The Role of Threats in the Racial Attitudes of Blacks and Whites

Walter G. Stephan
New Mexico State University

Kurt A. Boniecki
University of Central Arkansas

Oscar Ybarra
University of Michigan

Ann Bettencourt
University of Missouri

Kelly S. Ervin
Washington State University

Linda A. Jackson
Michigan State University

Penny S. McNatt
University of Florida

C. Lausanne Renfro
New Mexico State University

This study employed the integrated threat theory of intergroup attitudes to examine the attitudes of Black and White students toward the other racial group. This theory synthesizes previous research on the relationships of threats to intergroup attitudes. Structural equation modeling revealed that for both racial groups, realistic threats, symbolic threats, and intergroup anxiety predicted attitudes toward the other group. To varying degrees, the effects of negative contact, strength of ingroup identity, perceptions of intergroup conflict, perceived status inequality, and negative stereotyping on negative racial attitudes were mediated by the three threat variables. The model accounted for more variance in the negative attitudes of Whites toward Blacks than in the negative attitudes of Blacks toward Whites. The implications of these findings are discussed.

American society remains divided by race.[1] Over the course of the past half century, we have learned a great deal about the origins of these divisions. However, much of what we have learned has been concerned with the relations of the dominant group to minority groups, especially Whites' attitudes toward and relations with Blacks. Much less is known about the causes of attitudes and behaviors of minority group members toward the majority group (Shelton, 2000). For example, consider the major social psychological models of prejudice. Most of these models are better suited to understanding White than Black racial attitudes.

Theories of symbolic racism, modern racism, aversive racism, ambivalence-response amplification, compunction, and social dominance are all primarily concerned with the attitudes of dominant groups toward subordinate groups (Devine, Monteith, Zuwerink, & Elliot, 1991; Dovidio & Gaertner, 1998; Gaertner & Dovidio, 1986; Katz, Wackenhut, & Glass, 1988; McConahay, 1986; Sears, 1988, 1998; Sidanius & Pratto, 1999). Similarly, most personality theories of prejudice also have focused primarily on the attitudes of dominant group members (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950;

Altemeier, 1981; Crocker, Thompson, McGraw, & Ingerman, 1987; Dollard, Doob, Miller, Mowrer, & Sears, 1939; Dunbar, 1995; Ehrlich, 1973; Rubin, 1967). Societal explanations of prejudice have likewise tended to focus on members of dominant groups. For instance, realistic group conflict theory, socialization theories, Marxist theories, and theories of internal colonialism focus primarily on dominant groups (Blauner, 1972; Bobo, 1983; Cox, 1948; Fairchild & Gurin, 1978; George, 1984; LeVine & Campbell, 1972; Quillian, 1995).

It is understandable that social scientists have been more interested in the attitudes of dominant groups because the negative attitudes and behaviors of dominant group members have had devastating effects on minority communities (Hacker, 1992; Jones, 1997). Nevertheless, understanding the attitudes of minority group members is also important, yet they have rarely been studied (Shelton, 2000). For instance, Blacks' attitudes toward Whites may affect their behavior toward Whites. Blacks who dislike Whites may avoid them in social settings, discriminate against them if the opportunity arises, express hostility toward them, vote against them, and refuse to live or work with them. Blacks' attitudes also may influence the responses of Whites to Blacks. Outward expressions of negative racial attitudes by Blacks may lead Whites to fear them and may be used by Whites as a justification to avoid Blacks and discriminate against them. A comprehensive understanding of the dynamics of racial attitudes requires an understanding of the attitudes of both Whites and Blacks.

The emphasis of social psychological, personality, and societal models of prejudice on the attitudes of dominant groups does not mean that researchers have completely ignored the attitudes of Blacks toward Whites. However, most of this research has employed survey designs that yielded descriptive data with scant attention devoted to articulating theories of racial attitudes (e.g., Brigham, 1993; Ellison & Powers, 1996; Schuman, Steeh, & Bobo, 1985; Williams, 1964). More recently, a small number of studies have employed theoretical approaches to the racial attitudes of minority groups (Bobo & Hutchings, 1996; Monteith & Spicer, 2000; Shelton, 2000). One model of intergroup attitudes that may be as applicable to Blacks as it is to Whites is the integrated threat theory (W. G. Stephan & Stephan, 2000). Although this theory is restricted to a consideration of the role of threats as a cause of intergroup attitudes, it can be used to explain attitudes of minority groups as well as attitudes of the majority group. Integrated threat theory holds that the same threats that create negative attitudes toward minority groups also should create negative attitudes toward majority groups. Testing this idea was the goal of this study. The integrated threat theory was used as a framework to examine the attitudes of Black college students toward Whites and White college students toward Blacks.

The integrated threat theory brings together a variety of theoretical perspectives that have been employed to understand the role of threats in causing intergroup attitudes. The underlying thread that connects these theoretical perspectives is the idea that members of an ingroup expect outgroup members to behave in ways that are detrimental to ingroup members. The theory focuses on four types of threats: realistic threats, symbolic threats, threats stemming from intergroup anxiety, and threats arising from negative stereotypes.

The idea that realistic threats can cause prejudice is a fundamental premise of realistic group conflict theories (Bobo, 1988; Coser, 1956; LeVine & Campbell, 1972; Sherif, 1966). According to LeVine and Campbell (1972), "real threat causes hostility to the source of the threat" (p. 30). Realistic threats refer to threats to the very existence of the ingroup (e.g., through warfare), threats to the political and economic power of the ingroup, and threats to the physical or material well-being of the ingroup (e.g., their health). It is clear that both majority and minority groups may perceive that the other group poses real threats to their welfare.

Symbolic threats involve perceived group differences in morals, values, standards, beliefs, and attitudes. Adorno and his colleagues (1950) captured the essence of this threat when they wrote, "the feeling of difference is transformed into a sense of threat and an attitude of hostility" (p. 149). Symbolic threats are those that jeopardize the worldview of the ingroup. These threats arise, in part, because the ingroup believes in the moral correctness of its system of values. Allport (1954) was referring to symbolic threats when he wrote, "in a deep sense, we are the values that we hold, we cannot help but defend them with pride and affection, rejecting every group that opposes them" (p. 74). Minority groups would be expected to respond to symbolic threats in much the same way as majority groups (Feagin, 1989). The concept of symbolic threats in the integrated threat theory is conceptually kin to the idea of symbolic and modern racism (Kinder & Sears, 1981; McConahay, 1986; Sears, 1988).

The concept of intergroup anxiety refers to feelings of threat people experience during intergroup interactions because people are concerned about negative outcomes for the self, such as being embarrassed, rejected, or ridiculed (W. G. Stephan & Stephan, 1985). The idea that anxiety has negative effects on intergroup relations appears in several theories (Dovidio & Gaertner, 1998; Gudykunst, 1995). For instance, aversive racism theory suggests that unacknowledged negative affect toward African Americans is one of the essential components of White racism (the other component being egalitarian

values). According to this theory, negative affect involves "discomfort, uneasiness, disgust and sometimes fear" (Gaertner & Dovidio, 1986, p. 63). However, the concept of intergroup anxiety differs from the negative affect in aversive racism theory because aversive racism does not lead to overt expressions of negative attitudes, whereas intergroup anxiety does. Minority group members are also likely to experience intergroup anxiety because they too may fear negative outcomes from intergroup interaction.

Negative outgroup stereotypes can create feelings of threat among ingroup members when these stereotypes serve as a basis for negative expectations concerning outgroup members (Hamilton, Sherman, & Ruvolo, 1990). For instance, when outgroup members are stereotyped as aggressive, untrustworthy, or unintelligent, ingroup members may feel threatened by the prospect of interacting with them. In support of the idea that the negative traits attributed to outgroups are a source of threat, Allen (1996) found that the traits attributed by Blacks and Whites to the other group were rated by objective judges as creating more anxiety than were the traits attributed to the racial ingroup. Both Blacks and Whites hold at least some negative stereotypes of the other group (Brigham, 1993; Krueger, 1996; Monteith & Spicer, 2000; W. G. Stephan & Rosenfield, 1982), and thus, for both groups, it would be expected that outgroup stereotypes would be associated with negative racial attitudes.

Conceptualizing negative stereotypes as threats has proven to be the most controversial aspect of the integrated threat theory. One objection is that rather than constituting a type of threat themselves, negative stereotypes lead to feelings of threat. It has been suggested that negative stereotypes cause perceived realistic threats, perceptions of value differences, and heightened anxiety concerning social interaction and that the effects of negative stereotypes on attitudes are mediated by these threats. In the current study, structural equation modeling is used to test the original conception of negative stereotypes as a type of threat that is directly linked to negative racial attitudes and the alternative notion that negative stereotypes are an antecedent variable whose effects on negative racial attitudes are mediated by realistic threats, symbolic threats, and intergroup anxiety.

Integrated threat theory also argues that a number of other variables may influence the likelihood that people will feel threatened by outgroup members (W. G. Stephan & Stephan, 2000). Because their group identities serve such important functions (e.g., self-esteem, status, social support), people who strongly identify with their ingroups are likely to be attuned to threats from outgroups. In addition, negative contact with the outgroup should increase feelings of threat. The greater the frequency of negative contacts (e.g., disagreements, fights, losing team efforts, unpleasant intergroup interactions), the more the outgroup is likely to be perceived as a threat. Similarly, the greater the history of intergroup conflict, the more threatened members of both groups are likely to feel. Finally, perceived status inequalities between groups probably increase the salience of the threats posed by the outgroup.

Research has generally supported the links between the threats posited by the integrated threat theory and attitudes toward outgroups (Britt, Boniecki, Vescio, Biernat, & Brown, 1996; Corenblum & Stephan, 2001; Eagly & Mladinic, 1989; Esses, Jackson, & Armstrong, 1998; Islam & Hewstone, 1993; Stangor, Sullivan, & Ford, 1991; C. W. Stephan, Stephan, Demitrakis, Yamada, & Clason, 2000; W. G. Stephan, Diaz-Loving, & Duran, 2000; W. G. Stephan, Ybarra, & Bachman, 1999; W. G. Stephan, Ybarra, Martinez, Schwarzwald, & Tur-Kaspa, 1998). In particular, several studies have applied the model to the attitudes of low power or minority groups, providing some justification for applying the model to Blacks' attitudes toward Whites (C. W. Stephan et al., 2000; W. G. Stephan et al., 2000) However, there has been considerably less research on the antecedents of perceived threats.

The current exploratory study uses structural equation modeling to examine Black and White students' attitudes toward the other group. It was hypothesized that realistic threats, symbolic threats, intergroup anxiety, and negative stereotypes would predict negative racial attitudes and that the effects of negative outgroup contact, strength of ingroup identification, perceptions of intergroup conflict, and perceived status inequalities on racial attitudes would be mediated by these threats. An additional model was tested in which negative stereotypes were treated as an antecedent variable rather than as a mediator.

METHODS

Participants

Participants were recruited from six universities, including Washington State University (N = 175; women = 86, men = 89; Blacks = 91, M age = 18.9; and Whites = 84, M age = 18.5), the University of North Carolina at Greensboro combined with data from North Carolina Agricultural and Technical State University (N = 283; women = 189, men = 94; Blacks = 98, M age = 19.2; and Whites = 185, M age = 18.7), Michigan State University (N = 173; women = 110, men = 63; Blacks = 77, M age = 21.6; and Whites = 96, M age = 18.9), the University of Florida (N = 183; women = 122, men = 61; Blacks = 91, M age = 18.4; and Whites = 91, M age = 18.2), and the University of Missouri (N = 197, women = 130, men = 67;

Blacks = 15, *M* age = 18.6; and Whites = 102, *M* age = 18.2). These institutions were selected to obtain samples from different regions of the United States.

With only a limited number of exceptions, the participants were students in psychology classes (at one school they were students in comparative American culture classes) who received course credit for participating in this study. A small percentage were paid for their participation. They completed the questionnaire in monocultural groups of varying sizes, although at one school they answered the questionnaires at home. Again, with few exceptions, the questionnaires were administered to participants by research assistants of the same race. The measures are available from the first author upon request.

Measures

Negative racial attitudes. The measure of negative racial attitudes employed in this study has been used in a number of previous studies (W. G. Stephan et al., 1998, 1999). It was designed to reflect negative affect associated with outgroups (W. G. Stephan & Stephan, 1993). The participants were asked to indicate the degree to which they felt 12 different evaluative or emotional reactions toward Whites (Blacks) on a 10-point scale ranging from 0 (*no _____ at all*) to 9 (*extreme _____*). The evaluations and emotions included hostility, admiration, dislike, acceptance, superiority, affection, disdain, approval, hatred, sympathy, rejection, and warmth. For this measure, and all of the other measures, the same items were used for both Blacks and Whites. Items were reverse-scored when necessary to create an index reflecting the negativity of attitudes toward the racial outgroup. Cronbach's alphas were .87 for the Black sample and .91 for the White sample.

Realistic threats. Realistic threats were assessed by a measure consisting of 12 items that focused on political and economic threats. Two sample items are as follows: "Whites (Blacks) have too many positions of power and responsibility in this country" and "Whites (Blacks) have more economic power than they deserve in this country." The response format consisted of a 10-point Likert-type scale that ran from *strongly disagree* to *strongly agree.* Cronbach's alphas were .95 for the Black sample and .93 for the White sample. For each of the threat measures, high scores indicate greater perceived threat.

Symbolic threats. To capture the threats posed by perceived differences in values and beliefs between Blacks and Whites, a measure that consisted of 12 items was developed. Two sample items are as follows: " Blacks and Whites have different family values" and "The values of Blacks (Whites) regarding work are different from those of Whites (Blacks)." The items were rated on a 10-point Likert-type scale that ran from *strongly disagree* to *strongly agree.* Cronbach's alphas were .87 for the Black sample and .89 for the White sample.

Intergroup anxiety. The measure of intergroup anxiety was a modified version of the intergroup anxiety scale developed by W. G. Stephan and Stephan (1985). It consisted of 12 items that asked participants how they would feel when interacting with members of the other racial group. The anxiety-related terms used were as follows: uncertain, worried, awkward, anxious, threatened, nervous, comfortable, trusting, friendly, confident, safe, and at ease. The response format for these items employed a 10-point scale ranging from *not at all* to *extremely.* Items were reverse-scored where necessary and then averaged to form the intergroup anxiety measure. Cronbach's alphas were .83 for the Black sample and .92 for the White sample.

Negative stereotype index. To assess stereotypes, a measure developed by W. G. Stephan and Stephan (1993) was employed (cf. Eagly & Mladinic, 1989; Esses, Haddock, & Zanna, 1993). Participants were asked to indicate the percentage of members of the other racial group who possessed each of 12 traits. The traits were selected from previous research that had shown them to be associated with these groups (W. G. Stephan & Rosenfield, 1982). The response format consisted of a 10-point scale ranging from 0% to 100% in 10% increments. The traits included were as follows: hard working, unintelligent, arrogant, aggressive, modest, athletic, ambitious, untrustworthy, insincere, materialistic, loud, and clannish. In addition to providing the percentage estimates for each trait, participants rated the favorableness of each trait on a 10-point scale ranging from *very favorable* to *very unfavorable.* For each trait, the percentage estimate and the favorability rating were multiplied and the resulting figures were summed across traits to create a summary stereotype/evaluation index reflecting the negativity of the stereotype. Thus, for this index, positive numbers indicate more negative stereotypes. Cronbach's alphas were .57 for the Black sample and .64 for the White sample. Although these alphas are not as high as would be desirable, it should be noted that it is not unusual for the alphas of multiplicative indices to be somewhat low because they are limited by the reliabilities of both measures contributing to the composite index.

To determine if the items in the four threat measures could be conceptually distinguished from one another, a separate sample of majority and minority group students (*N* = 39) was asked to rate the items in these measures on the definitional criteria for all four threats. Each item was tested to determine if it was rated higher on the definitional criteria for that threat (e.g., realistic threat:

TABLE 1:   Means for Blacks and Whites on all Summary Indices

	Blacks (n = 452)	Whites (n = 559)	F(1, 1,009)	Cohen's d[a]
Negative racial attitudes	3.88 (1.58)	2.71 (1.45)	150.76*	0.78
Realistic threats	5.73 (2.00)	2.00 (1.58)	1,096.87*	2.10
Symbolic threats	6.22 (1.60)	3.28 (1.61)	839.74*	1.83
Intergroup anxiety	2.96 (1.42)	2.76 (1.56)	4.23*	0.13
Negative stereotypes	4.10 (6.25)	1.20 (5.58)	60.52*	0.49
Negative contact	2.41 (1.53)	2.07 (1.46)	13.31*	0.23
Ingroup identification	6.29 (1.88)	4.01 (2.07)	327.02*	1.15
Intergroup conflict	6.64 (1.68)	5.46 (1.58)	130.61*	0.72
Status differences	7.31 (1.63)	5.80 (1.75)	198.51*	0.89

NOTE: Values in parentheses are standard deviations. All measures employed 10-point scales except negative stereotypes, which potentially could vary from −50 to +50.
a. $d = .20$ is small, $d = .50$ is medium, and $d = .80$ is large (Rosenthal & Rosnow, 1991).
*$p < .05$.

issues or problems related to group differences in economic resources or political power) than on the definitional criteria for the other three threats. All of the items in the threat measures were rated significantly (45 items, $p < .05$) or marginally significantly (1 item, $p < .10$) higher on the relevant threat than for the other threats, with two exceptions: one realistic threat item and one stereotype item. Although these analyses do not establish the discriminant validity of the threat measures, they do indicate that the four threats are conceptually distinct.

Negative contact. To measure negative contact a measure modeled on one developed by C. W. Stephan et al. (2000) was employed. The participants were asked to indicate the frequency with which they had experienced a wide range of negative experiences at the hands of members of the other racial group. Examples of these negative experiences include being insulted, being discriminated against, being harassed, being verbally abused, being threatened, and being physically harmed. There were 14 items in this scale. The response options ran from *never* to *very frequently* and employed a 10-point format. Cronbach's alphas were .94 for the Black sample and .95 for the White sample.

Identification with the ingroup. A four-item scale developed by Luhtanen and Crocker (1992) was used to measure identification with the ingroup. Two items from this scale are as follows: "In general, my racial/ethnic group is an important part of my self-image" and "My racial/ethnic group is unimportant to my sense of what kind of person I am" (reverse-scored). The response format was a 10-point Likert-type scale running from *strongly disagree* to *strongly agree*. Cronbach's alphas were .64 for the Black sample and .76 for the White sample.

Perceived intergroup conflict. This measure employed four items, each rated on a 10-point Likert-type scale ranging from *strongly disagree* to *strongly agree*. Two sample items are as follows: "Relations between Blacks and Whites have always been characterized by conflict" and "Although sometimes it is not visible, there is a racial battle going on in this country." Cronbach's alphas were .71 for the Black sample and .68 for the White sample.

Perceived status differences. Perceptions of status differences between Blacks and Whites were measured with three items using the same 10-point Likert scale employed for the other items. Two sample items are as follows: "There is a great difference between the status of Blacks and Whites in this society" and "The differences in status, wealth, and power between Blacks and Whites in this country are decreasing" (reverse-scored). Cronbach's alphas were .79 for the Black sample and .77 for the White sample.

RESULTS

Differences Between Blacks and Whites

Table 1 presents one-way ANOVAS for the mean differences between the two groups on all of the measures included in this study. The Black students provided significantly higher ratings on all of the measures than did the White students. Table 1 also presents Cohen's *d*, a measure of effect size, for each comparison. As can be seen, Blacks scored very much higher than Whites on the measures of realistic threats, symbolic threats, and ingroup identification. Blacks scored considerably higher than Whites on the measures of negative racial attitudes, negative stereotypes, intergroup conflict, and status differences. Although significant, the difference between Blacks' and Whites' reports of intergroup anxiety and negative contact was relatively small.

Structural Equation Analyses

The primary analyses in this study were a set of structural equation analyses employing the AMOS structural equation modeling software, Version 3.6. In the present

TABLE 2: The Correlation and Covariance Matrix for all Summary Indices

	1	2	3	4	5	6	7	8	9
1. Negative racial attitudes		.49* (1.33)	.52* (1.14)	.50* (1.02)	.22* (1.85)	.40* (0.82)	.26* (0.72)	.30* (0.70)	.19* (0.41)
2. Realistic threats	.66* (1.34)		.69* (1.85)	.30* (0.75)	.24* (2.53)	.39* (0.95)	.30* (1.02)	.28* (0.80)	.37* (1.00)
3. Symbolic threats	.64* (1.36)	.70* (1.60)		.27* (0.54)	.22* (1.81)	.34* (0.66)	.31* (0.83)	.40* (0.91)	.35* (0.76)
4. Intergroup anxiety	.68* (1.42)	.48* (1.07)	.51* (1.19)		.19* (1.47)	.41* (0.73)	.12* (0.30)	.16* (0.33)	.14* (0.29)
5. Negative stereotypes	.57* (4.15)	.49* (3.86)	.52* (4.23)	.50* (4.00)		.16* (1.25)	.05 (0.53)	.14* (1.21)	.09 (0.75)
6. Negative contact	.48* (0.92)	.49* (1.01)	.45* (0.98)	.47* (1.00)	.37* (2.74)		.13* (0.33)	.11* (0.24)	.17* (0.35)
7. Ingroup identification	.38* (1.07)	.29* (0.86)	.31* (0.97)	.29* (0.90)	.14* (1.49)	.19* (0.55)		.27* (0.78)	.20* (0.55)
8. Intergroup conflict	.35* (0.76)	.34* (0.77)	.43* (1.04)	.34* (0.79)	.26* (2.18)	.24* (0.53)	.12* (0.38)		.47* (1.08)
9. Status differences	.14* (0.34)	.10* (0.26)	.22* (0.57)	.23* (0.58)	.12* (1.06)	.14* (0.34)	−.01 (−0.05)	.34* (0.90)	

NOTE: The correlations and covariances for the Black sample are above the diagonal and the correlations and covariances for the White sample are below the diagonal. Numbers in parentheses are the covariances.
*p < .05.

study, estimates were derived using the maximum likelihood procedure. Because maximum likelihood estimates are not robust against the presence of outliers and violations of normality, the data were examined for these problems. Twenty-three participants were identified in the Black sample and 13 participants in the White sample as outliers because their univariate or multivariate scores had less than a .001 probability of occurring in a normally distributed population (Tabachnick & Fidell, 2001). Because the number of outliers was relatively small (5.1% of the Black sample, 2.3% of the White sample), they were removed from the remaining analyses.[2] After removing the outliers, each summary index was examined for evidence of excessive skew or kurtosis. It was found that each summary index for both the Black and White samples did not differ from normality beyond acceptable limits (Kline, 1998).

Prior to running the structural equation analyses, the correlations among the variables were obtained. These correlations are shown in Table 2, separately for the Black and White samples. Table 2 also presents the covariance matrices for the Black and White samples used as input for the structural equation models. It should be noted that, with one exception, the correlations among the four threat measures were quite modest, indicating that they were measuring different constructs. The one exception was that realistic and symbolic threats were highly correlated in both samples (r = .69, p < .001 for Blacks, and r = .70, p < .001 for Whites). However, because the realistic threat items and the symbolic threat items were the only items of the four threat measures to use the same Likert scale, this correlation may be somewhat inflated due to shared method variance. As a result, the error terms associated with the realistic and symbolic threat measures were allowed to covary in each model to take into account any shared method variance.[3]

Based on the original integrated threat theory, the first model (hereafter referred to as the original model) proposed that the threat variables (realistic threats, symbolic threats, intergroup anxiety, and negative stereotypes) mediate the relationship between the antecedent variables (negative contact, strength of ingroup identity, perceived intergroup conflict, and perceived status differences) and negative racial attitudes. That is, each threat variable was allowed to predict negative racial attitudes and each antecedent variable was allowed to predict each threat variable and negative racial attitudes. Based on the alternative integrated threat theory discussed in the introduction, the second model (the revised model) proposed that negative stereotypes serve as a source of threat rather than as a threat variable itself. Thus, the revised model was the same as the original model except that the measure of negative stereotypes was considered to be an antecedent variable. In the revised model, each of the three remaining threat variables (realistic threats, symbolic threats, and intergroup anxiety) was allowed to predict negative racial attitudes, and each of the five antecedent variables, including the negative stereotype index, was allowed to predict each of the threat variables and negative racial attitudes.

Because it was proposed that a single model could account for the negative racial attitudes of both Blacks and Whites, multigroup structural equation analyses of the two theory-based models (the original and revised models) were conducted in which the covariance matrices for Blacks and Whites were simultaneously estimated. In a multigroup structural equation analysis, the specified relationships among the variables of a model (i.e., the path coefficients) are constrained to be equal across groups (i.e., group invariant) and the fit of the model to the covariance matrices of both groups is assessed. Differences between the groups can be explored by "freeing" those relationships (i.e., allowing

TABLE 3:   Structural Equation Fit Indices

	df	χ^2	χ^2/df	*GFI*	*TLI*
Original model					
A. All paths group invariant	34	310.95*	9.15	.931	.793
B. No paths group invariant	10	226.83*	22.68	.947	.450
C. Nonsignificant paths group invariant	28	255.91*	9.14	.941	.793
Revised model					
A. All paths group invariant	27	138.02*	5.11	.969	.896
B. No paths group invariant	4	22.44*	5.61	.995	.883
C. Nonsignificant paths group invariant	19	45.94*	2.42	.990	.964

NOTE: GFI = goodness-of-fit index, TLI = Tucker-Lewis index.
*p < .05.

the path coefficients to differ between groups) and again assessing the fit of the model to the covariance matrices of both groups.

The multigroup structural equation analyses assessed the fit of three versions of each model. The first version (Original Model A and Revised Model A) tested whether the path coefficients were the same for Blacks and Whites by restricting all path coefficients (i.e., regression weights) to be equal across samples (all paths group invariant). The second version (Original Model B and Revised Model B) allowed all the path coefficients to differ between the two samples (no paths group invariant). Last, the third version (Original Model C and Revised Model C) proposed a compromise between the first two versions by constraining only path coefficients that were not significantly different ($ps > .05$) between samples to be equal (nonsignificant paths group invariant). Original Model C allowed six paths to vary between samples—the paths from realistic threat, symbolic threat, and negative stereotypes to negative racial attitudes, the path from negative contact to negative stereotypes, the path from ingroup identification to intergroup anxiety, and the path from status differences to realistic threat. Revised Model C allowed eight paths to vary between samples—the paths from realistic threat and symbolic threat to negative racial attitudes, the paths from negative stereotypes to negative racial attitudes; realistic threat, symbolic threat, and intergroup anxiety; the path from ingroup identification to intergroup anxiety; and the path from status differences to realistic threat.

To assess the fit of each model, three generally accepted measures of fit (see Jöreskog & Sörbom, 1988; Kline, 1998; Stevens, 1996): the chi-square (χ^2) statistic, the goodness-of-fit index (GFI), and the Tucker-Lewis index (TLI) were examined. The chi-square tests the null hypothesis that the model and the data do not differ, with lower values indicating a better fit (Jöreskog & Sörbom, 1988). To interpret the chi-square, Kline (1998) suggests dividing it by the degrees of freedom in the model. Models with ratios less than three are considered a good fit. The GFI reflects the proportion of the total variance and covariance accounted for by the model. Similarly, the TLI assesses the proportion of variance and covariance accounted for by the model but relative to the null model (i.e., the model proposing no relationship among the variables). Furthermore, because more complex models tend to fit better, the TLI also adjusts for model complexity. Thus, all things being equal, the TLI gives an advantage to more parsimonious models. GFI and TLI values greater than .90 indicate a good fit (Kline, 1998; Stevens, 1996).

As can be seen in Table 3, Revised Model C, which constrained only nonsignificant path coefficients to be group invariant, was the only model to meet the criteria of good fit for all three fit indices. Revised Model C fit the data significantly better than Revised Model A, which constrained all path coefficients to be group invariant, $\chi^2(8, N = 975) = 92.08, p < .05$. Furthermore, Revised Model B, which allowed all path coefficients to vary between samples, did not significantly improve fit over Revised Model C, $\chi^2(15, N = 975) = 23.50, p > .05.$[4] Thus, of the models investigated, Revised Model C, in which only the nonsignificant paths were group invariant, fit the data the best. Therefore, this model was examined in more detail. Overall, Revised Model C accounted for 41% of the variance in Blacks' attitudes toward Whites and 65% of the variance in Whites' attitudes toward Blacks. For the Black sample, Revised Model C also accounted for 27% of the realistic threat variance, 29% of the symbolic threat variance, and 19% of the intergroup anxiety variance. For the White sample, Revised Model C accounted 42% of the realistic threat variance, 46% of the symbolic threat variance, and 41% of the intergroup anxiety variance. The path coefficients are presented in Figure 1 for the Black sample and Figure 2 for the White sample.

For both samples, the three original threat variables remaining in the model were all significantly related to negative racial attitudes. Intergroup anxiety had the strongest relationship for both Blacks and Whites, followed by symbolic threat for Blacks and realistic threat for Whites. Symbolic threat was a significantly stronger
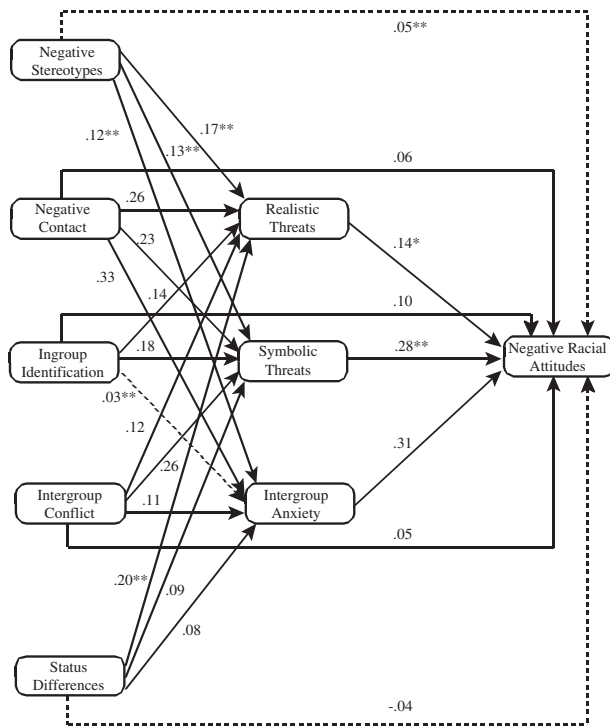
Figure 1   Path diagram of Revised Model C (nonsignificant paths group invariant) for the Black students' negative racial attitudes toward Whites.
NOTE: Path coefficients are standardized regression weights. Path coefficients displayed with solid lines are significant, *p* < .05. Path coefficients displayed with dotted lines are nonsignificant. Coefficients with a single asterisk are marginally significantly different between samples, *p* < .10. Coefficients with two asterisks are significantly different between the two samples, *p* < .05.

Figure 2   Path diagram of Revised Model C (nonsignificant paths group invariant) for the White students' negative racial attitudes toward Blacks.
NOTE: Path coefficients are standardized regression weights. Path coefficients displayed with solid lines are significant, *p* < .05. Path coefficients displayed with dotted lines are nonsignificant. Coefficients with a single asterisk are marginally significantly different between samples, *p* < .10. Coefficients with two asterisks are significantly different between the two samples, *p* < .05.

predictor of negative racial attitudes in the Black sample than in the White sample (*p* < .05). Conversely, realistic threat was a stronger predictor of negative racial attitudes in the White sample than in the Black sample, although this difference was only marginally significant (*p* < .10). The mediational role proposed for these threats in the alternative integrated threat model also received considerable support from the data, with only minor differences between Blacks and Whites. For both samples, realistic threats, symbolic threats, and intergroup anxiety significantly mediated the relationship between all five antecedent variables and negative racial attitudes, with only two exceptions. The first exception was that Blacks' intergroup anxiety did not significantly mediate the relationship between ingroup identification and their attitudes toward Whites. The second exception was that Whites' feelings of realistic threat did not significantly mediate the relationship between status differences and their attitudes toward Blacks.
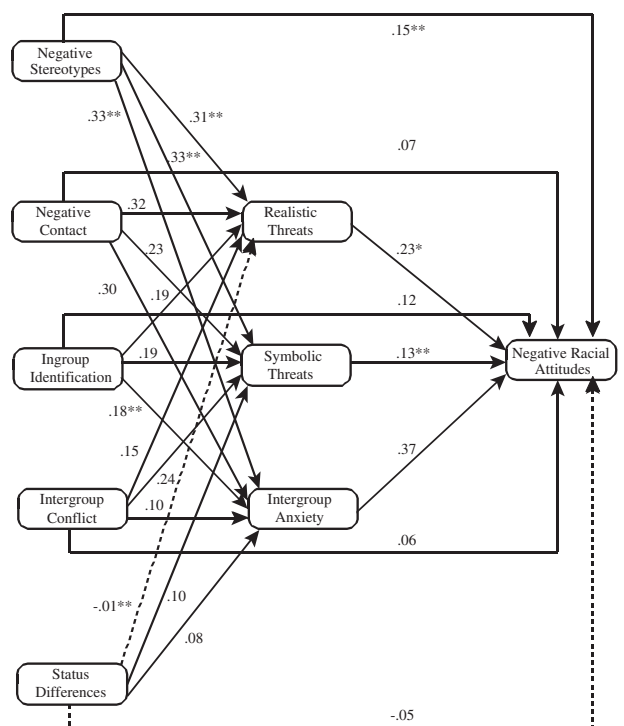
A notable difference between the Black and White samples was the role of negative stereotypes. Although negative stereotypes significantly predicted all three threat variables for both samples, negative stereotypes were a significantly stronger predictor in the White sample than in the Black sample (*p*s < .05). Furthermore, a significant direct effect between negative stereotypes and negative racial attitudes remained in the White sample but not in the Black sample. All other direct effects were similar in both samples. For both samples, negative contact, ingroup identification, and intergroup conflict significantly predicted negative racial attitudes, whereas status differences did not.

DISCUSSION

Responses from a large sample of geographically distributed Black and White students provide strong support for an alternative version of the model posited in the integrated threat theory of intergroup atti-

tudes (W. G. Stephan & Stephan, 2000). Three of the threats identified by this theory (realistic threats, symbolic threats, and intergroup anxiety) predicted Blacks' and Whites' attitudes toward the other group. Moreover, the influence of a second set of theoretically relevant antecedent variables (intergroup contact, identification with the ingroup, perceived intergroup contact, inequality, and negative stereotypes) on negative racial attitudes was mediated by these three threats. Perceptions of these threats and their antecedents accounted for a substantial proportion of the variance in the negative racial attitudes of both Black and White students.

Descriptive Results

The descriptive results revealed that the Black students scored higher than the White students on all of the measures included in this study. Although response biases could account for these differences, the magnitude of the majority of these differences suggests that they are meaningful. If so, the results suggest that the White students may have been reluctant to express negative attitudes toward Blacks and that the White students perceived relations between the groups in more favorable terms than did the Black students. Of course, Blacks have many reasons to think that Whites are a greater threat to them than vice versa, despite media presentations that often suggest it is Whites who feel threatened by Blacks. The White students may have been less aware of the conflict and status differences than the Black students. Alternatively, the White students may have been motivated to downplay intergroup conflict and status differences to reduce guilt feelings that might be aroused by regarding Blacks as being disadvantaged and their own group as the cause of these problems (Swim & Miller, 1999).

Similarities in the Results for Blacks and Whites

This study found that feelings of threat play a major role in attitudes between Blacks and Whites. The results of the best fitting structural equation model for Blacks and Whites were remarkably similar. In both groups, all three threats were significant predictors of negative racial attitudes and all three threats mediated the relationships between negative stereotypes, negative contact, intergroup conflict, and negative racial attitudes. In addition, realistic and symbolic threats mediated the relationship between ingroup identification and negative racial attitudes, whereas symbolic threats and intergroup anxiety mediated the relationship between perceived status differences and negative racial attitudes. Moreover, with one exception (negative stereotypes in the Black sample), the direct effects of the antecedent variables were very similar in the Black and White samples).

The Threats as Predictors

The strongest predictor in both groups was intergroup anxiety. In this study, as well as in others (W. G. Stephan & Stephan, 2000), fear of interaction with members of another group was associated with disliking the outgroup. Intergroup anxiety is the most self-interested of the threats in the integrated threat theory. Perhaps it should come as no surprise that for young people who function in integrated environments, anxiety concerning outgroup interaction should play a more prominent role in predicting negative racial attitudes than realistic or symbolic threats, which concern threats to the ingroup as a whole. Nonetheless, in both racial groups, realistic and symbolic threats did predict negative racial attitudes.

Of interest, realistic threats were a somewhat stronger predictor in the White than the Black sample, whereas symbolic threats were a stronger predictor in the Black than the White sample. Members of the White majority who felt that Blacks posed a threat to their power and wealth disliked them. Policies such as affirmative action have made the realistic threats posed by Blacks a highly salient issue for some Whites. This link may be weaker for Black students because even those Blacks who did not emphasize the realistic threats posed by Whites may still dislike Whites.

The Black students who strongly felt that Whites threatened the distinctive aspects of Black culture did appear to base their attitudes on these perceived symbolic threats. The reason may be that Blacks, unlike Whites, feel pressure to assimilate to the dominant culture and these pressures may lead to antagonism toward Whites. As the between-groups analyses indicated, Whites were less concerned with the possibility that Blacks threaten their value and belief systems than vice versa, and this decreased salience may have reduced the magnitude of the relationship between symbolic threats and negative racial attitudes among White students.

The Antecedents of Threat

The most powerful of the antecedent variables was negative contact. The greater the negative contact that Black and White students had with members of the other group, the more realistic threats, symbolic threats, and intergroup anxiety they reported. In addition, in both samples, negative contact was directly related to negative racial attitudes, although the magnitude of these relationships was not as strong as the relationships between negative contact and threats. To the extent that these relationships are causal ones, the findings suggest that negative experiences with members of the other racial group have a strong indirect effect on negative racial attitudes that is mediated by feelings of threat. These findings amount to evidence for a reverse contact hypothe-

sis. Although contact under positive conditions can improve intergroup relations (Allport, 1954; Pettigrew & Tropp, 2000; W. G. Stephan & Stephan, 1996), contact under negative conditions can have deleterious effects on intergroup relations.

Identification with the ingroup was related to all three threats in the White sample but only to realistic and symbolic threats in the Black sample. Whites and Blacks who strongly identify with their ingroups probably have a clear conception of the ingroup's values because they contrast these values to those held by relevant outgroups. These social comparisons are likely to lead to heightened perceptions of differences in values that favor the ingroup, as would be suggested by social identity theory (e.g., Brown, 1995; Tajfel & Turner, 1979). Whites and Blacks who strongly identify with their ingroups are also likely to be concerned with the preservation of the ingroup. This concern, in turn, may focus attention on threats to the ingroup's economic well-being and political power posed by the other group. It also was found that strength of ingroup identity was related to intergroup anxiety among White students but not among Black students. One reason may be that strong identification as White is probably related to sharpened racial distinctions and a heightened awareness of being White, which may lead such Whites to be particularly concerned about interracial interactions. Blacks may have to worry about interactions with Whites, regardless of the degree to which they identify with Blacks. For both groups, strong ingroup identity also was directly related to negative attitudes toward the other group, which may be a product of heightened ingroup bias among these individuals.

A perceived history of intergroup conflict was related to all three threats in both groups. For the Blacks and Whites who are most acutely aware of the history of conflict between these groups, one salient dimension of that conflict probably consists of concerns over competition for economic and political resources. A second salient dimension may be a belief that there are still fundamental differences between the groups in values, beliefs, and norms. Perceptions of conflict in the past also were related to intergroup anxiety for both Blacks and Whites, for obvious reasons.

Perceptions of inequality were related to symbolic threats and intergroup anxiety in both groups. For symbolic threats, the reason may be that perceiving large differences in status may lead people to believe that there are corresponding differences in values and beliefs. For intergroup anxiety, the perception of disparities in economic wealth and political power may lead people to anticipate that they will encounter difficulties when interacting with people who are so different from them. Perceptions of inequality were more strongly linked to

realistic threats for Blacks than for Whites. In this study, Blacks were more acutely aware of the disparities in wealth and power between the two groups than were Whites and the salience of these disparities may have led Blacks to be particularly attuned to the economic and political threats posed by Whites.

The effects of stereotypes on negative racial attitudes were more strongly mediated by all three threats (realistic, symbolic, and intergroup anxiety) in the White sample than in the Black sample. This difference may exist because negative stereotypes of Blacks commonly appear in the media and are often linked to Whites' apprehensions regarding the threats Blacks pose to their power, privileges, and perceived prerogatives. Thus, for Whites who negatively stereotype Blacks, these stereotypes readily activate their fears and concerns regarding Blacks. In addition, negative stereotypes directly predicted the negative racial attitudes of Whites but not of Blacks. This relationship may arise because stereotypes of Blacks have come to be closely associated with negative attitudes toward Blacks as a consequence of our society's long history of stereotyping Blacks. The findings for negative stereotypes suggest that a modification of the integrated threat theory may be in order. The relationship of negative stereotypes and negative racial attitudes may be mediated by perceived threats, although in some cases (e.g., the majority group in this study) there may also be a direct relationship between negative stereotypes and attitudes, as predicted by the original theory.

Comparing the Overall Results for Blacks and Whites

One of the most noteworthy findings of this study is that the variables in the model accounted for more variance in Whites' attitudes toward Blacks than in Blacks' attitudes toward Whites. For Blacks, factors in addition to threat may contribute to their attitudes toward Whites. The experience of being the target of prejudice, racism, discrimination, and oppression may influence the way that the dominant group is perceived in a way that cannot occur for Whites. The cultural origins of Blacks and the history of race relations in the United States also may have shaped how Blacks perceive Whites. For example, Shelton (2000) argues that Blacks' attitudes toward Whites are influenced by cultural values such as collectivism and familism (Gaines et al., 1997). In a related vein, the values embodied in the Protestant ethic play an important role in the attitudes of Whites toward Blacks (Katz & Hass, 1988) but may not play such an important role in the attitudes of Blacks toward Whites (Monteith & Spicer, 2000). Other factors that may play a role in the attitudes of Blacks toward Whites include relative deprivation (Runciman, 1966; Vanneman & Pettigrew, 1972), feelings of injustice (Leung & Stephan, 2001; Tyler, Boeckmann, Smith, &

Huo, 1997), and responses to being stigmatized (Major, Quinton, McCoy, & Schmader, 2000).

The finding that the model accounted for more variance among members of the dominant group than among members of the less powerful group parallels findings obtained in Canada for attitudes between Anglo-Canadians and Native Canadians (Corenblum & Stephan, 2001) and for attitudes between Americans and Mexicans (W. G. Stephan et al., 2000). It is possible that dominant groups are concerned with losing their power and having their values challenged, whereas less powerful groups have already paid a price for the threats posed by the majority group. In a sense, low power groups may have less to lose, having already been dispossessed of so much.

Methodological Limitations

It must be borne in mind that the results of the structural equation models are correlational. Undoubtedly most, if not all, of the causal relations among the variables in the integrated threat theory are reciprocal in nature to a greater or lesser degree. For example, although it is argued here that negative stereotypes can cause negative racial attitudes, there is research to suggest that the opposite direction of causality is also plausible (Boniecki & Brown, 1998). Other theorists have argued that one or another of the causal relations posited by the integrated threat theory run in the direction opposite from that specified by the theory (Bobo & Hutchings, 1996; Duckitt & Mphuthing, 1998; Watts, 1996). Even where the causal nature of the relationship between threats and prejudice has been established by experimental studies (e.g., Branscombe & Wann, 1994; Esses et al., 1998; Esses, Jackson, Nolan, & Armstrong, in press; Maio, Esses, & Bell, 1994), it does not rule out the existence of the opposite causal relationship. It also should be noted, of course, that "third" variables potentially pose an alternative to any of the explanations that have been offered.

CONCLUSIONS

The central finding of this study is that perceptions of threat play an important role in predicting negative racial attitudes. Black and White students who believe that the other group poses economic and political threats to their group, challenges central values and beliefs of their group, and who are anxious about interacting with members of the other group tend to have the most negative attitudes toward the other group. These perceptions of threat are greatest for Blacks and Whites who have had negative contacts with the other group, negatively stereotype the other group, identify strongly with their ingroup, perceive Blacks and Whites to be in conflict, and believe that there are substantial status dif-

ferences between the groups. Although the predictions of the integrated threat theory were well supported in both samples, the variables in the theory accounted for more of the variance in Whites' than in Blacks' attitudes. If these results are replicated in future studies, an important topic for research will be examining the reasons why the threats and their antecedents are better at predicting the attitudes of Whites than Blacks. More generally, research on the integrated threat theory would benefit from a consideration of both additional antecedents and consequences of threat (W. G. Stephan & Renfro, in press).

NOTES

1. The term *race* is used here in its socially constructed meaning, not as a reference to a biologically based construct. Similarly, we employ the terms *Blacks* and *Whites* to refer to people of African American descent and Euro-American descent, realizing that these terms too are socially constructed and ambiguous in their meanings.

2. Analyses with the outliers included also were conducted; unless noted, removing the outliers did not substantively change the results.

3. Versions of each model in which the covariance between the realistic threat and the symbolic threat errors was restricted to zero also were tested. In each case, the model that allowed the errors to covary fit the data significantly better than the model that did not allow the errors to correlate (all $ps < .05$).

4. If outliers were included in the structural equation analyses, Revised Model B was a significantly better fit than Revised Model C, $\chi^2(15, N = 1011) = 40.10$, $p < .05$. However, this better fit came at the expense of parsimony because the TLI for Revised Model B (.860) was much lower than the TLI for Revised Model C (.940). Furthermore, the χ^2/df ratio for Revised Model C (3.62) indicated a better fit than the χ^2/df ratio for Revised Model B (7.17). Thus, even with the outliers, we would have accepted Revised Model C as the better and more parsimonious model.

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