Being Bicultural: A Mixed-Methods Study of Adolescents’ Implicitly and Explicitly Measured Multiethnic Identities

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Understanding how ethnic identities develop in adolescence is currently limited by a reliance on self-report paper-and-pencil measures. This mixed-methods study presents a novel response time measure, the Multiethnic Identities Processing Task (MIPT), to quantify bicultural adolescents’ implicit identifications with ethnic and racial identity labels. Eighty-four adolescents (age 14–21 years) of diverse ethnic and racial backgrounds self-identified as bicultural or not bicultural and described their ethnic identities, pride, and ethnic centrality during a brief interview. Participants were assigned to complete either the interview (self-prime) or the MIPT (no prime) first. Results indicate that bicultural adolescents readily endorsed a variety of ethnic and racial labels in the MIPT, reflecting their multifaceted identities. Younger bicultural adolescents showed a large inhibited response to the label “White,” indicating some hesitation in deciding whether the label was “like me” or “not like me.” Heart rate monitoring and qualitative analyses of interviews provide some insight into this pattern of results. Findings are discussed with respect to developmental theory, and the strengths of using both implicit and explicit measures to understand multiethnic identity development in adolescence.

Keywords: bicultural, ethnic identity, implicit, adolescence

Interviewer: Do you ever consider yourself to be bicultural?

No, not particularly. Both my parents are Iranian. [How would you describe your ethnicity?] My parents have said that the technical name for us when we, like, put it on the SAT or something is White. But I am what I am. I don’t feel like I am White.

—Second-generation 17-year-old boy

Nope. I have one culture. I never really thought about it. [How would you describe your ethnicity?] We’re kind of White American.

—Fourth-generation 16-year-old girl

Yes, because I have one culture at school and a different culture at home. [How would you describe your ethnicity?] Both my parents are from Haiti, so I am Haitian and African American.

—Second-generation 16-year-old boy

Yes. My grandmother is from China, so I’m sort of mixed in with the Chinese culture. I haven’t actually been to China, but we have Chinese gatherings and celebrate the Chinese New Year’s. [How would you describe your ethnicity?] I normally just say I’m half Chinese, half Caucasian; my mom’s Irish and Scottish. I just say I’m half-and-half.”

—Third-generation 15-year-old girl

Being bicultural, reflected here in the words of high school adolescents in the current study, involves developing a sense of one’s cultural self (e.g., ethnic identities) as a member of more than one cultural, ethnic and/or racial group. In decades past, scholars of biculturalism proposed that being a member of more than one cultural group and navigating their multiple social environments would largely yield personal struggle and psychological distress (e.g., Park, 1928; Stonequist, 1935). According to such thinking, being bicultural is a risk factor for poor psychological outcomes, and full assimilation into the mainstream culture is optimal for development. Today growing evidence in psychological research supports an alternative, more nuanced view of biculturalism (Berry, 1997; Berry, Phinney, Sam, & Vedder, 2006; LaFromboise, 1988; Nguyen & Benet-Martinez, 2007). For example, bicultural individuals who are able to form strong, positive multiethnic identities have better self-esteem (Phinney, Cantu, & Kurtz, 1997), fewer mental health problems (LaFromboise, Coleman, & Gerton, 1993; Lang, Muñoz, Bernal, & Sorensen, 1982; Smokowski & Bacallao, 2007), and higher academic achievement (Fuligni & Witkow, 2004; Fuligni, Witkow, & Garcia, 2005; Rumbaut, 1994) than their peers with less developed or

1 Other studies reviewed here have used the terms bicultural and biculturalism to indicate efficacy in navigating more than one cultural domain; in the current study, these terms are used only to indicate an individual (or group of individuals) experiencing more than one cultural context, not the effectiveness of the bicultural social skills developed by the individual (or group).
singular (monocultural) ethnic identities. In addition, not all individuals with multiethnic backgrounds may perceive themselves as bicultural or multicultural. Developing ethnic and racial identities, whether with mixed ethnic and racial ancestry or across multiple cultural contexts (e.g., home and school), is a dynamic, lifelong process. As the United States has seen a recent, unprecedented increase in the number and cultural diversity of first- and second-generation immigrant children and adolescents (Hernandez, Denton, & Macartney, 2009), understanding how positive ethnic identities are formed and maintained among bicultural and multicultural youth is of timely importance.

Though ethnic identity development is important for supporting positive social and academic outcomes among adolescents of color in general (Fuligni et al., 2005; Marks, Powell, & García Coll, 2009), relatively little is known about the social cognitive processes by which bicultural adolescents form and experience their ethnic identities. Moreover, the measurement of ethnic identity has been based mainly on self-report paper-and-pencil measures. A recent rise in research regarding implicit social cognition offers promising new insights and measurement techniques for understanding aspects of self-information and self-identification that operate outside conscious awareness (for a review, see Devos & Banaji, 2003). Such techniques may offer advances in understanding individuals’ ethnic identity development, as they are less influenced by socially desirable responding than are explicit measures, and are linked to self-information built on past experiences (e.g., cultural socialization) that may be only partially available to the individual through controlled introspection (Greenwald & Banaji, 1995). Contemporary views of ethnic identity development emphasize the importance of experiences with identity development, particularly among immigrant and bicultural youth (Phinney & Ong, 2007). Therefore, these implicit cognitive aspects of identity must also be studied with respect to the affective experiences associated with the labels used to identify one’s ethnicity. Furthermore, it is reasoned in the current study that capturing implicit aspects of bicultural ethnic identities may also inform developmental theoretical frameworks of ethnic identity development in adolescence. The current study presents a novel social cognitive task, the Multiethnic Identities Processing Task (MIPT), alongside physiological monitoring and qualitative analysis of interview accounts of ethnic identification and identities, to begin to understand the associations among implicit and explicit aspects of developing ethnic identities among bicultural adolescents.

**Ethnic Identity Development and Implicit Social Cognition**

Stemming from a foundation in social identity theory (Tajfel & Turner, 1986), ethnic identities are typically conceptualized as having both social category and affective components (Bernal, Knight, Garza, Ocampo, & Cota, 1990; Phinney, 1989, 1993; Phinney & Ong, 2007). For example, a person developing an ethnic identity usually identifies with an ethnic group (e.g., Hispanic) and experiences affective associations with that category membership (e.g., pride in being Hispanic) built on the qualities of past experiences as an ethnic group member. Research with bicultural populations has shown that these affective associations with ethnicity are dynamic and context dependent (L. Allen, Bat-Chava, Aber, & Seidman, 2005; Kiang & Fuligni, 2009; Pittinsky, Shih, & Ambady, 1999), and are built largely on past cultural socialization experiences within both the family and other community social settings (Portes & Rumbaut, 2001; Rumbaut & Portes, 2001; Suárez-Orozco & Suárez-Orozco, 2001). Among bicultural children and adolescents, ethnic identities themselves are multifaceted, often involving group memberships and affective associations with multiple racial, ethnic, and panethnic social groups (Akiba, Szalacha, & García Coll, 2004; Chen, Benet-Martínez, & Bond, 2008; Cooper, Jackson, Azmitia, & Lopez, 1998; Marks, Szalacha, Lamarre, Boyd, & García Coll, 2007; Phinney & Devich-Navarro, 1997; Rumbaut & Portes, 2001; Trueba, 2002).

With particular regard to bicultural adolescents, Phinney, Horenczyk, Liebkind, and Vedder (2001) have proposed an interactional framework to understand ethnic identities among adolescent immigrants. According to this model, based in part on Berry’s (1997) bidirectional model of acculturation, individuals can experience independent feelings about their (or their family’s) culture of origin and a second culture. Applied to ethnic identity, the interactional framework posits that adolescents may have independent feelings regarding their ethnic (i.e., family ethnicity) and national (i.e., American) identities, and that it is the variation and association between these two identities that will differ between and within ethnic groups. Extended to the study of biculturalism, ethnic identities may therefore reflect both the positive and negative aspects of past experiences identifying with more than one ethnic and racial group. To adequately measure bicultural ethnic identities therefore requires a measurement approach that allows an individual to identify independently with more than one ethnic and/or racial group.

Until recently, one’s understanding of ethnic identity development among bicultural youth (and adolescents in general) has relied on paper-and-pencil self-report measures that target strength of identification with an ethnic group, pride in the group, the centrality of ethnic identities relative to other self-identities, and the amount of exploration experienced in developing an ethnic identity (e.g., Phinney, 1992). For example, Rumbaut (1994) has used self-report social category labeling methods in studying immigrant ethnic identities among adolescents, particularly as identity relates to acculturation and psychosocial outcomes. In his work, immigrant adolescents are more likely to identify with multiple and hyphenated labels if their families are more acculturated to the United States, often times (but not necessarily) a reflection of biculturalism. Such past research has yielded important information about how ethnic identities are formed, starting with use of labels, group pride, and exploration in middle childhood among children of immigrants (Marks et al., 2007), through exploration and increased centrality of ethnic identity in adolescence (French, Seidman, Allen, & Aber, 2006; Phinney, 1990; Sellers, Chavous, & Cooke, 1998). Centrality of ethnic identity—the relative importance of ethnicity compared with other aspects of identity (e.g., gender, family role)—has been shown to be particularly strong among bicultural, racial minority and immigrant youth (Phinney, 1989, 1990; Phinney & Devich-Navarro, 1997; Phinney et al., 2001). However, relying solely on self-reported ethnic identity characteristics, one’s understanding of ethnic identity development is based entirely on explicit (e.g., survey-based, conscious awareness) measures of identification.
that are subject to context influences and socially desirable responding, introducing error into one’s measurement.

Recent advances in implicit measurements (e.g., response time, unconscious) of social cognition provide new tools for understanding the underlying attitudes people hold regarding others and themselves. Such methods provide an opportunity to capture associations among self-concepts (e.g., “me” and “American”) and attitudes (e.g., “bad” and “American”) that individuals may be unable or unwilling to report. Understanding these implicit associations is important, as one’s implicit attitudes and associations are activated when one is stressed or threatened, oftentimes predict future spontaneous behavior better than explicit attitudes, and are largely influenced by past experiences (Bargh & Ferguson, 2000; Karpinski & Hilton, 2001; Rudman, 2004). Implicit associations, therefore, are unconscious records of individuals’ past thoughts and attitudes; the stranger (faster) the implicit association, the more that association has been built through past experience.

From a developmental perspective, capturing the strength of association between an individual’s sense of self and a group identity (e.g., ethnic label) through implicit response time tasks may also provide a window into the stage of identity formation (Phinney, 1989). Phinney (1989) has proposed a three-stage sequence for explaining ethnic identity development among minority adolescents. According to this model, the initial stage, diffusion, is characterized by a lack of exploration of ethnic identity, in which feelings about one’s ethnicity may be either positive or negative. The second stage, moratorium, involves active exploration of identity, but is accompanied by confusion about the meaning and valence of ethnic group memberships. The final stage, achieved, shows continued exploration along with a clear understanding and acceptance (or straightforward rejection) of the adolescent’s ethnic identification. Therefore, if an adolescent’s ethnic identity is in the primary, diffusion stage of development, one might expect a relatively slower implicit association (or response time) pairing “like me” with a group label such as “Asian,” reflecting less experience thinking about and experiencing that ethnic group membership. Further, one would expect that younger adolescents might be less reliable in their ethnic identifications (e.g., self-labeling) across implicit and explicit assessments, as evidence of relatively little ethnic-identity exploration or identity achievement. Adolescents in a more achieved state of ethnic identification, on the other hand, might experience a relatively faster implicit association with the group ethnic label (and show greater correspondence between implicit and explicit identifications), reflecting a greater amount of commitment to and exploration of that ethnic group membership. Following Phinney’s developmental model, in the current study we expected that younger bicultural adolescents would typically experience the former early stage response time pattern, whereas older bicultural adolescents would typically experience the latter achieved-stage response time pattern. This developmental reasoning fits within a burgeoning perspective of implicit social cognition researchers recognizing the influences of early experiences in forming implicit attitudes (Dunham, Baron, & Banaji, 2008; Greenwald & Banaji, 1995; Rudman, 2004).

The MIPT: A Novel Measure of Implicit Ethnic Identification

The application of an implicit social cognitive approach to understanding biculturalism is new; to our knowledge, only one recent report exists demonstrating that ethnic identification among bicultural college students may be measured implicitly (Devos, 2006). This study is similar to the current report in that it builds on the notion that bicultural individuals possess multiple cognitive networks of cultural frames of reference, which can be activated through priming techniques (Benet-Martínez, Leu, Lee, & Morris, 2002; Hong, Morris, Chiu, & Benet-Martínez, 2000; Ng & Lai, 2009). Devos’s (2006) study of implicit ethnic identification made use of the Implicit Association Test (IAT), in which cultural frames of references (e.g., American vs. Mexican and American vs. Asian) could be contrasted within bicultural individuals. By measuring relative response times to pairing the word me (vs. them) with cultural words and pictures relating to Mexican (or Asian) culture and American culture, Devos found that bicultural2 (both Mexican and Asian American) college students identified implicitly with both ethnic and American cultural stimuli. That is, bicultural participants responded equally fast to pairing me (vs. them) with each set of cultural stimuli, reflecting a similarity in strength of self-association with both their family ethnic and American cultural backgrounds.

Devos’s (2006) report presented an important first step in capturing bicultural ethnic identification implicitly. Building on this basis and the similarly employed methodological and conceptual frameworks of other self-related implicit cognitive research through the IAT (Greenwald et al., 2002; Greenwald & Farnham, 2000; Greenwald, McGhee, & Schwartz, 1998), a novel response time task was developed in the current study to measure implicit ethnic identification among two cohorts of diverse bicultural adolescents. This measure, the MIPT, is used to capture adolescents’ response time identifications with ethnic and racial identity labels. The MIPT uses a complementary implicit cognitive measurement approach, capturing an individuals’ self-association with a word (e.g., Asian) independently for each word presented. In the MIPT, a participant is presented with three sorting tasks: Grammar (noun vs. adjective), Affect (“good” vs. “bad”), and Identity (“like me” vs. “not like me”). In each sorting task, 50 words are presented in random order, which the participant is asked to pair with the appropriate response category as quickly as possible. Embedded in the list of words are seven target words (ethnic–racial labels): American, Asian, Arab, Black, European, Hispanic, and White. This measure differs both methodologically and theoretically from the IAT, in which concepts are contrasted to one another. For example, in Devos’s IAT, bicultural individuals made a forced choice between pairing me or them with either Mexican or American (or another cultural group). Although this forced comparison was presented as a strength for contrasting two salient identities within bicultural individuals (Devos, 2006), the MIPT was designed specifically for a multicultural sample to allow individuals to identify (or not identify) themselves with two or more salient ethnic or racial categories. Just as ingroup and outgroup research

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2 Bicultural status determined by research team was based on membership in ethnic group.
has been criticized for inflated estimates of prejudice found by forcing participants to make a social preference between two salient social groups (i.e., not allowing the participant to prefer both equally; see review by Cameron, Alvarez, Ruble, & Fuligni, 2001), the MIPT was designed to allow independent judgments (“good” vs. “bad” and “like me” vs. “not like me”) for multiple ethnic–racial group labels. Using this approach in line with Phinney’s (1989) theoretical model, we expected to observe a greater number of labels endorsed by bicultural adolescents as “like me” than not-bicultural adolescents, particularly among the older cohort for whom ethnic identities are more formed.

The current study also employs a self-priming experimental condition to further understand the role that past experiences may have in shaping ethnic identities and attitudes (for a review of such techniques, see Fazio & Olson, 2003). Using a supportive self-priming interview, a style of interview shown in past research to elicit the saliency of ethnic identity self-knowledge (Karcher & Fischer, 2004), we expected that adolescents self-primed to recall information regarding their ethnic identities and family cultural practices would demonstrate relatively faster response times to self-descriptive labels in the MIPT than adolescents who were not self-primed. Importantly, we believed this “facilitated” (or relatively faster) responding in the MIPT would occur only for adolescents who report more positive ethnic identities (e.g., higher ethnic pride, greater centrality, and low physiological arousal). Other research has clearly shown that priming facilitates responding in evaluative judgments but only when those judgments are congruous with the valence of the prime (Fazio & Olson, 2003). In other words, if an adolescent described his or her ethnic identities as having low centrality and/or group pride, we would expect that participant to exhibit a relatively slower response time (or “inhibited” response) to pair the label with “like me” (or “not like me”) during the MIPT. Further, drawing from our developmental perspective, we anticipated that this priming effect would yield more variable relative response times among the younger adolescents, for whom ethnic identities are less formed.

**Affective Regulation, Experiences of Ethnic Identity Development, and the MIPT**

To extend our understanding of the correspondence between implicitly and explicitly measured bicultural ethnic identities, the current study also makes use of two indirect methods for understanding qualitative aspects of bicultural adolescents’ representations of their ethnic identities: (a) heart rate monitoring, a measure of parasympathetic activity (stress response) during an ethnic identities interview, and (b) qualitative analyses of ethnic identity interview responses. Affective regulation, sometimes referred to as self-regulation, is an effortful process by which individuals select and pursue goals, oftentimes to modify perceptions of themselves and others. Affective regulation often occurs when individuals are stressed, attempting to regulate negative affect or exert socially desirable self-control (e.g., Muraven & Baumeister, 2000). In adolescence, the development of positive affective regulation skills (e.g., low distress, low anxiety behaviors) is associated not only with prosocial decision making but also with healthy relationships and optimal long-term health outcomes (Dahl, 2001; Lerner, Freund, Stefanis, & Habermas, 2001; Mikulincer, Shaver, & Pereg, 2003). Among bicultural individuals, preliminary research suggests that affective regulation plays an important role in emotionally managing multiple cultural contexts (Eng, Kuiken, Temme, & Sharma, 2005). Other research has shown that positive ethnic identity attitudes (e.g., greater ethnic identity achievement) are associated with positive psychological adjustment and coping strategies (Zaff, Blount, Phillips, & Cohen, 2002). However, to our knowledge there is no research to date specifically examining affective regulation qualities with respect to developing ethnic identities among bicultural adolescents.

The current study aims to advance researchers understanding of ethnic identity development using physiological monitoring to capture heart rate associations with (a) characteristics of responses about ethnic identities given during the interviews and (b) implicit-measured inhibited responses to ethnic identity labels in the MIPT. To do this, we drew from related research in adolescence linking attachment theory to self-regulation patterns (Kobak & Sceery, 1988; Mikulincer et al., 2003) as well as physiological research used to appreciate inhibited response times in social evaluation tasks. Kobak and Sceery (1988) found that three types of representations of childhood experiences (e.g., the quality of responses given about childhood relationships during interviews) were linked to affective regulation patterns among adolescents. In their study, adolescents with “secure” representations of attachment were less hostile, were less anxious, exhibited low levels of distress, and were more ego- resilient than their peers of “insecure” attachment styles. These secure representations were characterized by easily recalled memories with largely positive details. Further, negative details were discussed openly and integrated into the larger context of the childhood experiences. Among adolescents who exhibited “dismissive” representations of attachment, a type of insecure representation, affective regulation patterns were more hostile, with greater loneliness and low ego-resilience. These dismissive representations were characterized by an avoidant interview style in which the adolescent devalued the importance of relationships and had difficulty recalling specific details. Finally, adolescents with “preoccupied” attachment representations, another type of insecure representation, reported high levels of personal distress and exhibited low ego-resilience and high anxiety. These preoccupied adolescents could recall details of childhood relationships but were confused as to their meaning, and expressed difficulty in making sense of negative aspects of relationships. These associations between attachment self-representation styles and affective regulation characteristics have been replicated elsewhere (J. P. Allen, Moore, Kuperminc, & Bell, 1998). In our research, we anticipated that bicultural adolescents who represent their ethnic identities in a secure manner during the interview would also show low-stress affective regulation responses to the interview (i.e., low heart rate increase). However, for bicultural adolescents representing their ethnic identities using more insecure, anxious self-presentation behaviors and responses, we anticipated a larger distress response (greater heart rate increase) during the interview.

**Summary of Current Study**

This mixed-methods study has several aims: (a) to test the sensitivity of a new implicit measure of ethnic identification among bicultural adolescents, the MIPT, (b) to assess the effects of a self-priming condition to manipulate the saliency of implicit ethnic identities, as indicated by relative response times to ethnic—
racial identity labels; and (c) to use the MIPT to inform developmental ethnic identity theory for bicultural adolescents. We also included physiological monitoring and interview data to further capture the affective experiences associated with bicultural adolescents’ ethnic identities. To examine those aspects of ethnic identification among bicultural adolescents that may be common among youth of various ethnic and racial identities, we included adolescents from numerous ethnic heritages. Importantly, we asked adolescents whether they ever considered themselves to be bicultural, which served as our main grouping variable for the study. We reasoned that in order to validly manipulate (i.e., self-prime) someone with bicultural or multiethnic identities, that individual must consider him- or herself a member of multiple cultural groups. In keeping with past research of bicultural adolescents, the vast majority of our bicultural sample was either 1.5- or second-generation immigrant youth. Therefore, adolescents who self-identified as being bicultural, regardless of ethnic or racial identification, were included in our target bicultural group.

To test the specificity of our findings regarding ethnic identities among bicultural adolescents, we included a control group of self-identified not-bicultural adolescents (also from varied ethnic–racial backgrounds, third-generation-plus).

In sum, on the basis of the theoretical perspectives and empirical research reviewed above, we expected the following:

**Hypothesis 1:** In the MIPT, bicultural adolescents will endorse a greater variety of labels as “like me” than not-bicultural adolescents, particularly among older adolescents.

**Hypothesis 2:** Younger adolescents will endorse fewer ethnic labels (and respond with less facilitation) than older adolescents, reflecting their earlier stage of ethnic identity development.

**Hypothesis 3:** Adolescents with greater ethnic pride and centrality (positive valence explicit identities) may have relatively faster response times (facilitation) to ethnicity labels in the Identity Sort. Adolescents with lower ethnic pride and centrality (negative valence explicit identities) may have relatively slower response times (inhibition).

**Hypothesis 4:** Bicultural adolescents who represent their ethnic identities in a secure manner during the interview will show low-stress affective regulation responses to the interview (i.e., low heart rate increase). However, bicultural adolescents representing their ethnic identities using more insecure, anxious self-presentation behaviors and responses will show a larger stress response (greater heart rate increase) during the interview.

**Method**

**Participants**

Two cohorts of adolescents participated in the study: 41 late adolescents from a New England college (older cohort) and 43 middle adolescents from an independent high school (younger cohort). The younger cohort ranged in age from 14 to 17 years ($\mu = 15.8, SD = 1.2$), and the older cohort ranged in age from 18 to 21 years ($\mu = 19.8, SD = 1.0$). Though overall there was a higher proportion of female than male participants in the final sample (62% vs. 38%), there were no significant gender differences across cohorts, and cohorts were similar by immigrant generation, bicultural identification, and racial minority status. Given the emphasis of this study on developing a language-based computer task, speaking and reading English proficiently was an inclusion criterion for the study. No participants were excluded based on this criterion. English proficiency was determined by participants’ self-report prior to study enrollment. Twenty-seven percent of the sample ($n = 23$) reported speaking a primary language other than English at home. All participants had received monolingual instruction in school in English for at least 4 years at the time of study enrollment. Spanish forms of the written measures were made available to participants, but all participants chose to complete forms in English.

College participants were recruited from undergraduate psychology courses and posted flyers, and high school students were recruited at school assemblies and via flyers and campuswide e-mail. Because the college campus has a culturally diverse student body, no recruiting methods other than posting flyers were followed to balance the sample between bicultural and not-bicultural participants. For the younger cohort, however, a high school student volunteered to help recruit potential bicultural participants from school diversity clubs and classes by handing out flyers and providing an e-mail sign-up sheet for interested students after classes.

College participants were compensated with partial psychology course credit; high school participants were given a $10 gift certificate to local food establishments for their participation. Care was taken not to involve any teachers or school staff in the recruitment of high school students, to avoid any potential for coercion or breach of participant confidentiality. The two school sites were located in the same city neighborhood and were selected for their comparable characteristics in terms of students’ family demographics as well as similarity in neighborhood environment.

**Procedure**

Subjects were asked to participate in a single-session, two-part study examining students’ cognitive skills in word sorting and, in a brief interview, students’ cultural background and philosophies about education. As part of the experimental study design, participants were randomly assigned to receive either the interview (self-prime condition) or the cognitive task (no prime condition) first. Participants provided informed consent before beginning the study; if participants were under the age of 18, written parental consent was also obtained prior to study participation.

The study took place in a private office at each school’s location during school hours. Participants completed the cognitive task at a desktop computer (the same computer was used throughout the study) while alone in the study room. The interview then took place in the same room and was conducted by one of two trained research staff members. Interviews were audiotaped and later transcribed verbatim by the interviewers. Upon completion of the cognitive task and interview, the participant was invited to complete a few short questionnaires to provide explicit measures of behavioral traits and health information as well as bicultural attitudes.
Heart Rate Monitoring

Heart rate was monitored throughout the study session as a measure of cardiac control. Previous studies of affective regulation in both children and adults have successfully used heart rate monitoring as an objective, indirect measure of physiological regulation to a stressor (Bernston et al., 1997; Gross & Levenson, 1993; Porges & Byrne, 1992; Scarpia, Raine, Venables, & Mednick, 1997; Troutman, Allor, Hartmann, & Pivarnik, 1999). In the current study, heart rate was measured to capture adolescents’ stress arousal (or no arousal) during the ethnic identities interview.

Monitoring began with a 10-min baseline (the last 5 min of data were used in analyses) prior to the interview and cognitive task. Throughout the study session, participants wore a Mini-Mitter (2000) telemetric heart rate monitor, a thin plastic and cloth exterior Polar chest band with embedded transmitters that detect the R wave of the heart beat. The band is placed at the base of the sternum, and a telemetric receiver pack (which records the interbeat interval between R waves in milliseconds) was attached to a belt loop. The receiver pack is equipped with a marker button that inserts a digital marker (a code in the output data file) whenever pressed. The marker button was used to indicate start and stop times of the resting baseline period as well as the interview and cognitive task epochs. This particular type of heart rate monitor has been demonstrated previously to provide reliable and accurate (±1 ms) heart rate data in physiological research with both children and adolescents (Roberts, Boccia, Bailey, Hatton, & Skinner, 2001; Troutman et al., 1999; Truthet, Butte, Puyau, & Adolph, 2000).

MIPT Procedure and Stimuli

Through E-Prime software (Psychology Software Tools, 2003), the MIPT instructs participants to self-advance through a series of three word-sorting tasks (Grammar, Affect, and Identity), each preceded by instructions (Grammar Sort):

During this part of the experiment, you will see a fixation point followed by a word. Press the LEFT mouse button if the word is a noun, or the RIGHT mouse button if the word is an adjective. Press any key to continue.

Participants held the computer mouse with both hands and made responses using their right and left thumbs. In the Affect Sort, the participant was instructed to press the left button if the word was positive and the right button if the word was negative; in the Identity Sort the left button was pressed for “like me” and the right mouse button for “not like me.” The three sorts, counterbalanced in order of presentation, display the 50-word stimuli individually (in randomized order) at the center of the screen, which the participant was instructed by the researcher to “sort as quickly as possible in to one of two categories, without making errors.” The word stimuli were randomized to help limit any order effects that might influence results. A participant response to the word terminated the trial, and the intertrial interval was 400 ms. The entire MIPT takes about 5 min to complete.

In keeping with past research using word-stimulus response time tasks, stimuli presented in the cognitive task were selected carefully and were checked to ensure that they would be minimally emotionally arousing and match in overall affective valence to the set of seven target ethnic–racial word stimuli: American, Asian, Arab, Black, European, Hispanic, and White (Bradley & Lang, 1999). The word student was included as a control identity label, which all participants should endorse as “like me.” Words for both sets of stimuli were also matched in overall word length and frequency of use in the English language. Within the Grammar Sort, words were balanced evenly by noun versus adjective, and in the Affect Sort they were balanced by positive versus negative valence. Extensive pilot studies were previously conducted with approximately 40 college-age adolescents to ensure that (a) adolescents describing their ethnic identities during the interview always used at least one of the target words in the MIPT to describe themselves, (b) no overall response time differences were observed for each of the three sorts by bicultural versus not-bicultural participants, and (c) no differential item responding by gender was observed throughout the task for nontarget words. In keeping with other social cognitive response time tasks, it was evident from pilot studies that a reminder sheet was needed to facilitate accurate category responding. As such, we provided a key for sorting categories for the left and right response buttons. In addition, participants were asked at the end of the study session to rate their impression of each word’s association to both their home culture and American culture (or just one culture, for not-bicultural participants), to ensure that filler nouns and adjectives were balanced in their explicit association among different cultures.

Bicultural Ethnic Identities Interview (Explicit Measures)

A 15- to 20-min interview was designed to capture participants’ identification with the term bicultural and to understand students’ school experiences as bicultural individuals. The interview is based on a supportive interviewing strategy, in which participants are encouraged to detail their thoughts with follow-up prompts from the interviewer, who maintains a warm, even interpersonal style. Interviews were audiotaped and later transcribed. Three main components of the interview included (a) ethnic identification questions, including pride, labels used, and centrality of the most important label relative to student, gender, and family role identities; (b) family cultural history and routines, including family immigration information, family and household education information, and participant language comfort and proficiency; and (c) questions regarding academic and peer-social experiences in school as a person of the student’s self-described ethnicity–bicultural identification background. By asking participants both open-ended and scale-response questions, and asking participants why or how as a follow-up to each question, we were able to capture not only the content of responses that adolescents use to represent their ethnic identities but also the reasoning and qualities of responses. Such qualities might include positive and negative valence, hesitation in responding, inability to respond, or confusion. In other words, by using an interview (instead of self-report paper-and-pencil measures), we were able to capture qualitative aspects of bicultural adolescents’ representations of their ethnic identities.

For the purposes of the current report, students were asked to (a) indicate whether they considered themselves to be bicultural (coded 1 = yes, −1 = no), (b) describe their ethnicities and list any labels they use to describe their race and ethnicities (a sum of the number of labels used among those presented in the MIPT was calculated; range: 1–7), (c) indicate their level of pride (1 = not at
all proud, $5 =$ extremely proud) in being American (American pride) and being a member of the ethnic or racial group they indicated as most important (ethnic pride), and (d) contrast the importance of their preferred ethnic identities to other parts of their identity (i.e., student, gender, family role, and friend). This scale measures of centrality (range: 0–4; $\alpha = .70$) represents the number of times that participants indicated their ethnic identities were more important to their sense of who they are as a person than the other possible identities. This type of centrality measure has been used successfully in other ethnic identity research with bicultural children (Marks et al., 2007; Pfeifer et al., 2007). Other ethnic identity questions were derived from a variety of sources, including a widely used and validated ethnic identity questionnaire, the Multi-group Ethnic Identity Measure (Phinney, 1992). In addition, transcripts of interviews were analyzed for all ethnicity-related questions. These questions asked the participants whether they identify with being bicultural, how they describe their ethnicities, and about feelings of pride and centrality regarding their ethnicities.

The health questionnaire comprised two parts. The first section sought basic health information known to affect both resting heart rate and heart rate reactivity (Freedman, Dietz, Srinivasan, & Berenson, 1999), including height, weight, known heart conditions, chronic illnesses, and caffeine or medications taken in the previous 24 hours. Body mass index was calculated by dividing weight in pounds by height in inches squared, then multiplying by 703 (National Center for Chronic Disease Prevention and Health Promotion, 2006); body mass index range (range: 15–38; $\mu = 22.1$, $SD = 3.6$) was used as a covariate in heart rate analyses.

The second component of the health questionnaire was a subset of 30 items from the Brief Symptom Inventory (Derogatis & Melisaratos, 1983). This self-report questionnaire, widely used in research and validated for use with adults and adolescents (Boulet & Boss, 1991; Cochran & Hale, 1985; Rucklidge & Tannock, 2001), taps a variety of health-related psychological symptoms. The respondent is instructed to rate symptoms on a 5-point scale (0 = not at all, 4 = extremely), selecting the response that “best describes how much discomfort that problem has caused you during the past 4 weeks, including today.” For the purposes of the current study, the Nervousness subscale ($n = 4$ items; $\alpha = .74$, $\mu = 1.53$, $SD = 0.56$) was used as a control variable in heart rate analyses, as higher levels of generalized anxiety and nervousness are known correlates of higher baseline heart rates among children and adolescents (Dobkin, Tremblay, & Treiber, 1998; Gerra et al., 2000; Monk et al., 2001). These items included poor appetite, feeling fearful, being scared for no reason, and feelings of guilt.

Data Preparation

MIPT data. In preparing MIPT data for analysis, we excluded one individual’s data altogether (this older adolescent reported confusing the response keys throughout the task). Other data were trimmed according to commonly used data management practices in implicit social cognitive response time tasks (Devos, 2006; Greenwald et al., 1998): Response latencies less than 300 ms and greater than 3,000 ms are recoded to 300 and 3,000, respectively. Less than 3% of participants’ data required such trimming. Response time data followed parametric distributions.

To address the hypothesis that self-identified bicultural adolescents will respond relatively quickly to their own ethnic labels, when compared with not-bicultural adolescents, a within-subject adjustment for response times was first calculated. This adjustment was made by taking the average response time for all nonethnic–racial identity words and subtracting from it the response time for each target ethnic–racial label and cultural word stimuli. These nonethnic–racial identity words included political ideas (e.g., democracy, freedom) as well as words about physical appearance (e.g., beauty, young) and social prestige (e.g., wealthy). This resulted in a measure of a relative response time that, if a positive value, indicates the participant was faster at responding to the ethnic–racial word stimuli than nonethnic–racial words; if the value was negative, it indicates the participant was slower at responding to those particular ethnic–racial word stimuli than nonethnic–racial words. These adjusted response times are necessary to correct for differences in subjects’ overall response times (i.e., some participants are generally faster at responding to the cognitive task than others, and we did not want global responding speed to influence our estimate of differences in response times to particular stimuli).

Heart rate data. To determine whether heart rate activity corresponds with implicit and explicit ethnic identity responses, we calculated heart rate from interbeat intervals (IBIs; measured in milliseconds). Preparation of IBI data was made according to the guidelines developed by Forges and colleagues (Forges & Byrne, 1992). In brief, IBIs were scanned by a reliably trained researcher (the primary study author) for each participant to identify any errors created during the analog-to-digital conversion of the heart beat recording. Extreme IBI values (less than 300 or greater than 1,200 ms) that were inconsistent with the overall variability patterns observed for the participant were omitted when calculating epoch averages and standard deviations. In addition, the first and last five IBI values of each epoch were omitted from analyses because these values are particularly subject to artifact from turning the equipment off and on and pressing the marker button. Less than 5% of the IBI data was excluded from analysis. Next, change scores were created to capture change from baseline heart rate to heart rate averages during the interview epoch of the experiment. Change scores, previously demonstrated to be reliable indicators of physiological response to psychosocial tasks (J. W. Hughes & Stoney, 2000; Llabre, Spitzer, Saah, Ironson, & Schneidman, 1991), were calculated such that positive values indicate an increase in heart rate from baseline to interview or cognitive task and negative values indicate a decrease in heart rate from baseline to interview or cognitive task.

There were more missing data for heart rate, compared with the cognitive test, reflecting several challenges associated with recording heart rate outside the laboratory. For example, two cases were excluded from heart rate analyses because fire alarms at the school study site interrupted the study session, dramatically affecting heart rate data. One case was omitted from analysis due to slippage of the telemetric heart rate band around the participant’s chest, and another case was omitted because of an artificially high resting heart rate ($\approx 140$ beats per minute [bpm]; the participant was taking medication known to increase resting heart rate). The final sample size for heart rate included 39 adolescents in the younger cohort and 38 adolescents in the older cohort (missing data were evenly spread by gender and bicultural identification).

Qualitative analysis. To document the qualities of representations of ethnic identities given by bicultural adolescents during the interview, we followed the procedures used in a previous qualitative analysis with bicultural adolescents (Marks et al.,...
Such qualitative procedures have been used in previous research to understand how adolescents represent ethnic identities in a particular context (Torres, 2003; Torres & Magolda, 2004; Tse, 1999; Waters, 1990, 1999). Our qualitative analysis was based in grounded theory, closely following the widely used procedures described by Strauss and Corbin (1990). For the present study, four pairs of cases were selected based on the observed patterns between heart rate reactivity and relative response times to the word White in the Identity Sort, which showed the most robust inhibited MIPT response patterns. Two new research staff (blind to the reason for selecting the cases and the study hypotheses) worked independently, first closely examining the nature of responses given by each individual to ethnic identity questions. Responses were then further broken down into specific concepts and phenomena by each coder as part of a process to replicate the initial open coding results. This round of open coding was used to produce as many phenomena as possible so that every concept within the data was represented in the initial coding. In the second round of coding, an axial coding approach pulled together sets of responses from the initial open coding report. After this first stage of axial coding was finished for each case study, staff coders met to compare concept lists and check for agreement. When a concept was found in one coder’s report and not the other’s, both coders went back to the individual response from which that code was derived and determined together the validity of that concept’s inclusion in a final open coding report. Before merging codes, the research staff was in 90% agreement in main concepts (with occasional differences in terminology) and was able to agree on any additional concepts. Staying sensitive to patterns and frequencies of concepts in individual respondent axial coding reports, coders then independently compared respondents in each pair, looking for similarities and differences in conceptual patterns emerging from both respondents. Each coder completed a brief report detailing her findings of what seemed distinct within and common between the respondents. Compiled versions of these final reports are presented in the current study.

**Results**

Characteristics of participants’ explicit ethnic identities from the interview are presented first, followed by results for (a) categorical responses to ethnic labels in the Affect and Identity Sorts on the MIPT, (b) relative response times to ethnic labels in the Affect and Identity Sorts, and (c) correspondence between explicit ethnic identity labels, pride, centrality, and implicit responses in the Identity Sort of the MIPT. These results are followed by analyses of heart rate reactivity and qualitative coding from interview responses demonstrating the most dynamic inhibited responses to the MIPT.

**Ethnic Identity Labels, Pride, and Centrality: Characterizing Explicit Bicultural Identities**

Table 1 presents percentages of self-described ethnic and racial identities for both samples. In general, adolescents used an average of 3.2 (SD = 0.97) ethnic labels to describe themselves. To test our hypothesis that bicultural adolescents—particularly in the older cohort—would use a larger number of labels to describe their ethnicities, we used a general linear model to test for an interaction of bicultural group and cohort (as well as their main effects) on the number of explicit labels used (dependent variable). In support of our hypothesis, we observed a significant interaction, $F(1, 80) = 3.87, p < .05, \eta^2 = .05$, between cohort and bicultural group such that older bicultural adolescents used a slightly larger number of labels ($\mu = 2.5, SD = 0.87$) than younger adolescents ($\mu = 2.2, SD = 1.04$). Among not-bicultural adolescents, the opposite was observed: Older not-bicultural adolescents used fewer labels ($\mu = 1.6, SD = 0.67$) to describe themselves than younger adolescents ($\mu = 2.5, SD = 0.86$).

Also in keeping with our predictions, striking differences were observed in the types of labels used. Adolescents who identified with “being bicultural” identified mainly with Hispanic, Asian, and African American ethnic groups. First- or second-generation adolescents were far more likely to be self-identified as bicultural than third- or later generation adolescents. In addition, all adolescents describing their ethnic identities as “half-and-half” (a phrase commonly used by participants in the interviews)—either biracial or half ethnic–racial—also identified with being bicultural. Nevertheless, though it was more likely that adolescents of color identified with being bicultural, being racial minority and being bicultural were not synonymous (approximately 20% of the bicultural group used the word White to describe themselves). Not-bicultural adolescents more often described themselves using the labels “American” and “White,” and approximately one-third used a nationality label as well. Of the two participants using the label “Black” to describe their ethnicity in the older

<table>
<thead>
<tr>
<th>Variable</th>
<th>Younger cohort ($n = 43$)</th>
<th>Older cohort ($n = 41$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial distribution$^a$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racial minority</td>
<td>42%</td>
<td>51%</td>
</tr>
<tr>
<td>Biracial</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Second generation$^b$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity$^c$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>African</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arab</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Asian</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>Black</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>European</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>“Half and half”</td>
<td>20%</td>
<td>5%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Native American</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Nationality</td>
<td>65%</td>
<td>56%</td>
</tr>
<tr>
<td>White</td>
<td>65%</td>
<td>56%</td>
</tr>
</tbody>
</table>

$^a$ Participants used a racial minority identity label (a racial label other than “White”) during the interview to describe themselves. $^b$ Includes adolescents not born in the United States, 1.5-generation adolescents born abroad but permanently moved to the United States before the age of 5, and second-generation adolescents born in the United States with at least one immigrant parent. $^c$ Adolescents’ specific races and ethnicities during interview (percentages add to greater than 100 because all participants used more than one label to describe themselves).
cohort, one identified with being not-bicultural. Approximately 10% of participants using the label “Hispanic” also identified with being not-bicultural. In general, the patterns observed in label selection by bicultural versus not-bicultural groups were similar across cohorts.

Adolescents’ reports of ethnic pride, American pride, and centrality were also used to characterize the qualities (e.g., the strength of positive valence and importance of group membership to the self) of ethnic identities. In line with past studies, bicultural adolescents reported higher levels of ethnic group pride (M = 4.3, SD = 0.82), F(1, 64) = 5.78, p < .05, and centrality (M = 3.3, SD = 0.6), F(1, 81) = 18.48, p < .001, than not-bicultural adolescents (M = 3.7, SD = 1.0 and M = 2.5, SD = 1.0, respectively). Bicultural and not-bicultural adolescents reported similar levels of American pride (M = 3.7, SD = 1.0 and 3.6, SD = 1.0, respectively), and no mean differences in either ethnic pride or centrality were observed by cohort or gender. Overall, adolescents’ ethnic pride was higher than American pride, paired-samples t(57) = 3.43, p < .001.

Implicit Identification With and Affective Judgment of Identity Labels: Categorical MIPT Responses

Categorical associations between labels and valence as “good” versus “bad.” In general, bicultural and not-bicultural students responded similarly when asked to rapidly pair identity labels with “good” or “bad.” Only one difference was observed, with fewer bicultural students responding “good” to the label “White” than not-bicultural students (χ² = 4.69, p < .05). Though bicultural and not-bicultural students had similar affective judgments of other labels, there were significant differences in the general endorsement of “good” to the various labels for the entire sample. For example, the label “Asian” was paired most frequently with “good” (96% of the time) and more frequently than “Hispanic” (χ² = 8.84, p < .01), “European” (χ² = 8.84, p < .01), and “Arab” (χ² = 12.50, p < .001). Though overall endorsement of target identity labels as “bad” was low for both cohorts, older students were more likely to pair “Arab” with “bad” than younger students (31.3% vs. 11.6%, respectively; χ² = 4.42, p < .05). Older students were also more likely than younger students to pair “Asian” (9.4% vs. 0%, respectively; χ² = 4.20, p < .05) and “European” (21.9% vs. 4.7%, respectively; χ² = 5.15, p < .05) with “bad.” No cohort distribution differences for “good” versus “bad” were observed for the labels “American,” “White,” “Black,” “student,” and “Hispanic.”

Categorical associations between ethnic–racial labels as “like me” or “not like me.” To test our hypothesis that older bicultural adolescents would endorse a greater number of labels as “like me” during the MIPT, we used a general linear model to test the effects of cohort and bicultural group (and the interaction between them) on number of labels paired with “like me.” Though there was no effect of bicultural group on number of labels endorsed, there was a significant cohort effect, F(1, 80) = 9.40, p < .01, r² = .11, such that younger adolescents endorsed a greater number of labels as “like me” (µ = 2.5, SD = 0.88) than older adolescents (µ = 1.9, SD = 0.97). We also found support for hypotheses that bicultural adolescents would pair a greater variety of labels with “like me” than not-bicultural adolescents. Ninety-one percent of students (n = 10) who paired “Black” with “like me” were bicultural, compared with only one student who was not-bicultural (χ² = 7.31, p < .01). A greater number of students endorsing “Hispanic” also identified with being bicultural (n = 9, 81.8%) than not bicultural (n = 2, 18.2%, χ² = 4.20, p < .05). All of the 19 students to pair the label “Asian” with “like me” were bicultural. Self-identified bicultural students were less likely to pair the label “White” with “like me” than students who were not-bicultural (31.3% vs. 68.8%, respectively; χ² = 26.13, p < .001). Similar proportions of bicultural (n = 17) and not-bicultural (n = 11) students endorsed the label “European,” and similarly large proportions of bicultural (75.0%) and not-bicultural (88.6%) students endorsed the label “American” as “like me.” Few students (n = 3) endorsed the label “Arab.” All students, regardless of bicultural identification, paired the label “student” with “like me” during the identity sort.

In sum, in our implicit measure, self-identified bicultural students were more likely to endorse “Hispanic,” “Black,” and “Asian” labels as “like me,” whereas not-bicultural students were more likely to endorse “White.” These responses during the time-sensitive cognitive task mirror, but do not precisely correspond with, adolescents’ ethnic identity labels used during the interviews (see results of implicit–explicit correspondence in Table 2).

Lastly, our developmental-based hypotheses that older adolescents would pair ethnic labels with “like me” more frequently than younger adolescents were partially supported. Older and younger participants endorsed “White,” “Black,” “European,” and “Asian” labels as “like me” in comparable proportions. However, older students were more likely to endorse the label “Hispanic” as like them than younger students (25% vs. 7%, respectively; χ² = 10.76, p < .001). In addition, younger students were more likely to endorse “American” as being like them than older students (90.7% vs. 68.8%, respectively; χ² = 5.82, p < .05). Taken together, these results partially support the idea that younger adolescents would endorse fewer ethnic labels as “like me.”

Implicit Identification With and Affective Judgment of Identity Labels: Relative Reaction Time to MIPT Identity Sort

Before presenting the Identity Sort relative response time results, we present descriptive information for general response times. Paired-samples t tests comparing Grammar, Affect, and Identity Sort average response times revealed that adolescents responded most quickly to pairing words with response categories in the Affect Sort (M = 1,098.03, SD = 586.31), t(121) = 4.21, p < .001, compared with the Grammar Sort (M = 1,386.35, SD = 472.82). The overall response to the Identity Sort was in between, not significantly different from either the Affect or the Grammar Sort (M = 1,216.32, SD = 505.57). There were no significant differences in raw data averages by bicultural group.3

3 In keeping with other response time data research (e.g., Devos, 2006), response latencies were also log-transformed, and all statistical analyses of response times were conducted in parallel with transformed data to ensure that results were not influenced by slight deviations from normality or skewness. Because no differences in findings were observed between milliseconds and transformed data, results are presented in milliseconds for ease of interpretation.
As discussed above, positive relative response times indicate relatively faster (i.e., facilitated) responding to that ethnic–racial label, compared with that participant’s average response time to other words in the Identity Sort. Negative relative response times therefore indicate a slower (i.e., inhibited) response time to that ethnic–racial label, relative to other words in the Identity Sort. In the Identity Sort followed the hypothesized direction: One-sample t tests confirmed that responses to identity labels were significantly faster than the overall average speed of response (zero), with adolescents responding more quickly to ethnic identity labels (dependent variables) in each of the three sorts. As anticipated, no cohort, priming condition, or bicultural status effects were observed for relative response times to target ethnic identity words in the Grammar Sort. In the Affect Sort, self-primed adolescents responded more quickly to endorse “American” as good than adolescents who were not primed, F(1, 67) = 4.20, p < .05, η² = .06. The first was a significant effect of bicultural status, F(model(8, 60)) = 2.63, p < .01, η² = .26. The second set of findings emerged with regard to bicultural status, in which not-bicultural adolescents, regardless of cohort or priming condition, responded slightly more quickly to decide that “Hispanic” is “like me” than bicultural adolescents, F(1, 67) = 6.07, p < .01, B = 52.13, η² = .08. This finding was not in keeping with our prediction that bicultural adolescents would respond more quickly to ethnic identity labels.

To test hypotheses regarding the influence of self-priming, older adolescent age, and bicultural self-identification on increased relative response times to identity labels, we used general linear multiple models to examine the main effects and two-way interactions of study design, cohort, and bicultural group (between-subjects factors) on relative response times to the six target ethnic identity words (dependent variables) in each of the three sorts.

### Table 2

**Identification With and Affective Judgment of Identity Labels During the Multiethnic Identities Processing Task**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Bicultural</th>
<th>Not bicultural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>American</td>
<td>30</td>
<td>75</td>
</tr>
<tr>
<td>Arab</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Asian</td>
<td>19</td>
<td>47.5***</td>
</tr>
<tr>
<td>Black</td>
<td>10</td>
<td>25.0**</td>
</tr>
<tr>
<td>European</td>
<td>11</td>
<td>27.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9</td>
<td>22.5*</td>
</tr>
<tr>
<td>White</td>
<td>15</td>
<td>37.5***</td>
</tr>
<tr>
<td>Student</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

**Note.** Bicultural and not-bicultural column percentages add to greater than 100 because participants could endorse more than one label. Five not-bicultural adolescents’ data were excluded from analysis because of extremely long or short response latencies.

* p < .05.  ** p < .01.  *** p < .001.

### Table 3

**Average Relative Response Times (ms) to Target Identity Words During Identity Sort, by Bicultural Group and Study Design**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Self-prime</th>
<th>No prime</th>
<th>Self-prime</th>
<th>No prime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>American</td>
<td>49.32</td>
<td>542.29</td>
<td>24.04</td>
<td>637.82</td>
</tr>
<tr>
<td>Arab</td>
<td>197.49</td>
<td>531.28</td>
<td>372.63***</td>
<td>384.29</td>
</tr>
<tr>
<td>Asian</td>
<td>312.10***</td>
<td>264.54</td>
<td>339.36***</td>
<td>410.52</td>
</tr>
<tr>
<td>Black</td>
<td>−201.18</td>
<td>1283.99</td>
<td>362.49***</td>
<td>262.18</td>
</tr>
<tr>
<td>European</td>
<td>−66.91</td>
<td>792.46</td>
<td>−18.37</td>
<td>520.62</td>
</tr>
<tr>
<td>Hispanic</td>
<td>258.37**</td>
<td>289.17</td>
<td>220.45**</td>
<td>358.88</td>
</tr>
<tr>
<td>White</td>
<td>−567.85*</td>
<td>1000.48</td>
<td>224.77**</td>
<td>334.05</td>
</tr>
<tr>
<td>Student</td>
<td>312.09**</td>
<td>274.49</td>
<td>413.77***</td>
<td>337.93</td>
</tr>
</tbody>
</table>

*a Control.

* p < .05.  ** p < .01.  *** p < .001.
time) to the word White for bicultural adolescents, $F(1, 76) = 19.94, p < .001, B = -519.94, \eta^2 = .21$, depending on cohort, interaction $F(1, 76) = 5.02, p < .05, \eta^2 = .06$, and priming condition, interaction $F(1, 75) = 11.17, p < .001, \eta^2 = .13$. A significant main effect of priming condition was also observed for relative response time to the word White, with adolescents in the no-prime condition responding more quickly than self-primed adolescents, $F(1, 76) = 9.03, p < .01, B = 574.24, \eta^2 = .11$. These effects are presented in Figure 1. As presented in the figure, bicultural and not-bicultural adolescents responded with similar timing to decide whether the label “White” is “like me” or “not like me” under the no-prime condition. However, when adolescents were interviewed about their ethnicity (self-prime) prior to completing the cognitive task, a striking difference was observed between bicultural and not-bicultural response times: Bicultural adolescents were inhibited (relative to other words) at deciding whether “White” is like them, whereas not-bicultural students were relatively faster at making this decision. This pattern was particularly prominent for the younger cohort.

Correspondence Between Implicit and Explicit Measures of Ethnic Identities

In general, there was about a 50% correspondence between using a label in the interview and endorsing it as “like me” during the MIPT. Correspondence with interview labels was very high for adolescents endorsing “White” (86%) and “Asian” (84%) as “like me.” However, some variability was observed for other types of labels. For example, among the adolescents who endorsed “Black” as “like me,” less than half used the label “Black” to describe themselves explicitly during the interview. Instead, adolescents who categorized themselves implicitly as Black described themselves explicitly during the interview using nationality labels (and not the racial label “Black”). Adolescents who endorsed “European” or “Hispanic” as “like me” in the MIPT showed the lowest overall correspondence with explicit identity label use in the interview (29% and 55%, respectively). Nevertheless, among those adolescents endorsing “Hispanic” as “like me” in the MIPT, a large majority (82%) did describe themselves as being bicultural in the interview.

Lastly, Pearson correlations were used to measure the strength of associations among explicit ethnic identity characteristics, number of labels (both explicit and implicit), and relative response time to the word White in the Identity Sort. Because bicultural and not-bicultural adolescents showed different relative response times to the word White, correlations were calculated within bicultural group (see Table 4). For the not-bicultural group, adolescents with higher ethnic pride responded with facilitated relative response times to White in the Identity Sort of the MIPT. American pride was not associated with adolescents’ response times to White, suggesting that the observed White response pattern (among not-bicultural adolescents) may be linked to affective associations with non-American aspects of ethnic identities. Also within the not-bicultural group only, being male ($r = .40, p < .001$) and being younger ($r = -.42, p < .001$) were associated with slower relative response times to White.

![Figure 1](image-url)

*Figure 1.* Priming Condition $\times$ Bicultural Group $\times$ Cohort: Relative response times to the word White during the identity sort. Bars represent standard error.
There were no associations, however, observed between White relative response times and explicit ethnic identity among bicultural adolescents. Within the bicultural group, adolescents with higher centrality also reported greater ethnic pride. For both groups of adolescents, American pride was positively associated with ethnic pride, and students who endorsed more labels in both groups of adolescents, American pride was positively associated with higher centrality also reported greater ethnic pride. For adolescents who endorsed more labels in the Identity Sort also used more labels to describe themselves during the interview.

Heart Rate Reactivity and Qualitative Coding of Interviews

On average, heart rates during the baseline and interview were similar (a slight, not-significant decrease of approximately 1 bpm was observed from baseline to interview), and variability was observed in both heart rates and in heart rate change. Average heart rates (baseline: $M = 87.98$, $SD = 15.59$; interview: $M = 86.54$, $SD = 15.31$; change scores: $M = -1.44$, $SD = 7.11$) did not differ by bicultural group or gender. There was an effect of cohort on heart rate averages at baseline (younger: $M = 87.91$ bpm, $SD = 1.44$, $p = .001$), heart rate reactivity ($M = .97$, $p = .001$), and the interaction of cohort and heart rate (larger stress response: 9.1 and 5.6 bpm) during the interview and most inhibited response (slowest response: 661 and 711 ms) to the word White. This pair’s interview qualities can be described as confused with respect to their ethnic identities. Both participants exhibited complex thoughts, experiences, and inner dialogues relating to their ethnic identities. Pair 2 (low heart rate response, high relative response time) comprised two bicultural adolescents with a decreased heart rate change during the interview (lowest stress response: −6.8 and −8.1 bpm) and a corresponding facilitated response (relative response times: 661 and 711 ms) to the word White. These participants were both male and were thorough and confident in their responses. Pair 3 (high heart rate response, high relative response time) included two not-bicultural adolescents whose heart rate change showed the highest heart rate increase (larger stress response: 9.1 and 5.6 bpm) during the interview and the fastest relative response time to the word White (1,573 and 1,230 ms). These participants typically answered questions briefly and seemed dismissive or indirect at times. Finally, Pair 4 (low heart rate response, low relative response time) were two not-
bicicultural adolescents with the lowest heart rate reactivity (lowest stress response: −14 and −11 bpm) and lowest not-bicultural relative response times to the word White (98 and 49 ms). These adolescents tended to reply to ethnic identity questions in a thoughtful, yet somewhat detached manner. The full composite results of the qualitative analysis, including quotes, are included in the Appendix.

Discussion

This study presents the first use of an implicit social cognitive measurement technique to understand the development of ethnic identities in a multicultural sample of adolescents. By developing a novel response time measure, the MIPT, we were able to capture adolescents’ quick, time-sensitive responding to pairing a variety of ethnic and racial identity labels as “like me” or “not like me.” As expected, bicicultural adolescents represented their multifaceted ethnic identities with a variety of ethnic and racial labels in both implicit and explicit measures. In addition, we observed several noteworthy findings with respect to adolescent age. As anticipated on the basis of past research (Phinney & Devich-Navarro, 1997; Rumbaut, 1994), older bicultural adolescents used a larger number of labels to describe themselves explicitly during the interview. However, it was the younger cohort of bicultural adolescents who paired the highest number of labels with “like me” during the implicit Identity Sort. This may be an implicit reflection of early “identity work” among younger bicultural adolescents whose ethnic identities are less formed. It may be that the process of explicitly exploring one’s identity later in adolescence in essence helps to pair down the number of possible associations one might hold in one’s working set of ethnic identity labels. Future longitudinal studies are needed to replicate this finding across a larger developmental age range (starting in middle childhood), to more fully characterize the qualities of early ethnic identity exploration (such as family cultural socialization practices and routines) that may covary with this early implicit identity work.

Perhaps most notable, we observed a robust inhibited response (i.e., slower relative response time) among bicultural adolescents only to the word White when deciding to pair the word with “like me” or “not like me.” This finding was not observed among adolescents identifying with a single racial minority group (i.e., not a racial minority effect). Instead, the pattern was strongest for young bicultural adolescents, particularly those expressing a half- and-half identity encompassing a combination of racial and/or ethnic labels. This effect holds for adolescents reporting biracial and/or biethnic identities. Developmental frameworks for understanding ethnic identities in adolescence have used measures focused primarily on qualities of adolescents’ associations with ethnic ingroups; the research presented here suggests an important role for measurement using ethnic identity associations with the majority “White” outgroup among bicultural adolescents as well.

In a follow-up analysis, we found no associations between this inhibited White response and explicitly measured affective qualities of ethnic identity pride or centrality. In fact, for most adolescents, we observed mainly positive explicit comments when describing their ethnicities. Numerous past studies of implicit and explicit social cognition have likewise found little to no correspondence between implicit and explicit measures of attitudes (Devos, 2006; Devos & Banaji, 2003; Fazio & Olson, 2003; Greenwald & Farnham, 2000; Kim, Sarason, & Sarason, 2006). This is particularly true when the attitude measured is associated with complex, affectively and personally meaningful social attitudes (such as prejudice or racism; for reviews, see Fazio & Olson, 2003; Rudman, 2004). It may be that in the current study, young bicultural adolescents were either unable (as would be the case developmentally if they were in early exploration phase of ethnic identity development; Phinney, 1989, 1993) or unwilling (because of socially desirable responding) to explicitly report negative experiences with being a member of their own ethnic group. It is also possible that this inhibited response reflects younger adolescents’ difficulty reporting or understanding their personal association with the White racial majority as adolescents of color. It is widely observed in research among bicultural and biracial adolescents that a key task of forming ethnic identities is learning how to make sense of and overcome negative racial stereotypes as well as personal and societal experiences of racial discrimination (Cross, 1991; García Coll et al., 1996; Gibbs, 2003; D. Hughes et al., 2006; Waters, 1994).

Further, this inhibited response pattern among young bicultural adolescents was most prominent after the self-priming interview. On the basis of past research suggesting that inhibited social cognitive responding is more common when the valence of a prime is incongruous with the valence of the stimuli (Fazio & Olson, 2006; Waters, 1994), we initially reasoned that adolescents who reported low levels of ethnic pride or centrality in the self-prime condition may show such an inhibited response pattern. An investigation into the qualities of the experiences of the participants while talking about their ethnic identity also provided some insight as to the characteristics of explicit ethnic identification that may be associated with inhibited implicit responding to the word White. Qualitative research, employed commonly in cultural studies and recently in mixed-methods research (see Weisner, 2002, 2005), seeks to document not only the explicit comments given by participants in an interview but also the qualities of participants’ responses. Also using heart rate monitoring to independently capture adolescents’ stress responses during ethnic identity interviews, we found that bicultural adolescents with the largest heart rate stress responses presented their ethnic identities with confusion and uncertainty both in what to call themselves and in how to feel about their ethnicities. This heart rate stress response to the interview is characteristic of an anxious response (Egloff & Schmukle, 2002; Egloff, Wilhelm, Neubauer, Mauss, & Gross, 2002), and the interview representations are similar to those observed among insecurely attached, preoccupied adolescents (Kobak & Sceery, 1988). Importantly, these adolescents also exemplified an extreme inhibited implicit response to the “White” ethnic outgroup during the BIPT.

In strong contrast, bicultural adolescents with a facilitated implicit response to White during the BIPT had low heart rates during the interview (no affective stress response). These adolescents spoke of their ethnicities with security, providing largely positive details and well-thought explanations for negative memories about their ethnic identities. Taken together, these findings highlight the

4 Note that this inhibited responding did not occur with the majority-culture label “American,” which was well endorsed by both bicultural and not-bicultural adolescents.
importance of understanding the qualities of bicultural adolescents’ feelings of association with the “White” majority ethnic group. The results of qualitative analyses linking affective regulation to inhibited outgroup responding on the B IPT among bicultural adolescents in the current study may be used to develop new methods for capturing identity-related anxiety. Doing so may advance researchers’ appreciation for understanding not only how bicultural adolescents maintain positive ethnic identities but also how these positive ethnic identities may support healthy psychosocial adjustment and academic achievement (Fuligni et al., 2005). For example, future studies may employ affective regulation measures to help explain why some adolescents’ ethnic identities are positively associated with academic achievement (Fuligni et al., 2005), whereas others’ are negatively associated with academic achievement (Fordham & Ogbu, 1986).

Although it was not the central focus of the current study, we also observed some interesting findings with respect to affective regulation and highly facilitated responding to the word White among not-bicultural adolescents. The two adolescent female participants with highest stress responses to the interview showed very fast responding to pair “White” with “like me” during the BIPT. These adolescents appeared dismissive throughout the interview; though neither adolescent directly explained the qualities of her own ethnic or racial identity, both repeatedly discussed color-blind viewpoints. The responses given during the interview, such as “I don’t look at skin color or that sort of thing. I couldn’t care less if you were black, orange, or green,” are reminiscent of research documenting preferential responding to White faces during implicit racial evaluation measures and effortful attempts to control prejudiced reactions in explicit measures (e.g., Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Dunton & Fazio, 1997; Hausmann & Ryan, 2004; Olson & Fazio, 2003). It is interesting that we observed these responses in a study of ethnic identities; at no point did we explicitly ask adolescents to explain or describe their thoughts or feelings on racism, or to evaluate the qualities of other racial groups. To examine how insecure ethnic identities may relate to interracial group evaluations, future studies may also employ a masked priming technique to manipulate adolescents’ affective state or cultural cognitive set prior to completing the Identity Sort in the MIPT. Such research methodology has been used successfully to examine the role of general positive and negative affect in facilitating or inhibiting implicit social attitudes related to racial prejudice (Dambrun & Guimond, 2004; Fazio & Towles-Schwen, 1999).

In general, we observed excellent label correspondence between explicit ethnic identity labels used in the interview and labels endorsed as “like me” in the MIPT for Asian bicultural adolescents. Correspondence between implicit and explicit labels was also high for adolescents with the word White. The wider variability in responding with other labels likely represents both some error in making time-pressured associations in the MIPT and some complexity in capturing bicultural ethnic identities using labels in an implicit measure. For example, the majority of adolescents endorsing “Hispanic” during the MIPT were younger adolescents who self-identified explicitly as “American.” This finding may represent error, incorrectly identifying “Hispanic” as “like me,” but it may also represent exploration and/or positive implicit associations with the “Hispanic” ethnic group that the adolescent does not yet express explicitly. Notably, this finding also reflects a lack of endorsement of the word Hispanic in the implicit task among those participants who used the word explicitly. It may be that the panethnic descriptor “Hispanic” does not adequately represent the affective aspects and personal associations at an implicit level among this diverse group. In other words, although adolescents may explicitly know and state they are Hispanic, the valence of their ethnic identities may be associated more strongly with nationality labels representing more specific cultural memories and experiences. Along these lines, future research should consider larger contextual influences on identification with labels, including cultural biases (e.g., negative views of Arabs) and gender identity development, to better understand how social values impact ethnic identity label selection.

Lastly, there were several limitations of the current study that need to be addressed in future research. First, as is the case with any new course of research, studies are needed to replicate the findings presented here. Importantly, future studies should include longitudinal, within-subject designs to use the new mixed-methods approaches presented here over time. Such longitudinal research will be imperative for advancing our developmental theory further. Along these lines, future studies should also include participants from a wider age range, from middle childhood through late adolescence. In addition, increasing the sample sizes for both the bicultural and not-bicultural groups would enable detection of smaller, but potentially meaningful, effects. For example, a larger sample size might tease out whether the inhibited responding to “White” among self-primed bicultural adolescents is specific to the word White or is a general racial inhibition pattern also observed for the label “Black.” Of important conceptual and methodological consideration, future studies should sample specifically to disentangle, if possible, the differences between being bicultural due to immigrant generation (i.e., 1.5 or second generation) and being biracial. Despite these limitations, this study represents an important first step in developmental research using implicit measures of ethnic identities.

References


**Appendix**

**Extended Qualitative Analysis**

**Pair 1 (high heart rate response, low relative response time).** Responses from both participants in Pair 1 can be characterized as confused with respect to ethnic identities. This confusion did not seem to stem from a detachment or unwillingness to think about the questions but rather from having complex thoughts, experiences, and inner dialogues relating to their ethnic identities. Both participants were engaged throughout the interview and identified as bicultural female; however, they had very different ethnic identity constructions. Participant A identified as bicultural, first explaining that she was biracial (“My mom is White, and my dad is Black”), then explaining that her parents were from different countries. Participant B noted that she was bicultural, citing the cultural socialization that she experienced at home with two parents from China: “When I go home, I speak ethnic Chinese. My parents, their English is not that good.”

Neither participant showed especially high ethnic identity centrality. Participant A preferred thinking of herself as a daughter, a student, and a “girl.” Further, when asked to describe her ethnic identities, Participant A first responded, “I don’t know. I would say . . . usually I don’t really know what to say for that. I am pretty confused when it comes to that because I am not just one thing. I don’t know. I am confused on that one.”

Though neither participant strongly identified with a racial label, racial identity came up consistently throughout Participant A’s interview as another source of confusion. For example, in explaining what labels she checks on forms, Participant A noted, “I don’t know. Because I would not say I am really Hispanic or White or Black. Because I don’t think I am. Because my dad is not Black. I mean, I don’t know what he is! But I am not. So I don’t really fit under the other categories, so . . .”

Participant B’s confusion seemed less about what to call herself and more about how she might feel about her ethnicity. For example, when asked whether being a woman was more, less, or as important to who she is than her ethnicity, she replied, “Hmm. I don’t know. It doesn’t really matter if you are a man or a woman. And if you are Chinese, you are just Chinese. I don’t know.” Participant B also described herself as being different from the other people in her life, feeling “separateness,” and she noted experiences with discrimination as a child: “When I was little, there were a lot of Chinese jokes, and I’d feel like, being Chinese, they make fun of Chinese and so they are not as good as Americans. It could be kind of like racist, and so I’d feel like, oh, I am not as good as Americans.”

Both participants noted the context of diversity at school in their interviews; both claimed they were among the only “diverse kids” in the school, and felt socially isolated at times because of being bicultural.

(Appendix continues)
Pair 2 (low heart rate response, high relative response time).
Both participants in Pair 2 were thorough in their evaluations of their ethnic identities as they related to various aspects of their life and were confident in their answers. Both were male, identified with being bicultural, and reported salient and central ethnic identities (both chose ethnic identity as being more important or as important for at least three of the identity comparison questions).

However, as with Pair 1, these participants’ ethnic identity constructions were very different. Participant C used a hyphenated label as his preferred ethnicity descriptor (Korean-American), stating he has grown up with “both Korean and American values,” whereas Participant D, whose parents hailed from different countries, introduced each of his identities separately, describing himself as a “[European] [African] [Religious]” person. Neither identified strongly with a racial label, although both were able to choose a racial label when asked what they would pick on a form. Participant D explained that he was in an interesting position of having an ethnicity that, in America, is automatically associated with a racial label (part of his ethnicity is African, thus he is African American, which in the United States means Black). He stated, “I generally avoid the ‘African American’ term, although technically I could use it, but I know that they really mean Black when they use that.” Although he presented a complex explanation of his ethnic identities, he gave it easily. When asked about his feelings toward his racial and ethnic identities, he said, “I don’t really feel proud of being White. But I’m not ashamed of it. But I’m very proud of being [European].” When asked why he was proud, he told the interviewer that holidays with his family were “great. We roast a lamb on a spit in my cousin’s garage. The neighbors all think we’re crazy. It’s great.”

Although Participant C was also largely positive about his ethnic identities, he did bring up feelings of difference from others and pointed out how few Asians there were in school and the surrounding city in general. He saw his ethnicity as making him different on both a superficial (visual) level and a more substantial level; he perceived things differently because of his ethnicity. He spoke several times about social situations at school, which contributed to his feelings of difference: “People ask me, ‘Are you from the good Korea or the bad Korea?’ So being Korean is kind of complicated.” Nevertheless, Participant C mentioned that being different can be a strength: “It makes me more aware of my own ethnicity, of being bicultural, of others’ backgrounds too.”

Pair 3 (high heart rate response, high relative response time). The students in Pair 3 typically answered questions briefly and seemed dismissive or indirect at times. Neither appeared to have thought about her ethnicity much prior to the interview; neither student was bicultural, and both were female. Participant E identified with both the racial label “White” and her English heritage, and Participant F identified with her Irish heritage and being White. Participant F chose her ethnic heritage label “Irish” as her favorite ethnic descriptor, but throughout the interview this part of her ethnicity did not prove to be very salient or central. She noted that she did not talk with her friends about her ethnic identity, stating it did not “affect my decisions or anything,” and she did not “think about it in day-to-day life.” She attributed this to not being directly from Ireland. Participant E also preferred the label “Caucasian” to describe herself but stated that “Caucasian is not a source of pride.” Neither student showed strong ethnic identity centrality.

Both participants brought up racial identity and then quickly dismissed it. For example, when asked whether being Irish was more, less, or as important to who she is than being a student, Participant F stated, “I feel that, well, skin color doesn’t really matter. I mean, if I am White, I am White.” She brought up skin color again later when asked how her family background had helped her be a good student, noting, “I don’t look at skin color or that sort of thing. I couldn’t care less if you were black, orange, or green.” In both cases, she did not directly answer the question. For Participant E, when asked whether being English was more, less, or as important to who she is than being a daughter, she stated, “Less, because I don’t go out of my way to spend time with other Caucasians.”

Both participants did not feel “different than other people” at school; both noted that they were in the majority cultural group at school. In describing how her family background (English and Caucasian) had helped her to be a good student, Participant E said, “Well, I’m normal. So I feel like I fit in because most students are like me.” Participant F also reported that her background “doesn’t stand out.”

Pair 4 (low heart rate response, low relative response time). Adolescents in Pair 4 tended to reply to ethnic identity questions in a thoughtful, yet somewhat detached manner. These participants were not bicultural; one was male and the other female. For example, Participant G replied to two centrality questions with the same response, “I don’t identify based on race very much,” whereas Participant H stated, “I have never really thought about it before, my ethnicity.” Both brought up

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5 To protect the confidentiality of this individual, the specific identity labels used to describe his ethnic identities have been removed from this report, as they were a particularly unique combination of labels. “European” was a specific European nationality, “African” was a specific African ethnicity, and “religion” was a specific religious descriptor.
“European” heritage when asked what their ethnicities were, and neither brought up race (their own or others’) when explaining their responses. Neither was able to select an ethnic descriptor as their preferred descriptor, although Participant G was able to pick specific labels that she felt defined her: “I am Eastern European Jewish.” Both students chose “White” for the descriptor they would chose on a form.

When asked how proud they were of their ethnic background, Participant G stated, “It is no big deal,” and Participant H said, “I don’t really identify with ethnicity very much.” Both showed low levels of ethnic identity centrality; they both chose their preferred ethnicity (Caucasian) as less important in all but one identity comparison. Both acknowledged that being Caucasian meant being in a majority and took this notion into account when thinking about what it meant to be Caucasian. For example, one student said, “Caucasian is so much more broad then one specific country. It is not just one culture. It’s just an overall thing that just doesn’t seem to identify anyone,” whereas the other noted, “I think that I am less in touch with my ethnicity because it is a very bland common background, you know.”

Call for Papers: Special Issue on Co-Occurrence of Different Forms of Violence

Guest Editors: John Grych and Suzanne Swan

Psychology of Violence invites manuscripts for a special issue on the co-occurrence of different forms of violence, to be compiled by guest editors John Grych and Suzanne Swan. This special issue will publish in 2012.

There is growing interest in studying the co-occurrence of different types of violence. Accumulating evidence indicates that victims of one type of violence often experience other types of violence, individuals who perpetrate violence in one context often do so in other contexts, and many perpetrators also have been victims of violence. However, our understanding of the intersection of different types of violence has been limited by the tendency for researchers to study each kind of violence, abuse, or maltreatment in isolation. As a result, both knowledge of the causes of violence and the ability to effectively reduce it has suffered.

This special issue will attempt to break down the “silos” that have developed in each domain of research in an effort to move the field towards a more integrative understanding of the causes, risk factors, and effects of violence and abuse. We conceptualize violence broadly, including child maltreatment, psychological aggression and coercive control, intimate partner violence, teen dating violence, bullying, community violence, elder abuse, sexual aggression, suicidal behavior, and stalking. We welcome papers that address these issues theoretically and empirically and highlight the implications of this approach for prevention, intervention, and public policy.

Topics may include but are not limited to:
- Conceptual models that explain co-occurrence of different types of violence/abuse
- Developmental patterns in poly-victimization
- Victimization history as a precursor to abusive or violent behavior
- Revictimization across the lifespan
- Implications of co-occurrence of different forms of violence for understanding/addressing health disparities
- Links/gaps in prevention/intervention programs designed to reduce violence
- Different patterns of violence across cultural contexts
- Policy implications and possibilities for prevention and intervention offered by conceptualizing violence as occurring in multiple and interrelated forms

Manuscripts can be submitted through the journal’s submission portal, under the Instructions to Authors at http://www.apa.org/pubs/journals/vio/. Please note in your cover letter that you are submitting for this special issue. Deadline for submitting manuscripts is April 1, 2011. Inquiries regarding topic or scope for the special issue or for other manuscripts can be sent to John Grych, john.grych@marquette.edu, or Suzanne Swan, drsuzanne.swan@gmail.com.