ethnic identity using procedures established by Baron and Kenny (1986). Each nested model contains

Table 2. Structural equation model estimates of relationships between generation, Spanish use, RES, and core GPA: standardized coefficients, significance levels, and squared correlations.

Structural Path		<i>Gen→RES</i> (Model 1)		<i>Gen→Spanish Use→RES</i> (Model 2a)		<i>Use→RES</i> (Model 2b)		<i>Full Model</i> (Model 3)	
		Coefficient	R <sup>2</sup>	Coefficient	R <sup>2</sup>	Coefficient	R <sup>2</sup>	Coefficient	R <sup>2</sup>
Generation	→ Dual RES	−0.24*	0.06			−0.14	—		
Generation	→ Minority RES	−0.24*	0.06			−0.07	—		
Generation	→ In-Group RES	−0.34***	0.12			0.01	—		
Generation	→ Aschematic RES	0.22*	0.05			0.09	—		
Generation	→ Spanish-use			−0.62***	0.39	−0.62***	0.38	−0.62***	0.39
Spanish-use	→ Dual RES			0.27*	0.07	0.16	0.07	0.27**	0.07
Spanish-use	→ Minority RES			0.33***	0.11	0.27*	0.10	0.33***	0.11
Spanish-use	→ In-Group RES			0.56***	0.31	0.56***	0.31	0.56***	0.31
Spanish-use	→ Aschematic RES			−0.26**	0.07	−0.19	0.07	−0.25**	0.06
Generation	→ Core GPA							−0.29**	0.41
Spanish-use	→ Core GPA							−0.18	—
Dual RES	→ Core GPA							−0.21	—
Minority RES	→ Core GPA							0.58**	—
In-Group RES	→ Core GPA							−0.44*	—
Aschematic RES	→ Core GPA							−0.34**	—

\*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$

generation, Spanish-use, and the four RES factors<sup>1</sup>; the models differ only in the paths drawn between factors allowing us to test whether models differ significantly from one another using the likelihood ratio  $\chi^2$  test (LR  $\chi^2$ ). We already established that RES is influenced by generation in Model 1. To assess Spanish-use as a potential mediator of the effects of generation on RES, we first tested whether generation predicts Spanish-use and Spanish-use predicts RES. The corresponding model (Table 2, Model 2a) has paths between generation and Spanish-use, and between Spanish-use and each of the four RES factors, but does not allow generation to have a direct effect on RES. This model provides an excellent fit to the data (CFI = 1.000; RMSEA = .000; AIC = 134.54;  $\chi^2(43) = 40.54, p = .579$ ). Parameter estimates indicate that generation is a significant predictor of Spanish-use with use of Spanish declining with each generation, and Spanish-use is a significant predictor of each of the four RES factors.

To test whether Spanish-use fully mediates the relationship between generation and RES, we allowed generation to have a direct effect on RES, in addition to the indirect effect through Spanish-use. The resulting model (Model 2b) also provides an excellent fit to the data (CFI = 1.000; RMSEA = .000; AIC = 140.98;  $\chi^2(39) = 38.98, p = .471$ ), but the fit is not significantly different from that provided by Model 2a (LR $\chi^2(4) = 1.56, p = .816$ ) and the additional paths between generation and RES are not significant. These results suggest that Spanish-use fully mediates the effects of generation on RES (Baron and Kenny 1986). Thus, because of its parsimony (fewer estimated parameters) Model 2a, in which generation is not directly linked to RES but has an indirect effect through Spanish-use, is judged preferable. This model is used as the foundation for further analyses.

*Content of Racial-ethnic Identity and Academic Achievement*

After establishing a well-fitting model to describe relationships between the three acculturation factors—generation, Spanish-use, and racial-ethnic self-schemas—we added the dependent variable core GPA to assess effects of acculturation on academic achievement. Mean core GPA was weighted

<sup>1</sup> All nested models also contain a correlation between the unexplained variance in language use at home and generation (shown in Figure 2), a model adjustment suggested through post-hoc analysis, but one that has significant substantive merit due to parents' influence on the language spoken at home.

by alpha [ $\sigma^2(1-\alpha) = .178$ ] to reflect measurement error in grades. Figure 2 shows the resulting model (Model 3), which provides an excellent fit to the data (CFI = 1.000; RMSEA = .000; AIC = 156.50;  $\chi^2(49) = 46.50$ ,  $p = .575$ ). The resulting parameter estimates (Table 2, Model 3) show that, as in prior models, generation predicts Spanish-use, and Spanish-use predicts RES. In turn, RES predicts core GPA. In addition to its indirect effect on grades through Spanish-use and RES, generation also has a significant direct effect on GPA; as generation increases, grades decrease supporting the segmented assimilation hypothesis that downward mobility is likely to occur in inhospitable contexts.

Our model shows that the four RES types have different relationships with grades. As predicted by both racial-ethnic self-schema and segmented assimilation theories, In-Group RES is negatively related to academic achievement. As predicted by racial-ethnic self-schema theory, Minority RES is positively related to achievement, while Aschematic RES has a negative association with academic achievement. However, contrary to RES predictions, the relationship between Dual RES and GPA is non-significant ( $p = 0.17$ ) and negative. In addition, we did not find a significant direct effect of Spanish-use on GPA, though Spanish-use does have an indirect effect through its influence on content of RES.

#### *Alternative Models*

We assessed two theoretically important alternative models, since multiple structural equation models may fit the data equally well (Kline 1998). In the first alternative model grades are predicted by two acculturation components (generation and Spanish-use), omitting racial-ethnic identity. This model was compared with the complete model described above in which all three acculturation components, including racial-ethnic identity, predict grades. When core GPA is predicted only by generation and Spanish-use (CFI = .952; RMSEA = .060; AIC = 189.81;  $\chi^2(53) = 87.81$ ,  $p = .002$ ), 6% of the variance in grades is explained. Conversely, the full model linking generational status, with Spanish-use and

content of racial-ethnic identity accounts for 41% of the variance in student grades and provides a significantly better fit to the data ( $LR\chi^2(4) = 41.31$ ,  $p = .000$ ). We conclude that content of racial-ethnic identity operationalized as RES provides a significant contribution, beyond generation and Spanish-use, in predicting grades.

Our data were collected across one academic year, and even though racial identity was collected prior to grades, we cannot assume that racial identity impacted grades rather than the reverse. Therefore, we also assessed an alternative model in which generation predicts Spanish-use, generation and Spanish-use predict grades, and grades predict racial-ethnic self-schemas, testing whether grades are an equally strong predictor of RES as the reverse. This model showed extremely poor fit indexes (CFI = 0.651; RMSEA = .160; AIC = 407.26;  $\chi^2(54) = 307.30$ ,  $p = .000$ ) and was less preferable than the model with RES predicting grades ( $\Delta AIC = 250.76$ ). In sum, although our data were collected across an academic year, the substantially better fit of the model in which RES predicts GPA suggests that content of racial-ethnic identity was a better predictor of grades than the reverse.

#### DISCUSSION

Understanding the social (structural) and psychological (individual) processes involved in immigrants' adaptation to life in a new society is critical for predicting whether and why some immigrants succeed, while others fail at the American dream of economic success. An evolution of sociological assimilation theories has lead to differing and increasingly complex predictions. Classical assimilation theory (Gordon 1964) suggests that cultural and economic assimilation go hand in hand, predicting ultimate economic success for immigrants willing to relinquish their separate identities and melt into an American whole. Segmented assimilation theory (Portes and Zhou 1993; Portes and Rumbaut 2001) suggests that economic success or failure depends on the contexts of reception, including structural constraints that immigrants face upon arrival. Contrary to classical assimilation theory, seg-

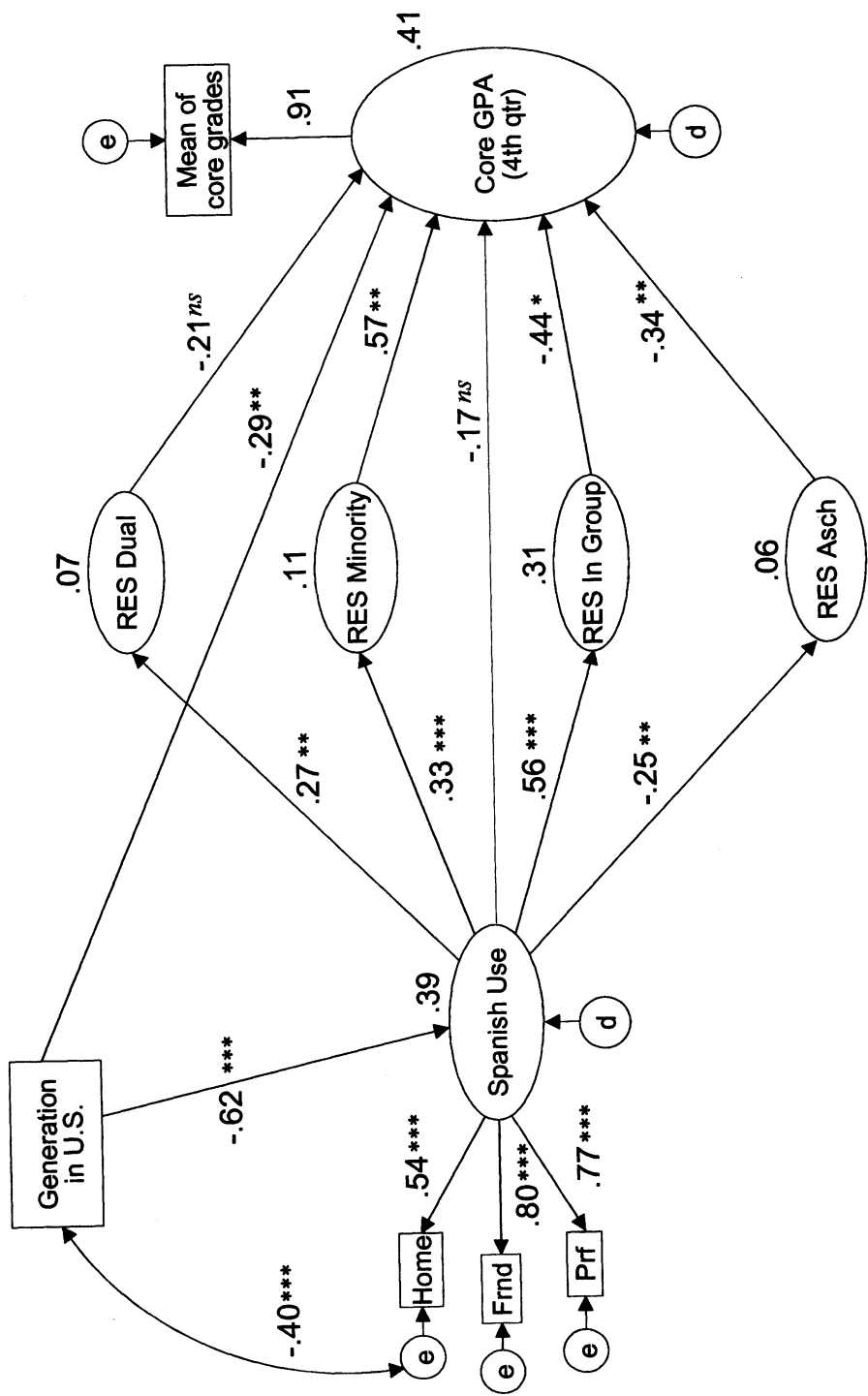


FIGURE 2. Structural Equation Model Predicting Core GPA based on Generation, Spanish-use, and RES (Model 3)  
CFI=1.000; RMSEA=.000; AIC=156.50;  $\chi^2(49)=46.50$   
Significance levels: \*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$ ; <sup>ns</sup> – not significant.

mented assimilation posits that immigrants experiencing inhospitable contexts characterized by discrimination and limited economic opportunities are likely to assimilate to low-status minority culture and subsequently experience downward economic mobility. Our integration of racial-ethnic self-schema (Oyserman et al. 2003) and segmented assimilation frameworks further elaborates on these predictions, suggesting that within inhospitable contexts individual identity responses influence the likelihood of economic success or failure.

Our results show that content of racial-ethnic identity is heterogeneous among Hispanic youth living in inhospitable contexts and those differences in content matter. Among the four identities or racial-ethnic self-schema types assessed, one—Minority RES—was associated with academic success, two—In-group and Aschematic RES—were found to be associated with lower grades, and a fourth—Dual RES—was found to have no effect on academic outcomes. This suggests that structural constraints alone do not predict identity response, academic achievement, and hence assimilation trajectory; rather structural factors in combination with individual identity responses to those factors are better predictors of assimilation trajectory.

We assessed several segmented assimilation assertions related to youths' racial-ethnic identities, finding support for some and lack of support for others. Perhaps most importantly, we did not find that Hispanic and Mexican-American youth living in inhospitable contexts were more likely to endorse a "thick" disenfranchised, in-group focused identity as hypothesized in segmented assimilation theory (Portes and Rumbaut 2001); on average, youth were neutral in their endorsement of statements typical of this identity. As a group youth were more positive in their endorsement of bicultural identities, operationalized as Dual and Minority RES, suggesting that despite residence in extremely disadvantaged neighborhoods and experience of barriers like discrimination and limited opportunities, youth were likely to identify with both their in-group, as well as some aspects of broader society.

We also did not find support for the related prediction that Mexican-American youths' racial-ethnic identities would "thicken" with time in the United States. Contrary to segmented assimilation theory, generation of residence in the United States was not associated with increased scores on the In-Group-only RES scale. In fact, we found that endorsement of In-Group RES steadily declines across generation of residence in the United States. First-generation youth are only neutral in their endorsement of the In-Group RES perspective, while second- and third-generation youth are more likely to disagree with In-Group RES items such as "it is better to be with my own group."

Segmented assimilation theory is not clear on the predicted effects of bicultural identities within inhospitable contexts; although the effects of such identities are hypothesized to be positive within more hospitable contexts, especially in the presence of community social capital (Portes and Rumbaut 2001). The racial-ethnic self-schema framework (Oyserman et al. 2003) predicts positive effects of bicultural identities (Dual and Minority RES) on academic outcomes in the presence of negative in-group stereotypes. Our results show a significant positive effect of Minority RES, but no significant effect of Dual RES. It is possible that for low-income, immigrant youth, the positive connection with both in-group and broader society described by Dual RES is simply not as promotional of achievement because it does not aid in making sense of negative in-group stereotypes. It is also possible that this aspect of racial-ethnic identity was not well assessed by the three-item measure developed here.

Finally, both frameworks make predictions about the academic impact of not identifying with any racial-ethnic group, including one's racial-ethnic group of origin, whether described as viewing racial-ethnic identities as optional (Waters 1990) or potentially in conflict with "American" ways (Zhou 1997). Within the segmented assimilation framework, such non-identifying responses, or a "thin" racial-ethnic identity, are associated with linear assimilation and are posited to have positive effects on academic outcomes,

albeit within hospitable contexts; it is less clear what the effect of thin identity is within inhospitable contexts. Within a racial-ethnic self-schema framework, such Aschematic RES responses are posited to have negative effects. We found support for the latter prediction, with Aschematic RES scores being associated with worse academic outcomes. Thus, adoption of a “raceless self” (Fordham and Ogbu 1986) is associated with increased risk of school failure for this population of youth. In addition, generation of residence was associated with being aschematic, with third-generation youth more likely to endorse an Aschematic RES than first- or second-generation youth. This pattern of eroding identification with the in-group across generation in the United States matches classical assimilation predictions. However, the consequence of this choice of identity is negative for the population of low-income Hispanic youth in this study.

Taken together these findings present a challenge to the segmented assimilation assertion that racial-ethnic identity, specifically a “thick” in-group oriented identity, contributes to a downward assimilation trajectory among Mexican youth living in inhospitable contexts (Portes and Rumbaut 2001). While youth who endorsed statements related to an in-group only identity had lower grades, such youth were not the majority in our sample and were more likely to be first-generation rather than second- or third-generation immigrants. Instead, youth were more likely to endorse a “thin” or aschematic identity with higher generation of residence in the United States. Youth were also less likely to endorse bicultural identities with generation in the United States, including the Minority RES associated with higher grades. All in all, these patterns of change in youths’ identities across generation suggest that rather than becoming “thicker,” Hispanic and Mexican-American youths’ identities are “thinning” with generation, and it is this identity thinning that is associated with downward mobility.

The integration of segmented assimilation and racial-ethnic self-schema frameworks suggests that in-group focus can be combined with a number of different orientations toward

the mainstream; our findings show that these differences matter with regard to academic outcomes and assimilation trajectory. These findings add a new perspective on earlier studies related to assimilation and acculturation of immigrant groups facing racial discrimination in the United States. Similar to earlier findings that bicultural identities are more adaptive and associated with greater success within mainstream institutions like schools (e.g. Feliciano 2001; Suárez-Orozco and Suárez-Orozco 2001), our results show that a bridging racial-ethnic identity is associated with higher grades. However, we find that focusing on overcoming obstacles within mainstream society, rather than a positive-only connection with the mainstream, is most adaptive for the low-income Hispanic youth in our sample.

Our findings also clarify a number of earlier studies (e.g. Zhou and Bankston 1994; Waters 1999), which could be interpreted to suggest that an in-group-only focus is associated with academic and economic success. While Zhou and Bankston (1994) and Waters (1999) focus on how youth who stay in-group identified are protected from downward assimilation, in both studies the in-group is very focused on economic success in broader society. In light of our results, a recharacterization of the results of these studies seems in order. Rather than in-group-only focus, it seems more plausible that in-group focus along with the desire to achieve in broader society is important for success.

Finally, our results contradict assertions that cultural assimilation to mainstream norms is economically beneficial (e.g. Alba and Nee 1997, 2003) or that being oblivious to negative in-group stereotypes (Suárez-Orozco and Suárez-Orozco 2001) is adaptive. The present findings show that for low-income Hispanic youth this pattern of racial-ethnic identity (i.e. thin or aschematic) is associated with academic decline; academic success is associated with maintaining a connection with the in-group along with a desire to overcome barriers imposed by mainstream society.

Our results also help clarify the relationships among and relative importance of three measures of acculturation—Spanish-use, generational status, and content of racial-ethnic

identity. We found that while Spanish-use mediated the relationship between generational status and content of racial-ethnic identity, content of racial-ethnic identity mediated the effects of Spanish-use on academic achievement. Identity contributed substantially to the variance explained in grades such that Spanish-use and generation had a diminished effect when racial-ethnic identity was considered. In our models identity was the single biggest predictor of grades. Thus, while studies often assess the effects of generational status and Spanish-use on academic outcomes, our results show that content of racial-ethnic identity is a key component of acculturation related to academic achievement and should be explicitly assessed in future research.

While we found a negative association between generational status and grades, we urge caution in interpretation of these results as support for an overall downward assimilation trajectory among Mexican-American youth. It is likely that selection plays a role in which immigrant families can be found in high-risk, low income neighborhoods; as immigrant families attain economic success, they are likely to move out of such inhospitable neighborhoods, leaving behind less economically successful immigrants. Although other research conducted with school-based samples supports the assertion that academic outcomes decline with generation among Mexican-American youth (e.g. Gibson and Bejinez 2002; Valenzuela 2000; Suárez-Orozco and Suárez-Orozco 1995), population based studies show the opposite generational pattern. Studies using representative population samples show that Latino and Mexican-American youth are more likely to complete high-school with each generation in the United States (e.g. Farley and Alba 2002; Hirschman 2001; Zsembik and Llanes 1996). It is likely that school-based studies concentrate on youth in the kinds of low-income, minority, urban neighborhoods that are most likely to encourage downward assimilation processes. Conversely, population-based studies include youth living in contexts that provide for a range of assimilation pathways.

Indeed, since we focused on a specific context—low-income, urban schools—our

conclusions are likely to be specific to that context. Moreover, in our sample, youth were more likely to be first or second generation than third-generation immigrants. It is possible that both the interplay of acculturation factors (generation, Spanish-use, and content of racial-ethnic identity) and their influence on academic achievement differ in other contexts. For example, studies examining social class along with identity or another aspect of acculturation among Mexican-American youth argue that class is powerfully intertwined with the meanings youth connect with being Mexican (Bettie 2002; Gonzales 2001) and it is the interaction of class and acculturation that is most strongly associated with achievement (Valenzuela and Dornbusch 1994; Padilla and Gonzales 2001). Padilla and Gonzales (2001) found that grades declined with generation of residence in the United States among Mexican heritage high-school students in the general track, but not in the college-prep track, suggesting that assimilation has a negative impact on achievement within some but not all contexts. Similarly, Valenzuela and Dornbusch (1994) show that the interaction of parents' level of education, an indication of class, with a strong sense of *familism*, a core Mexican cultural value, is an important predictor of student grades, suggesting that in-group focus is more beneficial among families with higher socioeconomic status; however, this study did not assess any other aspects of acculturation, including connection with broader society, leaving the question open whether in-group focus is more beneficial in the presence of higher socioeconomic status, or whether higher socioeconomic status is a proxy for greater connection with society at large. These studies do suggest that acculturation, content of identity, and assimilation trajectory should be examined in conjunction with class.

Most of the youth in our sample were of Mexican origin. We did not find effects of national origin on content of racial-ethnic identity, presumably because all youth in our sample experienced similarly negative economic and physical circumstances, a component of context of reception (Portes 2003) due to residence in the same low-income neigh-



borhoods. Because our data were effectively cross-sectional, the directional paths evaluated within our structural equation models can only be suggestive of causality. Our sample size and relatively low frequency of third-generation youth limited analytic power and meant that it was not possible to add other contextual and individual effects (e.g., class, gender, national origin) to the model. Further research incorporating a range of contextual influences on racial-ethnic identity is clearly called for.

In spite of these limitations, our results highlight the importance of assessing proximal social-psychological mechanisms underlying structural theories of assimilation and its consequences. The present examination of racial-ethnic identities among low-income Hispanic youth demonstrates the heterogeneity of identities within this group, as well as the significance of these differing identities for academic and future economic outcomes. Rather than finding that declining academic performance across generation of residence in the United States is associated with a "thickening" in-group identity, our results suggest that generational decline among low-income Hispanic and Mexican-American youth is associated with a lack of identification with an in-group. Among youth who identify with an in-group, lack of appreciation of the identity-relevant connections between in-group and broader society is associated with lower achievement. As Portes and Rumbaut (2001) so powerfully argue, the future of immigrants in the United States and U.S. society as a whole depend on the successes and failures of today's immigrant youth; our findings demonstrate the importance of racial-ethnic identity to the ultimate success of low-income Mexican-American and Hispanic youth.

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