Are CRIS Cluster Patterns Differentially Associated With African American Enculturation and Social Distance?

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Abstract
The authors examined whether Black racial identity cluster patterns, using Cross Racial Identity Scale (CRIS) scores, were differentially associated with preference for African American culture and social distance from various cultural groups. African American college students (N = 351) completed the CRIS, an enculturation scale, and a social distance measure. Six racial identity cluster patterns were identified using cluster analysis. A one-way analysis of variance indicated that individuals with an Assimilated cluster pattern endorsed African American culture less than those with an Afrocentric or Intense Black Involvement pattern; those with a Self-Hating cluster pattern endorsed African American culture less than those with an Afrocentric pattern. A one-way multivariate analysis of variance, followed by a descriptive discriminant analysis, on the social distance measure indicated that individuals with Self-Hating and Assimilated cluster patterns preferred less social

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distance from Whites, Asians, and Jews than individuals with Intense Black Involvement, Afrocentric, and Immersion cluster patterns.

Keywords
Black racial identity, Cross Racial Identity Scale, Black college students, enculturation, social distance

Empirical research on racial identity has gone beyond understanding racial identity as a construct to examining the effect that specific racial identity attitudes may have on many aspects of psychosocial functioning. One of the most prominent racial identity models is Cross’s (1971, 1991; Cross & Vandiver, 2001) nigrescence model. Over time, the original nigrescence model (Cross, 1971) has evolved into a comprehensive theory (Cross, 1991; Cross & Vandiver, 2001). In the revised model, Cross (1991) proposed that self-concept is composed of two components: personal identity (PI) and reference group orientation (RGO). PI refers to general personality features such as those measured in personality inventories (e.g., Big Five Inventory; John, Donahue, & Kentle, 1991), whereas RGO is based on social affiliations (e.g., religion, race, gender, sexual orientation). Most of the change during the formation of racial identity occurs in the individual’s RGO and little if any occurs in the PI component of the self-concept (Cross, 1991). As a result, Black identity refers to the way a person thinks, feels, and acts in relation to a matrix of social group orientations (e.g., no reference given to being Black, sole focus on Blackness, or diverse cultural connections; Cross & Vandiver, 2001).

The expanded nigrescence theory (Cross & Vandiver, 2001) contains the most current version of the model, which is measured by the Cross Racial Identity Scale (CRIS; Vandiver et al., 2000). However, little research exists about the nature of the relation between Black racial identity, as delineated in the expanded nigrescence model, and psychosocial aspects of functioning, such as enculturation and social distance.

The Expanded Nigrescence Theory & CRIS

The expanded nigrescence model (Cross & Vandiver, 2001) is significantly different from the original nigrescence model (Cross, 1971). The expanded model as tapped by the CRIS is not a developmental stage model. What were previously considered stages are now themes of various exemplars of Black racial identity attitudes. The existence of multiple Black identity attitudes, a defining characteristic of the revised nigrescence model (Cross, 1991), continues
to be a cardinal feature of the expanded model. Individuals can hold multiple attitudes simultaneously and to varying degrees (Cross & Vandiver, 2001) across three thematic categories: Pre-Encounter, Immersion-Emersion, and Internalization.

Pre-Encounter refers to attitudes that have negative feelings or low race salience (little importance) attributed to being Black. Pre-Encounter exemplars are Assimilation, Miseducation, and Self-Hatred (Cross & Vandiver, 2001). Pre-Encounter Assimilation attitudes are characterized by a primary racial group orientation of being American, with race treated as a secondary issue or of low race salience. Pre-Encounter Miseducation is the acceptance and internalization of stereotypes about Black people and Black culture. Pre-Encounter Self-Hatred is when the individual has negative feelings about being Black.

Immersion-Emersion represents an identity in transition. Immersion-Emersion exemplars are Anti-White and Intense Black Involvement (Cross & Vandiver, 2001). Immersion-Emersion Anti-White attitudes are characterized by disdain toward White people and White culture. Immersion Intense Black Involvement describes a person who is deeply immersed in Black culture and all things Black (e.g., community, music, art, and literature).

Internalization depicts individuals who are at peace with being Black and who experience race as a positive attribute that is moderately to very important. Internalized attitudes are Afrocentric, Biculturalist, and Multiculturalist Inclusive (Cross & Vandiver, 2001). Afrocentric is characterized by an internalized pro-Black identity with dedication to and activism in the Black community. Biculturalists give equal importance to Black culture and American culture. Multiculturalists have multiple reference groups of importance and bridge to other cultural groups, including majority cultural groups, and Gays and Lesbians.

The CRIS (Vandiver et al., 2000) measures six of the eight racial identity attitudes: Pre-Encounter Assimilation (PA), Pre-Encounter Miseducation (PM), Pre-Encounter Self-Hatred (PSH), Immersion-Emersion Anti-White (IEAW), Internalization Afrocentricity (IA), and Internalization Multiculturalist Inclusive (IMCI). The body of validity research on the CRIS (e.g., Vandiver, Cross, Worrell, & Fhagen-Smith, 2002; Vandiver, Fhagen-Smith, Cokley, Cross, & Worrell, 2001) and its evaluation (Cokley, 2007; Ponterotto & Park-Taylor, 2007) provide strong support for the psychometric properties of its scores.

Racial Identity & African American Enculturation

Research indicates that acculturation is a complex psychological process, occurring along various dimensions that affect the individual, such as identity,
attitudes, language, and adaptation (Berry, 1997). Bilinear models of acculturation consider the individual’s orientation toward his or her culture of origin and the host or majority culture (Berry, 1997; Miller, 2007). In this study, only one aspect of African American acculturation, preference for African American culture, was examined and thus the term enculturation was used to describe the measured construct (Berry, 1997; Cokley & Helm, 2007; Miller, 2007).

Enculturation is the degree to which one indicates a knowledge or preference for traditional African American cultural practices, beliefs, and attitudes and includes things such as eating traditional foods, having a preference for African cultural products, subscribing to traditional religious practices, and endorsing traditional mistrust attitudes about White people and racism (Klonoff & Landrine, 2000). According to Landrine and Klonoff (1994), racial identity and preference for African American culture are independent constructs, as evidenced in the differences in content of the items on the African American Acculturation Scale (AAAS; Landrine & Klonoff, 1994) and those contained in racial identity measures such as the Racial Identity Attitude Scale (RIAS; Parham & Helms, 1981) and the CRIS.

To date, there is a dearth of research examining preference for African American culture and its relation to racial identity attitudes (e.g., Cokley & Helm, 2007; Pope-Davis, Liu, Ledesma-Jones, & Nevitt, 2000). Pope-Davis et al. (2000) found, using the RIAS (Parham & Helms, 1981) and the African American Acculturation Scale (Landrine & Klonoff, 1994), that Immersion attitudes were the strongest positive predictor of preference for African American culture, and Pre-Encounter attitudes negatively predicted cultural preference. All six of the racial identity scales predicted 18% of the variance in the acculturation measure, but separate effect sizes were not provided for each of the predictors. Cokley and Helm (2007) found that all of the CRIS racial identity attitudes were predictors of enculturation, measured by the AAAS, with the exception of the Internalization Multiculturalist Inclusive. Pre-Encounter Assimilation and Self-Hatred attitudes negatively predicted enculturation, and Pre-Encounter Miseducation, Immersion-Emersion Anti-White, and Internalization Afrocentricity positively predicted enculturation (Cokley & Helm, 2007). The combined CRIS scales predicted approximately 10% of the variance of enculturation, with Afrocentricity and Assimilation contributing the most to the model. No effect sizes were reported for each of the CRIS scales.

Both studies provide empirical support for a small to moderate relation between racial identity attitudes and enculturation. However, these studies evaluated racial identity subscales in isolation of one another, as stand-alone scores. An aim of the current study was to examine the CRIS subscale scores using cluster analysis, allowing all CRIS subscale scores to be considered
simultaneously and beyond a single scale elevation, to determine whether racial identity cluster patterns were differentially associated with enculturation as described by the expanded nigrescence theory.

Potential linkages could be suggested between enculturation and racial identity cluster patterns. In the expanded nigrescence theory (Cross & Vandiver, 2001), the thematic category of Pre-Encounter describes a person whose primary identity is American with low race salience (Assimilation); therefore, an association may be likely between an Assimilated cluster (high elevation on Pre-Encounter Assimilation) and low levels of enculturation. Potentially, a similar pattern may exist also between enculturation and other Pre-Encounter clusters, such as Miseducation (high elevation on Pre-Encounter Miseducation) and Self-Hatred (high elevation on Pre-Encounter Self-Hatred). In contrast, two clusters that emphasize a primary orientation toward Black culture and the Black community (Immersion [twin elevations on Immersion-Emersion Anti-White and Afrocentric] and Afrocentric [high elevation on Afrocentric]) could be linked to high levels of enculturation. A Multiculturalist (high elevation on Internalized Multiculturalist Inclusive) cluster might have a moderate association with enculturation, as there is a preference not only for African American culture but for other cultures as well.

Racial Identity & Social Distance

Social distance is “the degree of sympathetic understanding that functions between person and person, between person and group, between group and group” (Bogardus, 1959, p. 7). There is limited research concerning social distance for African Americans in relation to racial identity attitudes. Considering that racial identity is a measure of social reference (reference group orientation; Cross, 1991), racial identity and social distance may have implications on one another.

In the expanded nigrescence theory (Cross & Vandiver, 2001), implications for social relationships are a consistent part of the descriptor for each of the three thematic categories (i.e., Pre-Encounter, Immersion-Emersion, and Internalization) and are further nuanced in the descriptions of the attitudes (e.g., assimilated, anti-White, multiculturalist, and Afrocentric) within each of the thematic categories. Pre-Encounter is described as having a low or negative preference for Black culture, whereas Immersion-Emersion is described as having a strong preference for Black culture and the Black community with a disdain toward White people and White culture. Therefore, the expanded nigrescence theory suggests that individuals with Pre-Encounter attitudes would have the greatest social comfort with those who are White,
whereas individuals with Immersion-Emersion attitudes would have the greatest social comfort with those who are Black and prefer social distance from White people. Internalization is more nuanced in that individuals with positive pro-Black internalized attitudes could have elevated Afrocentric attitudes or Multiculturalist attitudes. In the case of the Afrocentric, the theory suggests that the individual has a strong orientation toward the African American community and, thus, greatest social preference for those who are Black. In contrast, the Multiculturalist values his or her African American culture and bridges connections to other groups; therefore, the Multiculturalist would not have a social preference for any particular group but would instead be comfortable with all groups.

To understand how racial identity attitudes are associated with various psychosocial functioning, it is important to look at the balance between intrapersonal and interpersonal relationships with self and others. An aim of the current study was to test the expanded nigrescence theory by examining whether these theoretically implied social preferences would surface when examining the relation between racial identity cluster patterns and social distance preference from various cultural groups.

**Racial Identity & Cluster Analysis**

Most research on Black racial identity has been conducted at a univariate level, with single subscale scores indicative of a specific racial identity. Despite the growing support for the practical utility of CRIS subscale scores, a major shortcoming of most of the research to date is the use of univariate statistics to examine the relation between the CRIS subscale scores and other spheres of functioning (e.g., acculturative stress or college adjustment). According to the expanded nigrescence theory, individuals can hold multiple racial identity attitudes simultaneously and to varying degrees (Cross & Vandiver, 2001); therefore, the examination of CRIS subscales scores in unison is consistent with the expanded nigrescence theory, whereas the examination of subscale scores in isolation seems to coincide with the original stage model (Cross, 1971). Univariate approaches limit the scope of understanding the complexity of Black identity. As Black racial identity is multifaceted, its measurement and interpretation must be treated as such (Cross & Vandiver, 2001; Helms, 1995).

To date, three studies have used cluster analyses, a multivariate procedure that classifies individuals with similar profiles together into clusters (Hair & Black, 2000), to examine Black racial identity based on the nigrescence models. Carter (1996) and Neville and Lily (2000) examined racial identity clusters
based on the original nigrescence theory (Cross, 1971), as measured by the RIAS (Helms & Parham, 1990). The Worrell, Vandiver, Schaefer, Cross, and Fhagen-Smith (2006) study is the only one to examine clusters based on the expanded nigrescence theory (Cross & Vandiver, 2001), as measured by the CRIS (Vandiver et al., 2000).

Carter (1996) used a sample of 557 African Americans between the ages of 16 and 66. A three-cluster solution was accepted: Pro-White (high scores on Pre-Encounter and Immersion-Emersion, and low scores on Encounter and Internalization), Racial Confusion (high scores on all RIAS subscales), and Racial Pride (high scores on Internalization and moderate scores on Immersion-Emersion, Encounter, and Pre-Encounter). Neville and Lily (2000) used a sample of 182 African American undergraduates from two predominately White institutions. A five-cluster solution was accepted: Engaged Internalized (high Internalization and Encounter scores), Undifferentiated Racial Identity (moderate elevation on all four RIAS subscales), Committed Internalization (moderate to high scores on Internalization), the Dormant Racial Identity (the highest Internalization mean score), and Dissonance Internalization (a high Internalization score and elevated Encounter score).

Worrell et al. (2006) conducted two cluster analytic studies to identify stable clusters of Black racial identity in three samples of African American undergraduates. In Study 1, a six-cluster solution was accepted based on a sample from a predominately White institution (PWI): Assimilated cluster (dominant elevation on Pre-Encounter Assimilation subscale), Miseducated Variant cluster (higher mean scores on Pre-Encounter subscales), Immersion cluster (primary elevations on Immersion-Emersion Anti-White), Afrocentric cluster (primary elevation on Internalization Afrocentric), Multiculturalist cluster (primary elevation on the Internalization Multiculturalist Inclusive subscale), and Low Race Salience cluster (no elevations on any subscales).

In Study 2, with two samples from PWIs and historically Black colleges and universities (HBCUs), Worrell et al. (2006) had five clusters emerge in both samples, with a slight variation in cluster patterns. Four of the six cluster patterns from Study 1 replicated in both samples; however, Afrocentric did not replicate in either one, and Multiculturalist replicated only in the second PWI sample. A seventh cluster that had not appeared in Study 1, called Identity in Transition (characterized by elevated scores on four of the six subscales), was the fifth cluster in the HBCU sample.

Comparisons between the Worrell et al. (2006) study and the previously reported cluster solutions (Carter, 1996; Neville & Lily, 2000) are difficult because of theoretical and measurement differences. Also, the cluster findings used different measurement standards. Neville and Lily reported using
the scale midpoint to aid in interpreting means of racial identity clusters; Carter converted the racial identity scores to percentile ranks for interpretation; and Worrell et al. standardized subscale scores and interpreted clusters based on the dispersion of scores around the T-score mean of 50 and in keeping with the expanded nigrescence theory. Although Carter (1996) and Neville and Lily (2000) used the RIAS, different cluster patterns and different numbers of clusters were found.

Tentative conclusions can be drawn from the Worrell et al. (2006) study. First, there appears to be generalizable racial identity clusters among Black college students. Second, some clusters may be more common in the population than others. (For an in-depth review of these CRIS cluster solutions, see Worrell et al., 2006.) Worrell et al.’s (2006) research focused on the identification of CRIS cluster patterns and the generalizability of these clusters across independent samples; they did not test the utility of these clusters in relationship to other variables. Replicating Worrell et al.’s (2006) findings would provide additional support for the stability of the CRIS racial identity cluster patterns. Extending Worrell et al.’s study to examine the relationships between the CRIS racial identity cluster patterns and other psychological and sociocultural experiences (e.g., enculturation, social distance) would provide further support for the expanded nigrescence theory while furthering our understanding of the utility of these clusters and the role that racial identity plays in the psychosocial experiences of African Americans.

The Present Study

The primary aims of this study were twofold: (a) to extend nigrescence research by determining whether racial identity patterns identified through cluster analysis replicated the previous cluster patterns found by Worrell et al. (2006), and (b) to test the expanded nigrescence theory (Cross & Vandiver, 2001) by determining whether the racial identity cluster patterns differentially associated with two pertinent psychological and sociocultural variables (i.e., enculturation and social distance) in accordance with theory. Because the cluster patterns to emerge were unknown, the possible relationship between racial identity patterns and the outcome variables of enculturation and social distance was based on the potential emergence of clusters found by Worrell et al. (2006) and in alignment with the expanded nigrescence theory (Cross & Vandiver, 2001).

Hypothesis 1: Cluster analyses were expected to yield four to seven racial identity clusters that were consistent with the expanded
nigrescence theory and similar to the previous clusters found by Worrell et al. (2006) for Black college students attending a predominantly White institution.

**Hypothesis 2:** CRIS racial identity cluster patterns were expected to be differentially associated with African American enculturation as described by the expanded nigrescence theory. Individuals with Pre-Encounter racial identity cluster patterns (e.g., Assimilated) were expected to have less preference for African American culture in comparison to individuals with other racial identity cluster patterns (e.g., Afrocentric). Individuals with Immersion racial identity cluster patterns were expected to have greater preference for African American culture than individuals with Assimilated cluster patterns. Individuals with Afrocentric racial identity cluster patterns were expected to have greater preference for African American culture than individuals with Pre-Encounter racial identity cluster patterns.

**Hypothesis 3:** CRIS racial identity cluster patterns were expected to be differentially associated with social distance from various cultural groups as described by the expanded nigrescence theory. Racial identity cluster patterns were hypothesized to differentiate on the preferred social distance from various cultural groups. Specifically, social distance to various cultural groups was expected to differ for individuals with Pre-Encounter racial identity cluster patterns (e.g., Assimilated) in comparison to individuals with Immersion-Emersion (e.g., Immersion) and Internalization (e.g., Afrocentric) patterns.

**Method**

**Participants**

Participants were 360 college students who self-identified as being African American or Black (106 males, 252 females, and 2 unspecified), attending a predominantly White university in the mid-Atlantic region of the United States. Participants ranged in age from 18 to 38 years ($M = 20.69$ years, $SD = 2.78$). A majority of the participants were undergraduate students (92.8%) and 7.2% were graduate students. Participants were U.S. citizens ($n = 321$) or permanent residents from African countries ($n = 36$); three participants did not answer this question. Family income was reported to be below $20,000 annually for 6.6% of participants, between $20,001 and $40,000 for 24.2%, between $40,001 and $60,000 for 17.8%, and more than $60,000 for 34.7% of participants, and 16.7% of participants did not answer this question.
Procedures
Participants were recruited using numerous solicitation methods, including mass distribution of flyers and announcements across campus and at student organization meetings, face-to-face recruiting, flyers on student electronic mailing lists, and announcements from the university’s multicultural coordinators. Participants were given monetary compensation ($5) for their time upon completion of all research measures.

Measures
Data used in this study were collected as part of a larger project. The measures for each study were combined into one packet for ease of administration only and the measures were entirely different for each study. Only information pertaining to this particular study is discussed. In addition to demographic items, participants completed three measures for this study: the Cross Racial Identity Scale (Vandiver et al., 2000), the African American Acculturation Scale–Revised (AAAS-R; Klonoff & Landrine, 2000), and a modified version of the Bogardus Social Distance Scale–Revised (BSDS-R; Bogardus, 1933). All measures were counterbalanced to control for order effects.

Racial identity. Participants’ racial identity was measured by the CRIS (Vandiver et al., 2000), a 40-item instrument that measures six nigrescence attitudes as described in the expanded nigrescence model (Cross & Vandiver, 2001). The six subscales are Pre-Encounter Assimilation (PA), Pre-Encounter Miseducation (PM), Pre-Encounter Self-Hatred (PSH), Immersion-Emersion Anti-White (IEAW), Internalization Afrocentricity (IA), and Internalization Multiculturalist Inclusive (IMCI). Responses to CRIS items are made on a 7-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Sample items are “I am not so much a member of a racial group, as I am an American” (Pre-Encounter Assimilation item) and “I see and think about things from an Afrocentric perspective” (Internalization Afrocentricity item). Subscale scores are obtained by summing scores of the five items that make up each subscale and dividing by 5, resulting in average total scores ranging from 1 to 7, which parallel the rating anchors and are easily interpretable.

Subscale reliability estimates for the CRIS scores have ranged from .70 (PSH) to .89 (IEAW; Mdn = .82; Worrell & Watson, 2008). In the current study, the Cronbach’s alpha coefficients for the subscale scores ranged from .78 (IMCI) to .89 (PA). The six-factor structure has been supported in six independent samples using exploratory (e.g., Vandiver et al., 2001) and
confirmatory factor analyses (CFA). CFA fit indices have been above .90 and measures of misfit have been between .03 and .06 (Vandiver et al., 2002; Worrell & Watson, 2008). Convergent validity analyses with the Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997) have provided preliminary support for the construct validity of the CRIS scores, with correlations between subscales of the two measures ranging from |.30| to |.59|, with the strength of the relation varying based on the nuance of the theoretical construct (e.g., Multiculturalist Inclusive subscale of the CRIS correlated at .30 with Oppressed Minority subscale of the MIBI; Vandiver et al., 2002). CRIS scores had low correlations (|.01| to |.23|; Mdn = |.08|) with a social desirability measure and are distinct from one measure of the Big Five personality traits (|.01| to |.20|; Mdn = |.08|; Vandiver et al., 2002).

**Enculturation.** Preference for African American culture was measured using the African American Acculturation Scale–Revised (AAAS-R; Klonoff & Landrine, 2000), which is a 47-item scale that measures eight empirically derived dimensions of African American culture (Landrine & Klonoff, 1994). Responses to AAAS-R items are made on a 7-point Likert-type scale, ranging from 1 (*I totally disagree, not true at all*) to 7 (*I strongly agree, absolutely true*). Scoring the AAAS-R involves adding the participant’s ratings on all items to obtain the total AAAS-R score. High scores on the scale (agreement with items) reflect an embracement of a traditional Black cultural orientation, and low scores (disagreement with items) reflect low endorsement of traditional Black culture. Sample items from the AAAS-R are “Most of my friends are Black” (Preference for Things African American item), and “I don’t trust most White people” (Interracial Attitudes item).

Cronbach’s coefficient alpha estimates for the AAAS-R total scores have been reported to be .93 (total score) and .79 (split-half; Klonoff & Landrine, 2000). For the present study, the Cronbach’s alpha coefficient estimate for the total score was .89. Internal consistency reliability has ranged from .67 to .89 for the AAAS-R subscale scores (Klonoff & Landrine, 2000). Evidence for discriminant validity was based on group differences between African Americans and non-African Americans on the AAAS-R; African Americans reported a higher preference for African American culture than the other groups (Klonoff & Landrine, 2000).

**Social distance.** A modified Bogardus Social Distance Scale–Revised (Bogardus, 1933) was used to measure the social distance between participants and certain cultural groups. In the modified version, participants answered seven questions in relation to six different social groups for a total of 42 responses, as
opposed to the 40 ethnicities/races in the original version. The seven questions represent seven increasingly intimate social situations. Sample items are “Would you have someone from this group as a roommate?” and “Would you date someone who is from this group?” Participants had the choice to answer “yes” or “no” about their social relations with Latino/as, Asians, other Blacks (e.g., Africans or Caribbeans), Whites, Jews, and Gays and Lesbians. “No” responses are equal to 0 and “yes” responses equal 1. For any one social group, a participant’s social distance score could vary from 1 (would converse) to 7 (would establish a long-term intimate relationship). The BSDS-R yields a total score for various groups in terms of the social distance at which the participant would prefer to hold them (Miller, 1991). In general, the higher the score, the greater the measure of intimacy reflected by that participant to that particular cultural group.

Cronbach’s alphas for the BSDS-R scores ranged from .76 to .93 (e.g., Stewart, Weeks, & Lupfer, 2003). In this study, the Cronbach’s alpha coefficients ranged from .70 to .81. Split-half reliability coefficients have ranged from .94 to .97 (e.g., Hartley, 1952). Convergent validity analyses with the subscales of the Modern Racism Scale (McConahay, 1986) have provided preliminary support for the construct validity of the BSDS-R; correlations between scores on both instruments were in the appropriate directions ($r | .35|$, $p < .007$, two tailed; Stewart et al., 2003).

Data Analyses

Data management. Four sets of statistical analyses were conducted to test the three hypotheses. For Hypothesis 1, cluster analysis was conducted to create clusters of the CRIS scores. To aid in the interpretation of the identified cluster solution, a one-way multivariate analysis of variance (MANOVA), followed by post hoc analyses, was conducted, with cluster status as the grouping variable and the six CRIS subscale scores as the outcome variables. Although this process was somewhat redundant, using a MANOVA underscored the distinctions of the clusters, which made them more understandable for interpretation. For Hypotheses 2 and 3, two additional statistical analyses were conducted to test the expanded nigrescence theory by examining racial identity clusters in relation to enculturation (AAAS-R; one-way analysis of variance [ANOVA]) and the extent of social distance from various cultural groups (BSDS-R; a one-way MANOVA).

The original data set consisted of 360 participants but was reduced during cluster analysis, as 9 cases were identified by SAS as outliers when their
profile scores did not match any of the clusters and thus were not assigned cluster status, resulting in a sample size of 351 for the MANOVA. Examination of the 9 cases removed due to outlier status revealed no systematic pattern by sex or any other demographic variable for the participants’ extreme responses. Nine additional cases were removed due to missing data on the AAAS-R, resulting in a sample size of 342 for the ANOVAs. No discernible pattern (by cluster assignment, sex, or any other demographic variable) was found for those cases with missing AAAS-R data.

**Cluster analysis procedures.** Cluster analysis was used to identify racial identity clusters and was performed using SAS version 9.1 and the Multistage Euclidean Grouping (MEG; McDermott, 1998) cluster method, a comprehensive analytic strategy based on hierarchical agglomerative clustering techniques applying Euclidean distance scores and Ward’s minimum variance clustering (the same method used by Worrell et al., 2006).

First, CRIS subscales were standardized to $T$-scores ($M = 50, SD = 10$) through linear conversion. Standardizing the scores is recommended to offset the effect that Euclidean distance, the similarity method used in the MEG, has on raw scores (Blashfield & Aldenderfer, 1988; Hair, Black, Babin, Anderson, & Tatham, 2006), as it is sensitive to “magnitudes among the variables,” with larger values having “more impact on the final similarity value, particularly distance values” (Hair et al., 2006, p. 577). Another reason the scores were standardized was to aid interpretability and comparability to Worrell et al.’s (2006) clusters.

Next, participants’ CRIS data ($T$-scores for each CRIS subscale) were randomly assigned to three mutually exclusive and equivalent size blocks ($N = 360; n = 120$). First-stage cluster analyses were conducted independently for each of the three blocks. Cluster solutions at the various iterations were based on fusion statistics, which are formal tests that provide guidelines at each merge iteration to assist in identifying plausible cluster solutions. The fusion statistics applied were (a) pseudo-$F$ simultaneously elevated over the pseudo-$t$-squared statistic (Milligan & Cooper, 1988), (b) Mojena stopping criterion (i.e., when there is a significant jump in the pattern of coefficients thus signifying the need to stop clustering; Mojena, 1977), and (c) the increase in error variance statistic. Second-stage cluster analysis was used to determine (based on fusion statistics) whether the selected cluster solutions from first-stage analysis replicated consistently across each of the three blocks. Third-stage cluster analysis allowed for case relocation from one cluster to another to adjust for prior misassignments in earlier analyses and to optimize within-cluster homogeneity (McDermott, 1998).
Results

Descriptive Statistics

Means, standard deviations, correlation coefficients, and Cronbach’s alpha were calculated for the scores of CRIS subscales, AAAS-R, and BSDS-R subscales and are presented in Table 1. Cronbach’s alphas for all scores of the variables in this study were consistent with prior research. Two bivariate correlations between the CRIS subscales and AAAS-R scores met the a priori criteria ($p \leq .01; r \geq .30$). Participants who rated themselves higher on assimilation attitudes also deemed themselves as having less preference for African American culture ($r = -.32$). In contrast, participants who endorsed strong Afrocentric attitudes tended to view themselves as having greater preference for African American culture ($r = .36$). Two correlations between CRIS and BSDS-R subscale scores also met a priori criteria: Participants who endorsed strong anti-White attitudes also rated themselves as having more social distance from Whites ($r = -.37$) and Jews ($r = -.35$).

Replication of CRIS Cluster Patterns

Cluster analyses. First-stage clustering resulted in a six-cluster solution for Blocks 1 and 3, and a seven-cluster solution for Block 2. Second-stage clustering resulted in a six-cluster solution. Homogeneity statistics indicated the relative cohesion of variance within clusters, variables, and overall ($H = .64$). Initial cluster membership for the least-fit cases was reconsidered in third-stage clustering, and a single iteration relocation of cases was permitted based on the final cluster solution selected. Migrating of these cases to more appropriate clusters improved the homogeneity coefficient from .64 to .70. The mean homogeneity coefficient per variable across clusters ranged from .55 to .80, and the homogeneity coefficients per cluster across variables (on the relocated solution) were all above .62. Good replication rates were evident for each cluster, with Clusters 1 through 6 replicating 100%. Four alternate cluster solutions (five-, seven-, eight-, and nine-) were assessed by replicating the exploratory clustering techniques at the second and third stages. Subsequent homogeneity coefficients were lower and replicability rates did not improve; therefore, these solutions were ruled out as a viable option. Thus, the six-cluster solution was deemed most viable. To aid in delineating and labeling the cluster solution, a one-way MANOVA was conducted on the CRIS raw subscale scores, with cluster status as the grouping variable.

MANOVA. A one-way MANOVA was conducted to examine the pattern of mean differences of the CRIS subscale scores based on the cluster status
Table 1. Descriptive Statistics for the CRIS, AAAS-R Total Score, and BSDS-R Subscales

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</tr>
<tr>
<td>3. PSH</td>
<td>.12</td>
<td>.22</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4. IEAW</td>
<td>-.21</td>
<td>.10</td>
<td>.22</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5. IA</td>
<td>-.26</td>
<td>.11</td>
<td>-.01</td>
<td>.32*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. IMCI</td>
<td>.19</td>
<td>.12</td>
<td>.07</td>
<td>-.26</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. AAAS-R total</td>
<td>-.32*</td>
<td>.13</td>
<td>-.03</td>
<td>.25</td>
<td>.36*</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>8. Latinos</td>
<td>.04</td>
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<td>.01</td>
<td>-.12</td>
<td>-.01</td>
<td>.10</td>
<td>-.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Asians</td>
<td>.18</td>
<td>-.07</td>
<td>-.03</td>
<td>-.28</td>
<td>-.04</td>
<td>.20</td>
<td>-.24</td>
<td>.47</td>
<td></td>
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<td>10. Other Blacks</td>
<td>-.04</td>
<td>-.06</td>
<td>-.03</td>
<td>-.01</td>
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<td>-.01</td>
<td>.06</td>
<td>.23</td>
<td>.20</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11. Whites</td>
<td>.27</td>
<td>-.01</td>
<td>.04</td>
<td>-.37*</td>
<td>-.17</td>
<td>.29</td>
<td>-.32*</td>
<td>.39*</td>
<td>.66*</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Jews</td>
<td>.21</td>
<td>-.07</td>
<td>-.02</td>
<td>-.35*</td>
<td>-.20</td>
<td>.24</td>
<td>-.32*</td>
<td>.49*</td>
<td>.70*</td>
<td>.13</td>
<td>.76*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Gays/Lesbians</td>
<td>.14</td>
<td>-.02</td>
<td>.07</td>
<td>-.05</td>
<td>-.12</td>
<td>.18</td>
<td>-.01</td>
<td>.13</td>
<td>.14</td>
<td>.06</td>
<td>.21</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>2.98</td>
<td>3.40</td>
<td>2.09</td>
<td>1.61</td>
<td>3.07</td>
<td>5.82</td>
<td>4.40</td>
<td>6.53</td>
<td>5.23</td>
<td>6.90</td>
<td>5.67</td>
<td>5.06</td>
<td>2.01</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.58</td>
<td>1.24</td>
<td>1.26</td>
<td>0.91</td>
<td>1.25</td>
<td>0.94</td>
<td>0.81</td>
<td>1.09</td>
<td>1.90</td>
<td>0.41</td>
<td>1.71</td>
<td>1.89</td>
<td>2.10</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>0.89</td>
<td>0.80</td>
<td>0.88</td>
<td>0.88</td>
<td>0.87</td>
<td>0.78</td>
<td>0.89</td>
<td>0.76</td>
<td>0.81</td>
<td>0.70</td>
<td>0.78</td>
<td>0.80</td>
<td>0.72</td>
</tr>
</tbody>
</table>

*N* = 360 college students. CRIS subscales include PA = Pre-Encounter Assimilation; PM = Pre-Encounter Miseducation; PSH = Pre-Encounter Self-Hatred; IEAW = Immersion-Emersion Anti-White; IA = Internalization Afrocentric; IMCI = Internalization Multiculturalist Inclusive. AAAS-R total = total score for all AAAS-R subscales. BSDS-R subscales include Latinos, Asians, Other Blacks, Whites, Jews, and Gays and Lesbians. **M** = mean, **SD** = standard deviation. For interpretation purposes, the means and standard deviations have been converted to the ratings on the scale: 1 = strongly disagree to 7 = strongly agree for CRIS scores and AAAS-R.

*p < .01; r ≥ .30.*
identified through cluster analysis. Homogeneity of variance (Levene’s test) was violated for four of the six CRIS subscales (\( p < .05 \); PA, PSH, IEAW, and IA) as well as Box’s test of equality of covariances (\( p < .001 \)). As Box’s test is sensitive to large sample sizes, the logarithms of the group covariance matrix were checked and found to be within the same range (Huberty & Petoskey, 2000). The MANOVA was statistically significant on cluster status for the CRIS subscales, Wilks’s \( \lambda = .03 \), \( F(30, 1362) = 65.45, p < .001 \). To offset the violation of homogeneity of variance, the Welch’s \( F \) test, which adjusts for unequal variance, was conducted instead of the regular ANOVA (Field, 2009). All CRIS subscale scores were statistically significant on cluster status (\( p < .001 \); see Table 2). Effect sizes of the CRIS scores ranged from .22 to .62 (\( Mdn = .48 \); partial eta squared). Game-Howell post hoc analyses were conducted to mitigate the unequal sample size and violation of homogeneity of variance (Field, 2009). Although the analyses were initially conducted with raw scores, the findings are the same with the standardized \( T \)-scores.

The six-cluster solution was interpreted and clusters were named based on a synthesis of the following criteria: (a) the findings of the MANOVA, (b) the dispersion of scores around the \( T \)-score mean of 50, (c) the most prominent score, (d) the relative prominence of all other subscales, (e) the relative position of the cluster compared to other clusters, (f) the expanded nigrescence theory (Cross & Vandiver, 2001), and (g) Worrell et al.’s (2006) cluster descriptions. Figure 1 depicts how the six cluster patterns differed from each other by CRIS subscales.

**Cluster 1: Assimilated.** Cluster 1 was defined by an elevated \( T \)-score on assimilation (PA), almost 1.5 SD above the mean, and was statistically significant from the other clusters. PA is defined by a pro-American social identity, making race a secondary concern to the individual and in relating to others. Multiculturalist (IMCI), which reflected a comfort level in dealing with other cultural groups, was slightly elevated and differed from Clusters 4 (Intense Black Involvement) and 6 (Immersion). Miseducated (PM), which represented some degree of stereotyping and misunderstanding of African Americans, was also slightly elevated and differed from Clusters 3 (Multiculturalist), 4, and 6. The final distinguishing features of Cluster 1 were the low scores on Black self-hatred (PSH), anti-White (IEAW), and Afrocentric (IA) attitudes. The Cluster 1 pattern was statistically different from Cluster 2 (Self-Hating) on PSH, showing little discomfort about being Black, low anti-White sentiment in contrast to Clusters 4 and 6, and low Afrocentric ideology in contrast to Cluster 5 (Afrocentric). As a result, Cluster 1 was labeled *Assimilated* and consisted of 16.52% (\( n = 58 \)) of the participants.
Table 2. Summary of Game-Howell Post Hoc Analyses of CRIS Subscale Scores by Cluster Assignment

<table>
<thead>
<tr>
<th>CRIS Subscale</th>
<th>PA</th>
<th>PM</th>
<th>PSH</th>
<th>IEAW</th>
<th>IA</th>
<th>IMCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assimilated ( (n = 58) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>64.99</td>
<td>52.37</td>
<td>44.82</td>
<td>44.22</td>
<td>44.26</td>
<td>54.15</td>
</tr>
<tr>
<td>( SD )</td>
<td>6.82</td>
<td>10.24</td>
<td>4.98</td>
<td>2.12</td>
<td>8.97</td>
<td>7.78</td>
</tr>
<tr>
<td>Self-Hatred ( (n = 54) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>52.61</td>
<td>53.32</td>
<td>65.77</td>
<td>47.45</td>
<td>47.87</td>
<td>53.18</td>
</tr>
<tr>
<td>( SD )</td>
<td>8.85</td>
<td>9.07</td>
<td>7.72</td>
<td>5.96</td>
<td>7.72</td>
<td>9.37</td>
</tr>
<tr>
<td>Multiculturalist ( (n = 79) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>44.63</td>
<td>44.50</td>
<td>46.11</td>
<td>46.34</td>
<td>41.79</td>
<td>51.83</td>
</tr>
<tr>
<td>( SD )</td>
<td>5.51</td>
<td>7.73</td>
<td>4.97</td>
<td>3.90</td>
<td>4.99</td>
<td>6.63</td>
</tr>
<tr>
<td>Immersion-Intense Black Involvement ( (n = 43) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>44.92</td>
<td>43.38</td>
<td>44.68</td>
<td>52.64</td>
<td>53.79</td>
<td>33.71</td>
</tr>
<tr>
<td>( SD )</td>
<td>7.09</td>
<td>7.90</td>
<td>4.26</td>
<td>10.45</td>
<td>9.35</td>
<td>6.92</td>
</tr>
<tr>
<td>Afrocentric ( (n = 74) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>46.40</td>
<td>50.32</td>
<td>45.79</td>
<td>47.12</td>
<td>59.41</td>
<td>54.53</td>
</tr>
<tr>
<td>( SD )</td>
<td>6.07</td>
<td>8.96</td>
<td>5.01</td>
<td>4.90</td>
<td>6.42</td>
<td>6.19</td>
</tr>
<tr>
<td>Immersion ( (n = 43) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>47.27</td>
<td>57.37</td>
<td>53.72</td>
<td>65.30</td>
<td>55.67</td>
<td>47.71</td>
</tr>
<tr>
<td>( SD )</td>
<td>7.61</td>
<td>8.10</td>
<td>8.39</td>
<td>10.02</td>
<td>8.35</td>
<td>6.99</td>
</tr>
</tbody>
</table>

\( N = 351 \). CRIS = Cross Racial Identity Scale; PA = Pre-Encounter Assimilation; PM = Pre-Encounter Miseducation; PSH = Pre-Encounter Self-Hatred; IEAW = Immersion-Emersion Anti-White; IA = Internalization Afrocentricity; IMCI = Internalization Multicultural Inclusive. Similar subscripts indicate statistical significance between the clusters going down each column, with \( p \) values of less than .03 on all comparisons subscripted. Mean scores are \( T \)-scores, with a distribution \( M = 50 \) (\( SD = 10 \)). Significance pattern was the same with raw scores, and a summary table of raw mean scores is available upon request.

**Cluster 2: Self-Hating.** Cluster 2 was defined by a statistically significant elevation on self-hatred (PSH) in comparison to the other clusters, on average 1.5 \( SD \) from the \( T \)-score mean. Extreme discomfort in being Black was a pronounced feature of PSH. Its multicultural (IMCI) scores were no different from Clusters 1, 3, and 5. However, its assimilation (PA) scores were statistically different from Cluster 1 (Assimilated) and its miseducation score (PM) was statistically different from Clusters 3 and 4, but not from Clusters 1, 5, and 6. Like the Assimilated cluster, it was defined by a low score on anti-White (IEAW) sentiments and low preference for an Afrocentric (IA)
Figure 1. Six CRIS cluster patterns identified using cluster analysis; comparison of CRIS cluster patterns by subscale

N = 351. Same shade is indicative of a specific cluster. Measurement is mean differences from average T-score of 50 (SD = 10). Scores above 0 mean higher preference for a racial attitude and scores below 0 mean lower preference for a racial attitude. CRIS = Cross Racial Identity Scale; PA = Pre-Encounter Assimilation; PM = Pre-Encounter Miseducation; PSH = Pre-Encounter Self-Hatred; IEAW = Immersion-Emersion Anti-White; IA = Internalization Afrocentric; IMCI = Internalization Multiculturalist Inclusive.

ideology. As a result, Cluster 2 was labeled Self-Hating with 15.38% (n = 54) of the participants having this cluster pattern.

Cluster 3: Multiculturalist. Cluster 3 was defined by a consistently low pattern of scores on all the CRIS scores, except with a positive elevation on multiculturalist (IMCI; M = 52). Other clusters showed similar low scores on some of the CRIS scales, but not on most of them. There was low preference for an American attitude, and a low level of stereotyping of other Blacks, of hating being Black, of having anti-White sentiment, and of holding an Afrocentric mindset. However, exhibited was an acknowledgment of building coalitions with other culturally diverse groups—Whites, Asians, Latinos, Gays and Lesbians, and so on. In essence, Cluster 3 appeared to have a pro-Black identity while also being comfortable in relating to others from diverse backgrounds, which was no different from Clusters 1, 2, and 5. Cluster 3 was labeled Multiculturalist and was the most prevalent cluster pattern (22.51%; n = 79) in this sample of participants.
**Cluster 4: Intense Black Involvement.** The cardinal feature of Cluster 4 was its low score on having a multicultural attitude (IMCI) in contrast to the other clusters. There was a modest elevation on an Afrocentric (IA) attitude, which was statistically lower than Cluster 5 (Afrocentric) but statistically higher than other clusters (Clusters 1–Assimilated, 2–Self-Hating, and 3–Multiculturalist) but not Cluster 6 (Immersion). Furthermore, it had a modest elevation on anti-White (IEAW), which was statistically lower than Cluster 6 but statistically higher than the other clusters. In keeping with the elevated Afrocentric attitude, Cluster 4 had a low level of hating being Black (PSH) and of feeling miseducated (PM) about being Black and a low assimilation (PA) score. This pattern seemed to reflect a transitional attitude from Pre-Encounter attitudes to Internalization attitudes. Cluster 4 was labeled **Intense Black Involvement** and 12.25% \((n = 43)\) of the participants had this cluster pattern.

**Cluster 5: Afrocentric.** The Afrocentric cluster was defined by three scores in contrast to Clusters 4 (Intense Black Involvement) and 6 (Immersion). It had a prominent elevation on Afrocentric (IA) attitudes, which was no different from Cluster 6 but statistically different from the other clusters, including Cluster 4. It was statistically different from Clusters 4 and 6 on multicultural (IMCI) and anti-White (IEAW) attitudes, with a slight elevation on IMCI and a low IEAW mean. Cluster 5 also had low scores on the Pre-Encounter scales (PA, PM, and PSH), showing no preference for a pro-American attitude, reporting no feelings of being miseducated about Blacks, or having feelings of Black self-hatred. In comparison to other cluster patterns, Cluster 5 had the highest elevations on both of the Internalization subscales. Cluster 5 was labeled **Afrocentric** and consisted of 21.08% \((n = 74)\) of the participants.

**Cluster 6: Immersion.** The defining feature of Cluster 6 was the elevation on anti-White sentiments (IEAW), which was statistically higher than the other clusters. Furthermore, the cluster was defined by having an Afrocentric (IA) attitude, which was no different from Clusters 4 (Intense Black Involvement) and 5 (Afrocentric) but statistically different from the other three clusters. A low multicultural attitude (IMCI) was also characteristic of this cluster, statistically lower than all the other clusters except Cluster 4, which was statistically lower than this cluster on IMCI. This pattern was also defined by slight elevations on Black miseducation (PM) and self-hatred (PSH) but a low elevation on assimilation (PA). The cluster seemed to reflect being in the midst of dealing with being Black, focusing outwardly on anti-White sentiment (and low preference for being assimilated), and internalizing a pro-Black perspective and trying to reconcile stereotypical beliefs about Black people and Black self-hatred. Cluster 6 was labeled **Immersion** with 12.25% \((n = 43)\) of the participants having this cluster pattern.
Cluster patterns & demographic features. The cluster patterns were examined for differences based on demographic features: gender, education levels, perceived family social class status, and age. Two-way contingency tables revealed no statistically significant differences between the clusters on the four demographics listed above. Furthermore, a one-way ANOVA revealed that the clusters were not statistically different on average age. Thus, differences in the racial identity cluster patterns were not systematically defined by such demographic features as gender, education level, age, and perceived social class status.

Testing Expanded Nigrescence Theory

Enculturation. A one-way ANOVA was used to test whether the racial identity cluster patterns had statistically significant differences on reported levels of enculturation (AAAS-R scores). Homogeneity of variance was supported (Levene’s test $p = .26$). There was a statistically significant effect of racial identity cluster patterns on AAAS-R total scores, $F(5, 336) = 6.43, p = .001; \eta^2 = .09$. Tukey’s HSD post hoc test was used to compare mean differences across groups.

On average, individuals who were classified in the Assimilated cluster ($M = 4.06$) rated themselves as having less preference for African American culture than those who were in the Afrocentric cluster ($M = 4.70; p = .001; \eta^2 = .06$) or Intense Black Involvement cluster ($M = 4.68; p < .01; \eta^2 = .04$). Those who were classified in the Self-Hating cluster ($M = 4.19$) on average rated themselves as having less preference for African American culture than those who were in the Afrocentric cluster ($p < .01; \eta^2 = .04$). The cluster patterns of Immersion ($M = 4.50$) and Multiculturalist ($M = 4.31$) were not statistically different from any of the other cluster patterns on preference for African American culture (see Table 3).

Social distance. A one-way MANOVA was used to investigate whether racial identity cluster patterns had a statistically significant difference on the linear composite of six social distance indicators for cultural groups (i.e., Asians, Latinos, Other Blacks, Whites, Jews, and Gays and Lesbians). The assumptions of a MANOVA were met with the exception of the homogeneity of variance-covariance matrices (Box’s test of equality of covariance matrices was significant, $p = .001$). This violation was probably due to disproportional cell sizes but was considered robust because logarithms of the covariance matrix were within the same range (Huberty & Petoskey, 2000).

The MANOVA on the six BSDS-R variables was statistically significant for cluster patterns, Wilks’s $\lambda = .74$, $F(30, 1254) = 3.26, p < .001$. A descriptive
Table 3. Summary of Tukey’s HSD Post Hoc Analyses of a One-Way Analysis of Variance: Means and Standard Deviations for the AAAS-R by CRIS Cluster Status

<table>
<thead>
<tr>
<th>Cluster Status</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assimilated</td>
<td>57</td>
<td>4.06&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>.95</td>
</tr>
<tr>
<td>Self-Hatred</td>
<td>52</td>
<td>4.19&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.78</td>
</tr>
<tr>
<td>Multiculturalist</td>
<td>76</td>
<td>4.31</td>
<td>.74</td>
</tr>
<tr>
<td>Immersion</td>
<td>42</td>
<td>4.50</td>
<td>.76</td>
</tr>
<tr>
<td>Afrocentric</td>
<td>73</td>
<td>4.70&lt;sup&gt;a,c&lt;/sup&gt;</td>
<td>.72</td>
</tr>
<tr>
<td>Intense Black Involvement</td>
<td>42</td>
<td>4.68&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.71</td>
</tr>
<tr>
<td>Total</td>
<td>342</td>
<td>4.40</td>
<td>.81</td>
</tr>
</tbody>
</table>

N = 342. Mean and standard deviation scores are based on the Likert-type rating values of the AAAS-R scale: 1 (strongly disagree) to 7 (strongly agree). Superscripted letters denote statistically significant differences (p < .01) between CRIS clusters on AAAS-R scores. AAAS-R = African American Acculturation Scale–Revised; CRIS = Cross Racial Identity Scale.

discriminant analysis (DDA) was conducted to determine how the clusters differed on the linear composite, with cluster patterns now the outcome variable and the six BSDS-R scores the discriminating variable. Of the five discriminant functions to emerge, only the first one accounted for more than 10% of the variance (R<sup>c1</sup><sup>2</sup> = .18). Based on the dimension reduction analysis, only the first variate was statistically significant (p = .001), with p values for the subsequent functions greater than .01.

Based on the standardized function coefficients, social distance toward Whites contributed the most to Function 1, followed by social distance with Other Blacks and Asians (see Table 4). The discriminant structure coefficients indicated that social distance from Whites shared approximately 80% of its variance to the function, followed by social distance from Jews (34%) and Asians (15%). In contrast, Other Blacks had a negligible and negative correlation to the function. Thus, this function was named Perceived Preference for Mainstream Cultural Groups because of its inclusion of certain cultural groups (i.e., Whites, Jews, and Asians) that are either the numerical majority group or perceived as part of or functioning like the mainstream group on predominately White college campuses and the exclusion of other cultural groups (i.e., Other Blacks, Latinos, and Gays and Lesbians) that are the numerical minority group and perceived, treated, or deemed as socially marginalized on predominately White college campuses.
Table 4. Standardized Function Coefficients and Structure Coefficients of the BSDS-R Subscales for the Six CRIS Clusters

<table>
<thead>
<tr>
<th>BSDS-R</th>
<th>Function 1</th>
<th>Function 2</th>
<th>Function 3</th>
<th>Function 4</th>
<th>Function 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$s$</td>
<td>$B$</td>
<td>$s$</td>
<td>$B$</td>
</tr>
<tr>
<td>Latinos</td>
<td>$-0.14$</td>
<td>$0.09$</td>
<td>$-0.08$</td>
<td>$0.15$</td>
<td>$0.39$</td>
</tr>
<tr>
<td>Asians</td>
<td>$-0.26$</td>
<td>$0.39$</td>
<td>$0.10$</td>
<td>$0.22$</td>
<td>$-0.22$</td>
</tr>
<tr>
<td>Other Blacks</td>
<td>$-0.28$</td>
<td>$-0.18$</td>
<td>$0.49$</td>
<td>$0.51$</td>
<td>$0.52$</td>
</tr>
<tr>
<td>Whites</td>
<td>$1.20$</td>
<td>$0.90$</td>
<td>$-0.20$</td>
<td>$0.15$</td>
<td>$-0.23$</td>
</tr>
<tr>
<td>Jews</td>
<td>$-0.06$</td>
<td>$0.58$</td>
<td>$0.08$</td>
<td>$0.27$</td>
<td>$0.81$</td>
</tr>
<tr>
<td>Gays/Lesbians</td>
<td>$0.07$</td>
<td>$0.22$</td>
<td>$0.86$</td>
<td>$0.87$</td>
<td>$-0.53$</td>
</tr>
</tbody>
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$R_{c1}^2 = .18$  $R_{c2}^2 = .05$  $R_{c3}^2 = .03$  $R_{c4}^2 = .02$  $R_{c5}^2 = .003$

$N = 351$. Statistically significant function is bolded. BSDS-R = Bogardus Social Distance Scale–Revised; CRIS = Cross Racial Identity Scale; $B =$ standardized coefficient; $s =$ structure coefficient.
On average, individuals in the Self-Hating and Assimilated clusters rated themselves higher (Group Centroid = .58 and .57, respectively) on Perceived Preference for Mainstream Cultural Groups, indicating a preference for social closeness with Whites, Jews, and Asians, whereas individuals in the Afrocentric, Immersion, and Intense Black Involvement clusters rated themselves lower (Group Centroid = -.20, -.29, and -.82, respectively), preferring social distance from these cultural groups. The Multiculturalist cluster fell in the middle (Group Centroid = .01), showing no preference in being socially close or distant from Whites, Jews, and Asians. Figure 2 provides a visual depiction of the CRIS cluster patterns on the function.

Discussion
The purpose of this study was twofold: (a) to extend nigrescence research by determining whether racial identity patterns identified through cluster analysis
replicated the previous cluster patterns found by Worrell et al. (2006), and (b) to test the expanded nigrescence theory (Cross & Vandiver, 2001) by determining whether the racial identity cluster patterns differentially associated with two pertinent psychological and sociocultural variables (i.e., enculturation and social distance) in accordance with the theory. All hypotheses were supported.

**Replication of CRIS Cluster Patterns**

Six cluster patterns emerged from the cluster analyses, with four replicating the findings from Worrell et al.’s (2006) Predominately White Institution samples: Assimilated, Immersion, Afrocentric, and Multiculturalist. Two clusters identified by Worrell et al. (2006) in the PWI samples did not replicate in the current study: Miseducated Variant and Low Race Salience. However, two new clusters labeled Self-Hating and Intense Black Involvement emerged. Finding the same four clusters as Worrell et al. (2006) provides additional empirical support for the stability of these clusters. Thus, there may be consistent racial identity patterns in the population, especially in a college population of African Americans, an assumption that underlies much of the research on racial identity to date (Carter, 1996; Cross & Vandiver, 2001; Helms, 1995; Neville & Lily, 2000; Worrell et al., 2006) and as stated in the expanded nigrescence theory (Cross & Vandiver, 2001). In addition, these cluster patterns provide evidence that individuals can hold multiple racial identity attitudes simultaneously and to varying degrees across the thematic categories (i.e., Pre-Encounter, Immersion-Emersion, and Internalization), as stated in the expanded nigrescence theory.

Discovering two new clusters (Self-Hating and Intense Black Involvement) potentially extends the understanding of Black racial identity by offering additional cluster patterns that are congruent with the expanded nigrescence theory. In developing the CRIS and ultimately updating the expanded nigrescence theory, Cross and colleagues (Cross & Vandiver, 2001; Vandiver et al., 2001) reported the creation of several new racial identity attitudes, one being Pre-Encounter Self-Hatred (PSH). In the previous conceptualization of the theory (Cross, 1991), PSH was confounded with Miseducation and identified as Anti-Black; however, empirical findings during scale development appeared to reflect separate identities and ultimately these attitudes were teased apart (Vandiver et al., 2001). In the current study, the Self-Hatred profile was characterized by extreme discomfort in being Black, not by elevated Miseducation attitudes, thus providing support for the revision to the expanded nigrescence theory that these are in fact separate attitudes. In
addition, the CRIS initially contained a subscale to tap Immersion-Emersion Intense Black Involvement (IEIBI); however, the subscale was removed from the scale because of its high intercorrelations with Immersion-Emersion Anti-White and Internalization Afrocentric subscales. In essence, it was not possible to delineate the construct of Intense Black Involvement (IBI) from some of the other CRIS subscales. The other subscales aligned as expected when IEIBI was removed from the scale (Vandiver et al., 2001). Thus, to identify a cluster reflecting this racial identity attitude provides support for the expanded nigrescence theory in that this IBI cluster pattern captures the theoretical description of Intense Black Involvement although these attitudes could not be captured in a single subscale but instead required consideration of multiple attitudes across various thematic categories.

The instability of some of the clusters may be due to a number of reasons. One, sampling differences such as maturation, age, geographic location, and identity development might affect the existence and prevalence of clusters. Two, a plethora of Black racial identity types exists; the CRIS taps six identity types as exemplars of this spectrum (Cross & Vandiver, 2001). Thus, it is most likely that some of the complexities of racial identity remain untapped by the CRIS. And three, some cluster patterns (e.g., Assimilated) may be more common in the population than others (e.g., Afrocentric).

Testing Expanded Nigrescence Theory

Enculturation. Some of the racial identity cluster patterns were found to be differentially associated with African American enculturation, as suggested in the expanded nigrescence theory. Individuals with Afrocentric and Intense Black Involvement cluster patterns reported higher levels of enculturation in African American culture than those assigned to the Assimilated cluster pattern. However, Afrocentric and Intense Black Involvement did not differ on level of enculturation. Individuals with a Self-Hating cluster pattern reported lower levels of enculturation than those assigned to the Afrocentric cluster pattern. Yet, the Assimilated and the Self-Hating clusters did not differ on levels of enculturation. These results correspond with the implied relation between racial identity and enculturation in the expanded nigrescence theory, where Pre-Encounter is described as having low or negative race salience, and Afrocentric and Intense Black Involvement are described as pro-Black with a primary orientation toward Black culture and the Black community (Cross & Vandiver, 2001).

In addition, these results support and extend the findings of Cokley and Helm (2007), who used a similar measure of enculturation and found that the
CRIS scales of assimilation and self-hatred negatively predicted enculturation, whereas the CRIS scales of anti-White and Afrocentric positively predicted enculturation. The findings in the current study underscore the sharp contrasts that exist between different cluster patterns (Assimilated and Self-Hating vs. Afrocentric and Intense Black Involvement), while at the same time emphasizing the nuanced differences that may exist between similarly themed clusters (e.g., Assimilated vs. Self-Hating). For example, the Assimilated cluster is marked by a pro-American stance (elevation on PA) with little consideration given to race and a low score on anti-White (IEAW) sentiments. Thus, racial enculturation would not be of primary importance to these individuals. Other sociopolitical issues (e.g., religion, political beliefs, or socioeconomic status) may carry more weight; thus, some contextual issues may prohibit or inhibit the ability of an individual to join with the African American community. Similarly, the Self-Hating cluster is defined by an elevated score on Self-Hatred (PSH), an indication of negative feelings about being Black. Preference for African American culture would be low because one’s Blackness is the cause of great self-loathing. In contrast to these two Pre-Encounter clusters, the Intense Black Involvement and Afrocentric clusters are marked by elevations on Afrocentricity (IA) and low levels of assimilation and self-hatred; such a combination is indicative of a preference for African American culture. However, these two clusters differ on the degree of multiculturalist (IMCI) attitudes, a low endorsement by Intense Black Involvement, and a moderate elevation by the Afrocentric. As highlighted, some psychological variables may discriminate to some extent on broad differences between clusters whereas other variables, such as social affiliation, may delineate the more subtle nuances between clusters. Enculturation appears to fall into the former category, but not the latter.

Although the effect size (9%) between enculturation and racial identity cluster patterns is considered to be of medium strength (Cohen, 1988), there is still a large proportion of variance unaccounted for between the variables. Possible explanations for the lack of a stronger relation between enculturation and racial identity are the nature of the constructs and their measurement. Theoretically, enculturation and racial identity do not reflect the same construct (Landrine & Klonoff, 1994). Thus, overlap between the constructs will be most obvious where race salience is most delineated, as found between Assimilated (low race salience) and Afrocentric (high race salience). Differences in enculturation will not be as obvious in racial identity patterns where other aspects of race are of equal importance, such as Immersion (high race salience—anti-White) and Multiculturalist (salience of multiple identities). It is possible that the constructs may be more closely aligned, but the
specificity of their measurement may influence tapping the subtle similarities between the two.

Social distance. Racial identity cluster patterns were found to be differentially associated with preference for social distance from various cultural groups as suggested in the expanded nigrescence theory. Racial identity clusters were differentially associated on Perceived Preference for Mainstream Cultural Groups, the function identified through descriptive discriminant analysis. This function was named because of its inclusion of certain cultural groups (e.g., Whites and Asians) that are perceived as part of or functioning like the mainstream group on predominately White college campuses and its exclusion of other cultural groups (e.g., Latinos and Gays and Lesbians) that are perceived as socially marginalized on predominately White college campuses (Thornton & Taylor, 1988). The function name may be considered as reinforcing stereotypes, such as the model minority, about Asian Americans. Although stereotypes are not accurate representations of groups, most people, regardless of race, do stereotype both in- and out-groups (Gilbert & Hixon, 1991).

Research findings (Thornton & Taylor, 1988; Wong, Lai, Nagasawa, & Lin, 1998) and national survey reports (Pew Research Center, 2010) indicate that varying degrees of perceived social distance and closeness exist between African Americans and other cultural groups. Thornton and Taylor (1988) found that African Americans, in general, did not feel close to Asian Americans. Ten years later, Wong et al. (1998) found that Asian Americans on a predominately White campus were stereotyped by all racial groups of students, including Asian Americans, as being more motivated, prepared for college, and likely to have future career success. Even now, racial/ethnic groups still differ in their perceptions. The Pew Research Center (2010) found, a year after President Obama’s election, that African Americans and White Americans perceived discrimination differently, with approximately 43% of African Americans believing there was a lot of “anti-Black discrimination” versus about 13% of Whites agreeing. More White Americans (23%) saw Latinos as targets of discrimination. Furthermore, both African Americans (55%) and Whites (45%) viewed gays and lesbians as facing a lot of discrimination. In contrast, Pew reported that “fewer Americans see a lot of discrimination” for Whites (10%) and Asian Americans (8%). Our findings fit within the context of race relations and perceptions that have spanned almost 20 years. However, the difference between the studies reported and our study is in the measurement of race, as a racial designation versus social identity, which underscores the heterogeneity within the Black race.

Our social distance findings are also consistent with the expanded nigrescence theory (Cross & Vandiver, 2001): (a) Individuals in the Multiculturalist
cluster did not have a preference for one cultural group over another; (b) individuals in the clusters of Immersion, Intense Black Involvement, and Afrocentric preferred to be socially distant from perceived mainstream cultural groups; and (c) Pre-Encounter clusters (Assimilated and Self-Hating) preferred to be socially close to the majority culture. Individuals with an Immersion or Intense Black Involvement pattern are characterized by strong endorsement of pro-Black attitudes and anti-White sentiments and a strong under-endorsement of multiculturalism. Individuals with an Afrocentric cluster pattern are characterized by strong endorsement of pro-Black attitudes, a slight endorsement of multicultural attitudes, and low anti-White attitudes. These findings are consistent with those of Townes, Chavez-Korell, and Cunningham (2009), where individuals with strong anti-White and Afrocentric attitudes preferred Black counselors, in that preference for a Black counselor may be influenced by social distance attitudes toward the majority culture (i.e., Immersion and Intense Black Involvement cluster patterns) and/or preference for social closeness with other Black people (i.e., Afrocentric cluster pattern).

Finally, Assimilated individuals have a strong reference group orientation to the American identity—social groups representing mainstream culture. Individuals in the Self-Hating cluster are likely to prefer more social closeness with mainstream culture due to negative feelings and beliefs about their own Blackness. These findings again are consistent with those found by Townes et al. (2009): Individuals with assimilated attitudes did not prefer Black counselors, showing instead a preference for social closeness with perceived mainstream culture.

**Limitations**

The generalizability of the findings is limited, as the sample of participants was not randomly selected and was composed of Black college students attending a predominately White institution in the mid-Atlantic region of the United States. This sample may not be reflective of Black students attending historically Black colleges, small colleges, or private universities across other geographic regions of the country. Similarly, the findings cannot be generalized to community populations. Sample size is another limitation in regards to the stability of CRIS cluster patterns. Although the number of cases per block in the cluster analysis (120 cases) exceeded the minimum criterion of 100 cases, it is recommended that blocks contain between 150 and 300 cases (McDermott, 1998). Thus, the stability of the clusters found in the current study cannot be assured and further research is needed on clustering
the CRIS scores with larger sample sizes ($N > 500$) to determine whether the clusters found are supported.

**Implications & Further Research**

The findings obtained in this study are a first step in establishing the usefulness of the CRIS cluster patterns in testing the expanded nigrescence theory and examining the clusters’ relationships to external variables to better understand the role of racial identity in the lives of African Americans. If consistent cluster patterns like these can be established, the results could have important implications for clinical work and within- and across-group race relations. For example, studies (e.g., Townes et al., 2009) have provided support for the link between racial identity attitudes and Black individuals’ counselor preference. What role does social distance have in the interaction of racial identity patterns between client and counselor? This linkage is speculative until more research is conducted to connect racial identity with psychological variables directly applicable to counseling. However, if supported, these results could help counselors better understand how racial identity attitudes influence intergroup and intragroup relations and may in turn be helpful for counseling psychologists in understanding their clients’ behavior, facilitating group dialogues, and offering consultation for various groups and work environments.

In addition, the use of CRIS cluster patterns for African American clients has the potential to improve treatment planning by clinicians and thus improve the quality of services rendered to clients. Although the stability of CRIS cluster patterns continues to be established, support for the existence of cluster patterns across samples is growing. Based on the CRIS cluster patterns found in this study and by Worrell et al. (2006), a clinician could use clients’ CRIS scores to get a general sense of their cluster pattern. The examination of Black racial identity in this multidimensional way highlights the complexity of racial identity and may result in a more accurate understanding of the client’s presenting concerns and psychosocial experience. The use of CRIS cluster profiles could potentially guide counseling psychologists in making the appropriate cultural adaptations needed for clients of various worldviews and Black identities to help ensure retention in counseling and improve counseling outcomes. For example, cultural adaptations to clinical interventions for an Afrocentric client might include more race-specific interventions and dialogue than a clinical intervention with an Assimilated client. Further research could focus on examining the need for cultural
modifications to evidence-based treatments or other clinical interventions based on clients’ CRIS cluster profiles.

The results of this study contribute to the growing body of research on Black racial identity and its relation to psychological and sociocultural aspects of functioning, such as enculturation and social distance. However, future replication of this study and other CRIS cluster studies (Worrell et al., 2006) is necessary to provide support for the existence and stability of these racial identity clusters and the expanded nigrescence theory. In addition, demographic variables such as age and socioeconomic status, and community samples as opposed to college student samples, should be addressed to determine whether the CRIS cluster patterns found in this study replicate across demographics and whether the prevalence is similar. Further examination of the CRIS cluster patterns could be expanded to examine other variables (e.g., achievement, cultural mistrust, and help-seeking) as a means of increasing the usefulness of racial identity and its potential influences on mental health and counseling outcomes.

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Note
1. While this article was under review, Whittaker and Neville (2010) identified a five-cluster solution (i.e., Low Race Salience, Multiculturalist, Self-Hating, Immersion, and Afrocentric) using cluster analysis of CRIS scores. For an in-depth review of these CRIS cluster solutions, see Whittaker and Neville (2010).

References


Bios

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