The Context of Contact: White Attitudes Toward Interracial Marriage

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The Context of Contact:
White Attitudes Toward Interracial Marriage

by

Bryan R. Johnson

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Sociology
Brigham Young University
June 2004
BRIGHAM YOUNG UNIVERSITY

GRADUATE COMMITTEE APPROVAL

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ABSTRACT

THE CONTEXT OF CONTACT: WHITE ATTITUDES TOWARD INTERRACIAL MARRIAGE

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Using a year 2000 national racial poll conducted by the New York Times, I analyze Whites’ approval of interracial marriage. I utilize the contact hypothesis, as originally formulated by Gordon Allport, to develop a conceptual model of White’s attitudes toward interracial marriage. Specifically I propose and develop an additional dimension of the contact hypothesis, which accounts for the context in which interracial contacts occur. I do so by examining several specific social settings in which White respondents report experiencing contact with Blacks. The contexts examined are ordered in terms of the type of contact they likely provide, from close, personal contact to superficial and hierarchical contact. The results indicate that the type of contact engendered by a variety of contexts is an important factor in determining attitudes about interracial marriage. The contacts in most of the social settings are associated with friendship, yet a majority of the contexts are also related to approval of interracial marriage even when extraneous factors such as friendship, age, gender, income, political party, frequency of religious service attendance, and region are controlled for statistically.
The findings provide support for the consideration and utilization of the *context of contact* as an additional dimension of the contact hypothesis.
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The Context of Contact: 
White Attitudes Toward Interracial Marriage

Interracial marriage has a long and tortuous history in the United States, a history which dates back to colonial times. The first slavery laws were instigated in Maryland in 1661, after which a proposed law preventing interracial marriages soon followed in Virginia. Even into the early eighteenth century, interracial dating and marriage was condemned with vigor. During this time, strong social norms emerged against intimate forms of interracial contacts. As the nation moved into the twentieth century, stronger sanctions against intermarriage were created by the state (Kalmijn, 1998). Anti-miscegenation laws restricting interracial marriage became the standard in the U.S., both inside and outside of the South (Kalmijn, 1993). During this era, as many as thirty-eight states passed laws prohibiting interracial marriage. As recently as 1930, thirty states continued to enforce laws condemning intermarriage. In states such as Florida and North Carolina, the standard penalty for intermarrying was 10 years’ incarceration (Wilson & Jacobson, 1995).

Basing its rationale on the Fourteenth Amendment, on June 12, 1967, the U.S. Supreme Court eradicated all laws banning marriages between those of different races. Since that time, attitudes toward interracial marriages have evolved gradually (Schuman et al., 1997). As negative attitudes toward intermarriage have decreased, rates of interracial marriages have increased (Qian, 1997; Heaton & Jacobson, 2000). Annual marriage records in 33 states verify that intermarriage has increased in both northern and southern states since the ban was lifted (Kalmijn, 1998). The annual Current Population Surveys (CPS) conducted by the Census Bureau show similar increases (Jacobson &
Despite the high rates of acceptance, inter-group marriage in the United States remains relatively low. In many ways intermarriage remains the ultimate break with traditional racial norms. For many minority groups, interracial marriage delineates one of the final boundaries to achieving complete racial assimilation. Accordingly, racial intermarriage continues to evoke an emotional response from many whites and some members of minority communities (Pettigrew, 1997). Thus, the examination of attitudes about interracial marriage remains important and provides a relevant perspective on the state of current inter-group relations. In this research, I use the contact hypothesis as a framework to examine attitudes toward interracial marriage in a recent national poll. I do so by focusing on the contexts or arenas under which such contact occurs.

Social contact between groups is commonly viewed as a critical and ameliorative factor in improving relationships between groups. As stated by Allport in 1954, the contact hypothesis claims that under specific conditions, contact with members of different racial groups can promote positive and tolerant attitudes toward other groups. Applied to marriage, the contact hypothesis asserts that the chance for members of different groups to intermarry depends primarily on their opportunities to meet and interact socially. As Kalmijn and Flap (2001) succinctly state, “mating requires meeting.” Only under favorable conditions, however, can pertinent information about other groups be obtained, synthesized, and formulated into positive reactions, so that good relationships develop. Under such conditions, interracial friendships evolve and romantic relationship and intermarriage become more probable. Thus, positive contact
and favorable attitudes toward members of other groups become important precursors to intermarriage.

I utilize the contact hypothesis chiefly because of its direct application to intergroup relations. In addition, the contact hypothesis has been deemed an effective method of examining reduced opposition to interracial marriage (Wilson & Jacobson, 1995; Kalmijn, 1998; South & Messner, 1986; Anderson & Saenz, 1994; St. Jean & Parker, 1995; Heaton & Jacobson, 2000; Sandefur & McKinnel, 1986; Tucker & Mitchell-Kernan, 1990; Sigelman & Welch, 1993). Furthermore, I employ the contact hypothesis in lieu of more macro-structural explanations because of the distinct advantages it provides when addressing social psychological factors such as attitudes toward interracial marriage.

I examine attitudes toward intermarriage instead of actual marriages due to the scarcity of data available that include variables on both rates of intermarriage and contextual contact. While the study of actual rates of interracial marriage might be preferable, the lack of available data leaves the examination of attitudes as a viable alternative. Schuman and colleagues (1997) note that attitudes can be proscriptive, defining what may happen in the future. They also suggest that racial attitudes constitute norms about what individuals consider to be acceptable to the public in general. Further, Schuman and associates found increases in attitudes toward intermarriage to be associated with actual occurrences of such marriages. They conclude that the analysis of attitudes toward interracial marriage is a logical and important extension of the study of interracial marriage.
CONTACT CONDITIONS IMPROVING INTERRACIAL ATTITUDES

Allport’s (1954) classic theoretical formulation argued that positive outcomes to social contact occur only under several specific conditions. The first of these conditions is involvement in cooperative events. In his studies on intergroup conflict, Sherif (1958) found that group hostility lessened significantly when group members were required to cooperate. More recent research on the positive effects of cooperation has obtained similar results (Sigelman and Welch, 1993; Hewstone and Brown, 1986; Powers and Ellison, 1995; Desforges, et al., 1997). The research is also clear, however, that if conflicting groups fail in cooperative efforts, intergroup relations may worsen. Thus, interracial relations will likely improve when contact between groups is cooperative rather than competitive and when groups are successful in achieving their goals.

Another condition necessary to produce agreeable racial relations, according to Allport, is for individuals from different groups to share equal status. Recently, Yancey (1999) found that only when Blacks and Whites of equal status shared a wide variety of contacts did White hostility toward Blacks decline. Yancey concluded that unequal status contact is more likely to nurture feelings of resentment for subordinates, while at the same time reinforcing negative stereotypes. Others have also stated that social contact promotes positive racial attitudes under the ideal condition that it involves persons of equal status (Powers and Ellison, 1995; Wilson and Jacobson, 1995; Hewstone and Brown, 1986).
A third and final condition outlined by Allport is for intergroup contact to be intimate or friendly. Studies by Hewstone and Brown (1986) confirm that contact between members of groups should be “intimate,” as opposed to “superficial,” if intergroup relations are to be enhanced. Research by Yancey (1999) coincides with these findings and suggests that one of the most important factors in determining whether an individual fosters positive attitudes toward outgroups is the person’s “subject-object intimacy.” Yancey’s findings also affirm that superficial contact tends to preserve negative stereotypes about members of minority groups, which happens as selective information is picked up during casual intergroup meetings. Furthermore, surveys of 3800 Europeans confirm that individuals who have minority-group friends are much more likely than others to manifest sympathy and assistance for members of other groups (Pettigrew, 1997). Accordingly, intimate, rather than superficial contact is essential if favorable interrelationships are to develop.

Finally, in addition to the conditions established by Allport to improve intergroup contact, Pettigrew (1998) and Desforges (1997) focus on the generalization process. They suggest that contact should be with typical individuals of the other group and that such contact should be sustained over time. By implication, contact with a variety of individuals might also produce generalization. If such contact does not occur, individuals may “exempt” specific “others” from their prejudice while maintaining prejudice against the group as a whole. They can do this by creating a second category of the specific other, saying that the individual is “not like all the others” (Desforges et al., 1997). Hence, for intergroup contact to be most effective, it should occur with typical members over time or across many different individuals.
FACTORS INFLUENCING INTERMARRIAGE ATTITUDES

In addition to the conditions known to contribute to improved attitudes and relationships among dissimilar groups, several factors have been identified that influence actual interracial marriage. The propensity to marry interracially differs dramatically by gender (Gilbertson, Fitzpatrick, & Yang, 1982). Scholars argue that men and women display very different interracial marriage patterns, with men marrying out to a far greater extent than women (Kalmijn, 1998, 1993; Sandefur and McKinnel, 1986; Qian, 1997). However, in some samples gender has been found to be unrelated to interracial marriage (Mitchell-Kernan and Tucker, 1990; St. Jean and Parker, 1995). Mithchell-Kernan and Tucker (1990) found that the “primary structural correlates of outmarriage” were exactly the same for both sexes, suggesting that there are “considerable structural similarities among those who intermarry, irrespective of gender.” Specifically, Blacks have been found to follow similar patterns. When controlling for factors such as age, education, and place size, St. Jean and Parker (1995) found no significant differences between Black males and females regarding attitudes about interracial marriage. Research by Wilson and Jacobson (1995) suggests that White attitudes toward interracial marriage follow trends similar to those of actual marriages. However, they found these patterns to vary less when accounting for specific variables such as age and education.

Another factor believed to influence interracial marriage attitudes is age. Many studies confirm the effects of age on tolerance toward interracial marriage (Wilson & Jacobson, 1995; Heaton & Jacobson, 2000; St. Jean & Parker, 1995; Tucker and Mitchell-Kernan, 1990; Sandefur & McKinnel, 1986). Older people tend to be less accepting of interracial marriage; in other words, increased age is has been found to be
negatively associated with attitudes toward intergroup marriage. This has been found for both Black and White samples. St. Jean and Parker (1995) found that Black males and females over the age of 35 favored laws banning intermarriage more than their younger counterparts. Similarly, Wilson and Jacobson (1995) found that Whites who approved of interracial marriage tended to be the young, ages 21-29. Further, Tucker and Mitchell-Kernan (1990) and Sandefur and McKinnel (1986) report intermarried couples to be significantly younger, on average, than similar endogamous couples.

Scholars have also identified a number of macro-level and intermediate-level factors that affect both attitudes about intermarriage and the rate of intergroup marriage. Blau (1977, 1994), for example, has emphasized how the macrostructure of society provides opportunities for contact between groups. Macro structures include relative group size as well as geographical separation, segregation within those areas, and the age structure of local areas. Others have demonstrated that intermediate-level factors, such as everyday social settings, influence group norms and prejudice regarding interracial marriage (Powers and Ellison, 1995; Yancey, 1999; Kalmijn 1998, 2001; Kalmijn and Flap, 2001; Gorsuch and Aleshire, 1974; Batson, Schoenrade, and Ventis, 1993; Hunsberger, 1995).

SOCIAL SETTINGS AFFECTING INTERRACIAL ATTITUDES

Intermediate level social structures present opportunities for individuals to meet those of different groups. Such structures can facilitate, modify, or impede the development of inter-group relationships (Powers and Ellison, 1995; Yancey, 1999; Kalmijn 1998, 2001; Kalmijn and Flap, 2001). These structures include arenas such as
residential neighborhoods, workplaces, religious institutions, educational institutions, and places of commerce or shopping. Each of these contexts provides an opportunity for contact, but the type of contact may vary in the degree of intimacy, cooperation, and status differential. I discuss each of these settings below, as well as their potential implications regarding interracial attitudes.

Residential neighborhoods tend to consist of individuals with similar socioeconomic backgrounds, indicating that egalitarian relationships are likely to exist among residential neighbors (Yancey, 1999). Sigelman and Welch (1993) found that living in areas where frequent contact with Blacks was common provided Whites with positive information about Blacks. They concluded that firsthand information gathered from residential associations with Blacks “almost inevitably” influenced Whites’ perceptions and feelings about Blacks in general. Other residential studies illustrate that Whites living in integrated housing projects developed favorable attitudes toward Blacks at a faster rate than Whites who lived in segregated housing projects (Pettigrew, 1998; Yancey, 1999). Powers and Ellison (1995) also established that the contact that follows from racially integrated neighborhoods reduces opposition to intimate forms of interracial contact, specifically interracial dating.

Other empirical studies, however, have not shown positive attitudinal change to be correlated with residential interracial contact. In a recent study aimed at replicating previous work on residential integration, Yancey (1999) reported that integration did not alter the racial attitudes of White respondents toward African Americans, claiming that residential integration can “exacerbate racial hostilities rather than relieve them” when communities lack support for integration. Yancey’s findings suggest that additional
contextual factors should be examined when studying the effects of residential settings on intergroup relations.

A second social setting believed to greatly affect interracial attitudes is the workplace. Powers and Ellison (1995) found that the contact that follows from racially integrated workplaces reduces attitudes opposing more intimate interracial relationships. Much of the contact between groups in the workplace is hierarchical, however. Reskin, McBrier, and Kmec (1999) have emphasized that sex and race composition is highly variable in organizations. They report that while one-fifth of the employees in an average establishment are minorities, one in four establishments employed no minorities, and in another quarter of work establishments, minority employees number fewer than one in ten. Under such conditions, interracial contact may produce countervailing effects, depending on the specific conditions and interactions workers have with those of other races. Additionally, while individuals may work together, they may potentially lead separate and distinct lives after leaving their places of employment.

Another social setting thought to dramatically influence racial attitudes is the religious institution. Religions almost universally promote tolerance of others and of other groups. Assessments of the effect of religion on prejudice, however, are ambiguous. While some authors indicate that religiosity is associated with high racial prejudice, others find religiosity to be weakly, if at all related to racial attitudes. Still others emphasize the difference between intrinsic religiosity (personal religiosity) and extrinsic religion (social religion) and have generally found extrinsic religion to be positively associated with prejudice while intrinsic is negatively associated with prejudice (Gorsuch and Aleshire, 1974; Batson, Schoenrade, and Ventis, 1993; Hunsberger, 1995).
However, scholars sometimes have failed to account for the degree of segregation present in most religious settings. Most religious institutions remain highly segregated. Early research by Parker (1968) found that members of one interracial church frequently conversed with each other, but some segregation in seating continued. The members appeared to make a substantial effort to have a stable integrated church. An exceptional leader, an integrated neighborhood, and members with common interests were all components of this dynamic congregation. Under these favorable conditions racial attitudes among the members appeared to be good.

More recently Yancey (1999) compared the attitudes of Whites attending both segregated and integrated congregations. Members of segregated churches possessed significantly more stereotypical attitudes whereas Whites who attended integrated churches possessed significantly less racially prejudiced attitudes about African Americans. Yancey concluded that integrated church members are more racially tolerant than those who attend homogenous congregations and that “the most powerful effects of attending integrated churches are that White respondents engage in less stereotyping and have lower levels of social distance.”

Another social setting believed to greatly affect interracial attitudes is the educational system. Most scholars who have examined the effects of education on racial attitudes have found a positive relationship between education and interracial tolerance (Sandefur and McKinnel, 1986; Tinker, 1982; Schoen, Wooldredge, and Thomas, 1989; St. Jean and Parker, 1995; Wilson and Jacobson, 1995). Education is highly related to greater tolerance of other racial groups, as well as perceptions of smaller social distance between an individual and members of other racial groups (Sandefur & McKinnel, 1986).
Schoen, Wooldridge, and Thomas (1989) found level of education to be a reasonably good predictor of respondents’ attitudes toward intermarriage. Heaton and Jacobson (2000) also suggest that mixed marriages are increasingly being considered acceptable by persons with average or above average education. They found that those who most approve of interracial marriage are the college educated. Moreover, St. Jean and Parker (1995) found that Black males and females without a high school degree were less accepting of interracial marriage than their high school and college degree holding counterparts.

Sandefur and McKinnel (1986) found that the occurrence of interracial marriage also increases with the education of individuals, and therefore the highest levels of intermarriage are found among the college educated. Work by Qian (1997) concludes that the odds of interracial marriage increase with couples’ educational attainment. Heaton and Jacobson (2000) argued that college experience increases the chances of exogamy for both White men and lower status groups. Similar studies illustrate that educated members of racial minority groups marry exogamously more often than their lesser educated peers (Kalmijn, 1998). In addition, Heer’s (as cited in Tucker & Mitchell-Kernan, 1990) analysis of 1970 census data indicated that Black males and females with 13 or more years of education were more likely to be married interracially. These positive associations most likely result from at least two aspects of education. Educational attainment is associated with greater tolerance in general and educational experiences generally increase equal-status contact with members of different groups.

Shopping, the final social arena I examine, is another example of the potentially separate lives that races live in this country. With large malls now drawing people from
numerous neighborhoods in urban places, individuals often shop with members of other groups. As Pettigrew (1998) notes, “society could not exist without bonds across reciprocal roles.” Nevertheless, these contacts are often fleeting and transitory, and they are often routinized, formal, and status related. Thus, while shopping provides an additional arena where individuals of different groups come together, this arena is unlikely to produce changes in attitudes regarding interracial marriage.

ADDITIONAL FACTORS RELATED TO INTERMARRIAGE: CONTROL VARIABLES

As alluded to earlier, friendship appears to be a critical factor affecting attitudes about approval of interracial relationships (Powers and Ellison, 1995; Pettigrew, 1997; Yancey, 1999). Bonilla-Silva (2003) presents compelling evidence that Whites inflate reports of their friendship with Blacks and that they “promote” black acquaintances to “good friends” when interviewed. Because self-reported friendship strength can potentially be inflated, I use the amount of self-reported contact Whites have with those of other races in social activities to develop a socializing/friendship scale. (The development of this scale is elaborated more fully in the ensuing methods section.) Ultimately, friendship is controlled for statistically in order to more accurately assess the influence of the social structures presented previously on individual attitudes.

In addition, three other variables are controlled for statistically in order to assure that the results for the contexts are not the result of extraneous variables. I control for income, an additional measure of social status and for political party identification as a measure of political conservatism or liberalness. Lastly, I also control for region. Studies of interracial marriage have consistently found higher rates of interracial
marriage in the West and lower rates in the South (Heer, 1966; Jacobson and Heaton, 2000). With these variables controlled statistically, I am able to better assess the influence of social settings on the approval of interracial marriage.

**CONTEXTUALIZING THE CONTACT HYPOTHESIS**

Though many of the social settings examined thus far have been shown to influence interracial relations, researchers have failed to examine these settings specifically from a contextual standpoint using the contact hypothesis. As demonstrated previously, accounting for the context of social settings is crucial in determining how people will interact with those of other races. The importance of context is illuminated by Yancey’s (1999) study of integrated churches and neighborhoods, which found that Whites experiencing interracial contact in settings marked by intimate interactions were more racially tolerant than those participating in identical settings categorized by superficial contact. While Yancey’s purpose was not to expand the utility of the contact hypothesis *per se*, his work nevertheless provides a nice example of the importance of accounting for the context of contact when dealing with interracial relations. Therefore, since social context is a critical factor that has been overlooked in the majority of studies examining interracial marriage, I examine the *context of contact* as an additional dimension of the contact hypothesis. Creating a multi-dimensional conceptual model, including the circumstances under which intergroup contact occurs, greatly enhances the effectiveness of the contact hypothesis as a theoretical tool.

In addition, since the context of contact is noticeably absent in the majority of previous studies, my research focuses on expounding the *cohesive* dimension of this
contextual model. (I conceptualize cohesion as the level of intimate, cooperative, and egalitarian contact provided in social situations.) Prior research has mainly identified contact in terms of dichotomies: “cooperative” versus “competitive,” “egalitarian” versus “non-egalitarian,” and “intimate” versus “superficial” (Sigelman & Welch, 1993; Hewstone & Brown, 1986; Myers, 2001; Powers & Ellison, 1995; Yancey, 1999). However, everyday settings rarely exemplify dichotomous situations with respect to contextual social factors; instead settings are more likely to correspond to specific points along a continuum of social contact. One extreme of this continuum constitutes intimate, cooperative, egalitarian contacts (cohesive), while the other extreme exemplifies superficial, competitive, non-egalitarian contacts (non-cohesive).

The social settings I examine are residential communities, religious institutions, academic institutions, places of employment, and commercial settings. It is highly unlikely that any of these arenas will be characterized by the type of contact found at the extremes of the social contact continuum. Instead, I argue that these environments illustrate a variety of contextual situations between the two extremes. As individuals participate in the various settings, I expect their attitudes toward intermarriage to be influenced in different ways.

**HYPOTHESES**

While considerable variation exists within each of these social structures, I expect that religious and educational institutions will have the greatest potential to generate ameliorative environments, due to the type of contact generally associated with these social settings. The contact that occurs in these situations frequently tends to be close,
personal, sustained, egalitarian, and cooperative. I anticipate that neighborhood and work environments will have mixed effects for approval of interracial marriage (see Kalmijn and Flap, 2001). While the workplace provides opportunities for individuals to have contact with members of other groups, the contact can often be hierarchical or distant. And while neighborhoods allow contact, considerable isolation may occur in individual lives. Therefore, I expect workplace and neighborhood environments to be less strongly related to attitudes about interracial marriage than educational and religious institutions. Finally, since shopping is frequently casual, superficial, and sometimes status-related and hierarchical, I expect shopping to be negatively related to support for interracial marriage. Shopping simply offers few opportunities for close, personal contact that leads to more tolerant racial attitudes.

**DATA & METHODS**

The data for this analysis are taken from a national survey conducted by the New York Times (2000) and archived at the Inter-university Consortium for Political and Social Research at the University of Michigan. The special topic (race relations) poll was based on telephone interviews conducted June 21-29, 2000. Unfortunately, Blacks were not asked the questions about contact with other groups, so the analysis will be based only on the 1107 White adults in the poll. Additionally, the data do not support the inclusion of Latinos and Asians as White respondents. Asians constituted 0.7 percent of the sample (15 respondents) and Latinos were included in the category “other,” which included all respondents who were not Black, White, or Asian. This categorization made it impossible to identify Latino respondents in the sample. Since both groups could not
be included, Latinos and Asians were omitted from the analysis.

The sample of telephone exchanges was randomly selected by a computer from a complete list of more than 42,000 active residential exchanges across the United States. Within each exchange, random digits were added to form a complete telephone number, thus permitting access to both listed and unlisted numbers. Within each household, one adult was designated by a random procedure to be the respondent for the survey. The results of the survey were weighted to account for household size and number of telephone lines in the residence and to adjust for variations in the sample relating to geographic region, sex, age, marital status, and education.

Table 1 provides a comparison of the New York Times data with national General Social Survey data collected in 1998 and 2000. While the New York Times sample is very similar to the General Social Survey sample, it does vary somewhat with respect to income, education, and political party affiliation. The New York Times sample contains slightly fewer individuals with lower levels of education and income below $15,000. Additionally, the New York Times sample is characterized by a slightly larger number of respondents reporting a Republican political party affiliation.

Respondents were questioned about their attitudes regarding the state of current racial relations in the U.S. The poll asked about a range of conditions under which contact with Blacks takes place. Respondents were asked directly about approval or disapproval of interracial marriage, whereas previous surveys such as the General Social Survey (GSS) have often relied on indirect measures of attitudes toward interracial marriage. In previous years the GSS asked: “Do you think there should be laws against marriages between Blacks and Whites?” This question likely elicits reactions to
governmental intervention as well as attitudes about intermarriage (St. Jean, 1998). Thus, the question that will be used in this analysis directly assesses approval of interracial marriage.

The residential contact variable was measured by asking White respondents: “About how many of the people who live in the immediate area around your home are Black?” The interracial religious attendance variable asked: “How many people at your church or synagogue are Black?” The question for interracial shopping was: “How many of the customers at the places you usually go shopping, such as grocery stores or pharmacies are Black?” Occupational integration was measured with the question: “About how many of the people you work with are Black?” Response categories for each of the questions were: none, a few, about half, or almost all. Since few Whites selected “almost all” to any of the questions, these responses were combined with “about half” to create the category “half or more.”

Approximately 45 percent of the respondents did not go to church or went only a few times a year. In addition, 36 percent of the respondents were out of the workforce, either retired or not employed. Because of this, those not attending church and those not actively working were not asked about the amount of contact they experienced with those of other races. In order to retain cases and still be able to assess the effects of the other independent variables for these individuals, I assigned them to the “zero contact” category. In addition, I created a dummy variable to account for employment status (coded 0 = unemployed, 1 = retired, 2 = working). I also included a measure of the respondent’s frequency of religious service attendance. By assigning “zero contact” to individuals who were not polled regarding these two questions and subsequently
including these two additional variables, I am able to control for the different levels of religious service attendance and employment involvement, while still retaining cases in the analysis. In a sense, I am able to ascertain the effect of the two independent variables on the dependent variable only for those who actually attend religious services and participate in the workforce. As a result, the analysis for religious service attendance and workforce participation is limited to those who participate in these activities. This method of treating missing data is both logical and intuitive for these two variables. Alternative approaches such as mean substitution would be less appropriate, as they would introduce a mean level of contact into the model that would logically not exist for individuals who do not participate in such social situations. Ultimately, this approach allows me to retain cases without imputing unnecessary contact into the analysis.

Income was coded on a five-point scale from 1 (less than $15,000) to 5 (more than $75,000). About six percent of the sample refused to give their income. In order to retain cases I developed a new variable that predicted a respondent’s income in cases when it was not reported. To do this, I examined bivariate relationships between income and other variables known to be related to income. Age, education, gender, and employment status were found to be significantly related to income (p < .05). I included these four variables together in an ordinary least squares regression equation. All variables remained significant at the p < .05 level. I utilized the same regression equation to derive predicted values for a new income variable. When missing data was present in the original income variable, the value from the predicted income variable was substituted for the original missing data. Once all missing data were imputed, the values were then converted to the original income categories, ranging from 1 to 5 as previously
mentioned.

Education was measured as the last grade of school the respondent completed. Approximately one third of the sample had completed high school, and just over a fifth had also completed college. Males were 43 percent of the sample (coded 1) and females were 57 percent (coded 0). Age ranged from 18 to 93 with a median of 47. Because a number of respondents refused to provide their specific age, but reported their age in the “age group” question, I utilize “age group” as my measure of age. Additionally, political party identification was ascertained by asking whether respondents were closer to the Republican (coded 2) or Democratic (coded 0) party. Those without a specific political party affiliation are coded 1. Democrat is the implicit category in the analysis that follows.

Interracial friendship is measured with a socializing scale which ranges from 0 to 4, reflecting the degree of contact Whites report having with other races. Each of the friendship variables (having friends of another race, having guests of another race, visiting those of another race, and socializing with friends of another race) was found to be significantly related to approval of interracial marriage when regressed independently (bivariate regression) on attitude toward interracial marriage. However, when all four variables were included in the regression equation, only visiting and socializing remained significant at the p < .05 level (see table 2).

Further analysis revealed that these four variables share considerable variation so that when all are regressed against approval of interracial marriage, only two of the four variables remain significant. As a result, I utilized data reduction to create a friendship scale by summing the responses (scored yes =1, no = 0) to each of the four interracial
socializing measures. A factor analysis confirmed the inclusion of all four items, which loaded on a single factor with an Eigenvalue of 2.2 (see table 3). In addition, the inclusion of the friendship measure in the analysis provided the best fit for the data. Akaike and Bayesian Information Criterion (AIC & BIC), as well as a likelihood ratio chi-square test (p < .001), confirmed that the full model (including the friendship scale) provides a better fit than the model with the friendship measure excluded (see table 4).

Approval of interracial marriage was ascertained by asking; “Do you approve or disapprove of marriage between people of different races?” The response categories were “approve” (coded 1) or “disapprove” (coded 0). Sixty nine percent of the white sample said they approve of interracial marriage with the approval rate being somewhat higher in the West (82 percent) and somewhat lower in the South (61 percent). Approximately nine percent of the white sample said either “don’t know” or the interviewers did not ascertain a response regarding the respondent’s approval of interracial marriage.

In order to determine the influence of cases with no response to the question about attitudes toward interracial marriage (used as the dependent variable in subsequent analyses), I conducted a multinomial regression analysis with the three responses (“approve,” “don’t know,” and “disapprove”) included as categories. Those in the “don’t know” category did not differ significantly from those who disapproved of interracial marriage on any of the variables included in the analysis. Those in the “don’t know” category differed from those who approved of interracial marriage only on the age variable (being somewhat older than those who approved of such marriages). Since the category contained both “don’t know” and “not ascertained,” and since the differences
between this category and the others was minimal, I dropped the category for the following analyses.

Whites’ approval of interracial marriage is slightly higher than the results from other national polls, but the other polls are older. The Washington Post poll conducted in July of 1998, for example, reported that 52 percent of a national sample said marriage between blacks and whites was always acceptable and an additional 23 percent said it was “acceptable in some situation, but not others.” The January-February 1997 Gallup Poll asked a national survey of Americans whether they “approve or disapprove of marriage between blacks and whites.” Sixty-four percent said they approved. Finally, a survey by Knight Ridder in May of the same year, with the same question, reported that 63 percent approved of interracial marriage (percentages for these surveys are from Roper Poll Center online).

I utilize logistic regression to analyze the data. This approach provides an assessment of the odds of an individual approving of intermarriage, as a function of both categorical and continuous independent variables. Logistic regression is more appropriate than ordinary least squares regression because the dependent variable used in the analysis is dichotomous, rather than continuous.

The dependent variable for the model is approval of interracial marriage. The independent variables in the model are education, degree of interracial religious attendance, degree of occupational integration, degree of residential integration, and degree of interracial shopping. Age, sex, region, income, political party identification, frequency of religious service attendance, and frequency of interracial socializing are included as control variables. Descriptive characteristics of all variables included in the
analyses are presented in Table 1.

RESULTS

CONTROL VARIABLES

Gender was not significantly related to approval of interracial marriage. Further, the inclusion of gender in the analysis did not significantly affect the relationship of the other independent variables to attitudes toward interracial marriage. Several goodness of fit statistics confirmed that the model with gender absent provided the best fit for the data, although the difference between the two models was minimal. I examined both the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) to make this assessment (see table 4). As a result, gender was removed from the analysis in order to present a more parsimonious model.

The other control variables were significantly related to approval of interracial marriage. As expected, age was negatively related to approval of interracial marriage. For each categorical increase in age (increments of approximately 15 years), the odds of Whites in the sample approving of interracial marriage decreased by approximately 50 percent, after controlling for the effects of the other variables in the model. Income was positively associated with approval of interracial marriage. For each categorical increase in income (increments of $15,000), the odds of approving of interracial marriage increased by approximately eighteen percent. Political party affiliation was also found to be a significant factor in predicting attitudes toward intermarriage. The odds of Democrats approving of interracial marriage were about 75 percent higher than the odds
for Republicans. Furthermore, the odds of approving of interracial marriage for those without a political party identification were approximately one and one-quarter times higher than the odds for Republicans. The resulting Wald statistic for political party identification was $= 14.74 (p < .01)$.

As mentioned earlier, the highest approval rate of interracial marriage was in the West; the lowest was in the South. The Northeast and the Northcentral regions fell in the middle of the distribution (see table 1). In the analysis, the West is the reference category. The odds of individuals from the Northeast and Northcentral approving of interracial marriages were somewhat lower than those from the West, but not significantly so. However, those from the South were significantly less likely to approve of interracial marriage when compared to those from the West. The odds ratio for those from the South was 0.36. The overall effect of region was highly significant (Wald = 16.23, d.f. = 3, $p < .001$).

Finally, as expected, the friendship or interracial socializing variable was also significantly related to approval of interracial marriage. After accounting for the effects of the other independent variables in the model, each one unit increase in the friendship scale was associated with a 37 percent increase in the odds of approving of interracial marriage. As found in other studies (Sigelman and Welch, 1993; Pettigrew, 1997; and Yancey, 1999), friendship appears to be a critical factor affecting attitudes toward intermarriage, reemphasizing the need to control statistically for the effects of this influential variable.
CONTEXTUAL VARIABLES

After all variables were included in the analysis (including the control variables age, region, income, attendance, political party, and friendship), those out of the workforce were not significantly different from those in the workforce in their approval of interracial marriage ($p = .09$). Workplace integration was also not significantly related to attitudes toward interracial marriage ($p = .173$). Similarly, residential composition was unrelated to approval of interracial marriage in the full model ($p = .469$). These results are presented in table 5. Possible reasons for these outcomes will be explored more fully in the discussion section below.

As expected, education is a significant predictor of favorable attitudes toward interracial marriage. After controlling for the effects of the other independent variables in the analysis, each one year increase in education is associated with a 31 percent increase in the odds of approving of interracial marriage ($p < .001$).

The results for religion are mixed. After controlling for the effects of the other variables, each categorical increase (ranging from “never” to “every week”) in church attendance is associated with a sixteen percent decrease in the odds of approving of interracial marriage ($p = .008$). Interestingly, among those who attend church, the racial composition of the congregation appears to be an important factor associated with support for interracial marriage. The odds of approving of interracial marriage among those who attend with a few Blacks are about 52 percent higher than those who attend all white congregations. Furthermore, the odds of approving of intermarriage for those who attend with 50 percent or more blacks are approximately two times the odds of those who do not attend church with any Blacks ($p = .02$).
Shopping with Blacks, on the other hand, was significantly but negatively related to approval of interracial marriage. Compared to those who shop with no Blacks, the odds of approving of interracial marriage were 34 percent lower among those who shop with a few Blacks and nearly 70 percent lower among those who shop with 50% or more Blacks (p = .01).

**DISCUSSION**

As anticipated, the context of interracial interactions contributes significantly to Whites’ attitudes regarding interracial marriage, and likely the attitudes of Whites about race in general. This has been demonstrated, even after controlling for friendship, age, region, attendance, political party, and income – all of which are significantly associated with racial attitudes. As a result, the structural factors or arenas of contact appear to have a significant effect over and beyond the control variables utilized in the model.

Based on the analysis, the contexts examined can likely be ordered along a social contact continuum ranging from cooperative and egalitarian contact (cohesive) at one extreme and superficial and hierarchical contact (non-cohesive) at the other. An illustration of the social contact continuum is shown in Figure 1. I discuss each of these contexts in more depth below.

**RELIGIOUS SETTINGS**

Of the social settings examined, religion had mixed, but important effects. Those who do not attend church are generally more supportive of interracial marriage. For
those who do attend, however, support for interracial unions diminishes quickly as frequency of attendance increases. Each incremental increase in frequency of religious service attendance is associated with a sixteen percent decrease in the odds of approving of interracial marriage. Attendance at church with a few Blacks, however, increases the odds of white approval, and attendance with 50% or more Blacks increases the odds nearly two fold, when compared to those who attend all White congregations.

Religious separation likely reflects preference on the part of some, but also likely reflects patterns of segregation and the traditional pattern of separate worship that has existed in this country for most of its history. The positive effect of interracial worship likely also reflects choice on the part of some whites. Under such circumstances, integrated churches are likely to be characterized by equal status relationships between Blacks and Whites who share “intimate” or personal contact with one another. This is suggested by both Parker (1968) and Powers and Ellison (1995). Moreover, members of different races likely cooperate as they perform religious duties required of them by their churches. Apparently, integrated religious institutions meet a sufficient number of the conditions specified by the contact hypothesis to produce positive racial contact, as implied by Hewstone and Brown (1986), Pettigrew (1998), and Yancey (1999). Due to the auspicious type of intimate, cooperative, and egalitarian contact likely present in these interracial congregations, as well as their potential for improving attitudes toward intermarriage, interracial religious institutions are placed at a position to the left on the social contact continuum (see figure 1).
EDUCATIONAL SETTINGS

Education is less strongly related to approval of interracial unions than is church attendance, yet it is still an important factor. Increased education was shown to significantly augment favorable attitudes toward heterogamy in the white sample. For every one year increase in education, the odds of approving of interracial unions increase by approximately thirty percent, even when controlling for the other variables in the model. These effects are especially pronounced when examining higher levels of education, especially among those with college and graduate degrees. The odds of approval among these individuals are more than three times the odds of approval among individuals with only a high school education.

This likely occurs as educational environments such as colleges and universities provide an atmosphere of tolerance and acceptance, while at the same time supplying opportunities for cooperative and equal-status contact. Since most college campuses consist of heterogeneous populations, they afford white students the opportunity to interact as equals with individuals from different racial groups. These contacts and interactions in turn may lead to the type of personal contact shown to improve racial relations. As Whites interact with Blacks over time, the cooperative, egalitarian conditions of higher education appear to help break down negative stereotypes and lead to favorable attitudes toward interracial marriage.

My findings suggest that educational settings likely provide the favorable type of social contact conducive to positive attitudes toward inter-group marriage, as suggested by Schoen, Wooldredge, and Thomas (1999) and Heaton and Jacobson (2000). As a result of the propitious type of contact provided by educational institutions and their
ability to contribute to improved attitudes toward interracial marriage, such establishments are placed toward the side of the social contact continuum exemplifying intimate, cooperative, and egalitarian contact. While the effects of education on racial attitudes are not quite as pronounced as those found in religious institutions, educational institutions appear to achieve a sufficient amount of favorable contact to be placed accordingly on the social contact continuum (see figure 1).

**Residential and Occupational Settings**

Neighborhood and workplace settings were not found to be significantly related to attitudes toward racial intermarriage, once the other variables were controlled for statistically. I suggest two probable explanations for the lack of a relationship between these settings and support for interracial marriage. First, neighborhoods and occupational settings likely lack the type of contact required to form opinions supporting or opposing interracial marriage. While the settings afford Whites the opportunity to interact with Blacks, the contact is not sufficiently cooperative or intimate to lead to positive attitudes. At the same time, the contact may not be sufficiently competitive or superficial to reinforce pessimistic stereotypes and negative attitudes. Further, self selection with members of the other groups may occur in neighborhoods. This explanation accords with research conducted by Yancey (1999) and Sigelman and Welch (1993), which indicates that Whites’ contact with members of other races does not necessarily result in more support for Black-White social interaction.

My second explanation for the non-significant results for neighborhood and occupational structures is that countervailing trends may be at work in these
environments. While some Whites have cooperative, equal status, personal relationships with other groups in these settings, others likely do not. Still others may have contact with members of other groups, but only in competitive or hierarchical relationships. The New York Times survey does not provide sufficient detail to ascertain the multiplicity of these effects. Furthermore, residential and occupational effects may be working in both positive and negative ways. Because integrated neighborhoods and workplaces likely do not consistently afford the type of intimate, cooperative, and egalitarian contact shown to improve attitudes toward interracial relationships and because they likely do not consistently provide contrary conditions leading to pessimistic or negative attitudes toward intermarriage, both of these institutions are placed at a position near the center of the social contact continuum (see figure 1). Additional research and contextual data are needed in order to ascertain what is taking place in these multifarious situations.

**COMMERCIAL SETTING**

The final social setting examined, shopping, was found to be highly significant, but negatively related to attitudes toward interracial marriage. The data indicate that Whites who shop with Blacks are less likely than other Whites to approve of interracial marriage. The odds of approving of interracial marriage for Whites who shop with a few blacks were roughly thirty percent lower than for Whites who shop with no Blacks and the odds of approval among those who shop with fifty percent or more blacks were even lower still. This is true even when the effects of all social contexts are controlled for statistically in the model.
Shopping generally provides limited personal interaction with others, and the infrequent contacts and conversations that it does provide tend to be fleeting and transitory, and often hierarchical. Thus, shopping appears unlikely to provide the type of close, personal, cooperative contact needed to form positive attitudes toward outgroup members. The results for shopping accord with research conducted by Hewstone and Brown (1986) and Yancey (1999) who found superficial contact to preserve negative stereotypes, since such contacts provide mostly selective information.

An additional factor may be that some Whites who shop with large numbers of Blacks may be those who feel trapped in transition neighborhoods. As a result, they may be unsympathetic to the changes occurring in their neighborhoods. While I have controlled statistically for age, education, and degree of residential segregation, this effect may still be present and should be investigated in future research. Due to the superficial, hierarchical, and at times competitive contact potentially present in commercial settings, shopping is placed at a position on the right side of the social contact continuum (see figure 1). Apparently such settings violate a sufficient number of favorable contact conditions that the interactions occurring in these settings frequently lead to negative racial attitudes.

**THE CRITICAL ROLE OF FRIENDSHIP**

While the focus of this research is more on contact than friendship *per se*, friendship appears to be a critical component of contact. Friendship was incorporated in the analysis mainly to control for the effects of extraneous factors. While friendship accounts for these effects statistically in the complete logistic regression model, it has an
interesting effect on two of the variables examined specifically. When comparing the constrained model (without the friendship scale) to the full model which includes the friendship measure, the variables integrated religious service attendance and region show considerable variation.

In the constrained model, attending church with Blacks is highly significant ($p = .003$), whereas when friendship is included to comprise the full model, the significance level drops substantially ($p = .02$), although it is still statistically significant at the $p < .05$ level. What is more important is the fact that the odds of approving of interracial marriage decrease by approximately 12 percent when friendship is included in the analysis. Since AIC, BIC, and likelihood ratio chi-square fit statistics confirm that the unconstrained model is the best fit for the data, it can logically be deduced that friendship shares a significant amount of variance with interracial religious settings. This effect provides further justification for including the friendship measure as a control for outside factors. By statistically controlling for friendship in this manner, the effect and magnitude of the religious contexts of contact can be teased out more efficiently and effectively. Without this control variable, the influence of interracial religious attendance on attitudes would appear to have a much larger effect than it actually does.

The variable region has a similar relationship to racial attitudes when the friendship scale is included. In the unconstrained model, all categories (with the exception of the Northeast) are significantly different from the West in their attitudes toward interracial marriage. Once friendship is included in the full model, however, only the South remains significantly different from the west. While only the South remains statistically significant in the final model, the strength of the odds ratios increase for each
category of region, once friendship is included. Again, these effects provide an additional illustration of the consequences of friendship in the formation of racial attitudes and approval of interracial marriage, as shown by Sigelman and Welch (1993), Pettigrew (1997), and Yancey (1999).

CONCLUSION

I began this research by combining two bodies of literature, the first on the conditions under which social contact ameliorates potential conflict between groups, and the second on the factors related to inter-group marriage in the United States. I utilized these two streams of research literature to develop a conceptual model examining attitudes toward interracial unions. The model relies on both contact factors and factors known to influence interracial marriages, though the focus throughout the paper has primarily been on the context under which contact takes place. I have argued that the context of contact is a critical factor in understanding and explaining attitudes toward interracial marriage and I have specified the arenas where such contacts either enhance or exacerbate intermarriage attitudes.

My primary conclusion is that attitudes toward interracial marriage are influenced differentially in various social arenas or environments, and these effects occur even when friendship, a critical variable in the formation of racial attitudes, is controlled for statistically. These environments can be ordered on a cohesive dimension, characterized in terms of the amount of intimate, personal, and egalitarian contact they likely provide. Ultimately, those settings likely exemplified by the type of contact represented near the extremes of the social contact continuum have been shown to be significantly related to
Whites’ attitudes toward intermarriage. As predicted, those social situations believed to meet a minimum threshold of positive contact have been shown to improve attitudes, whereas those exemplifying a sufficient number of negative contact factors have been illustrated to exacerbate attitudes toward inter-group marriage. Interracial religious settings and educational atmospheres, both of which typically exemplify positive contact characteristics, were found to contribute to improved attitudes toward interracial marriage among Whites in the United States. Alternatively, interracial commercial settings, believed to be characterized more by superficial and hierarchical contact, were found to be associated with negative attitudes toward interracial relationships among Whites.

Furthermore, the social settings believed to typify neither type of contact (not sufficiently positive or negative), or both types of contact (a simultaneous blend of positive and negative), were found to be statistically unrelated to attitudes toward interracial marriage. Racially integrated workplaces and neighborhoods are presumed to belong to one of these two contact categories, as they were not significantly associated with attitudes toward interracial marriage among Whites. In these instances, it appears that countervailing effects may also operate, with some occupational and neighborhood settings facilitating and some inhibiting.

Determinations of contextual contact in these settings were based on the respondent’s reporting of their degree of contact. However, questions regarding settings where multiple types of contact are possible were not included in the New York Times questionnaire. While the contact effect may still be present in these situations, the data do not allow a further examination of these effects. Future research that provides a more detailed analysis of the context of contact may be able to tease out these differences.
Although I have only examined the relationship between these arenas and attitudes about interracial marriage, it is probable that similar results would be present for other attitudes and interracial behaviors. While age, education, and region have proven to be favorable predictors of Whites’ racial attitudes in a multitude of previous studies (Heer, 1966; Tinker, 1982; Sandefur & McKinnel, 1986; Schoen, Wooldredge, & Thomas, 1989; Tucker & Mitchell-Kernan, 1990; Kalmijn, 1993, 1998; St. Jean & Parker, 1995; Qian, 1997; Heaton & Jacobson, 2000), other contextual variables have not been examined sufficiently. Additional research examining specific details about the context of specific social settings would be beneficial to uncovering the manner in which social settings are related to additional interracial attitudes. Furthermore, future research that examines other social structures where Blacks and Whites interact might also provide additional clarification of the context of contact.

Finally, the New York Times survey did not ask Blacks about the degree of contact they have with Whites. The authors of the New York Times survey may have assumed that, because of the relative group size, almost all Blacks have contact with Whites, or they may have assumed that such questions would be insulting to Black Americans. Nevertheless, the contact Blacks have with Whites likely varies greatly across different social settings.

Although somewhat dated, the National Survey of Black Americans asked questions about the degree of contact Black Americans report having with Whites. Utilizing such data, researchers have shown that contact with Whites is likewise related to attitudes of Black Americans (Powers and Ellison, 1995; Ellison and Powers, 1994).
Additional analyses of data from other racial and ethnic groups would allow a
generalization of the contact hypothesis to such groups and would further clarify the
effects of contextual factors in the study of interracial attitudes and relationships. As
suggested by Bobo and Fox (2003), the micro processes in many social structures that
facilitate good race relations are yet to be addressed. Future research would be wise to
utilize and extend the context of contact in order to better address such gaps in the current
stream of interracial relations literature.
REFERENCES


## APPENDIX

### Table 1  
**Descriptive Characteristics of Sample and Variables**  
**New York Times & General Social Survey**

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### Table 1: Descriptive Characteristics of Sample and Variables

**New York Times & General Social Survey**

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Table 2. Relationship of Friendship Variables to Approval of Interracial Marriage 
(Logistic Regression)

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Table 4. Goodness of Fit Statistics – AIC, BIC, BIC’ & LR Test

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<td>Gender Included</td>
<td>1.064</td>
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<td>-107.03</td>
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<td>Friendship Included</td>
<td>1.062</td>
<td>-5482.68</td>
<td>-107.03</td>
<td>Chi-square = 29.85</td>
</tr>
<tr>
<td>Friendship Excluded</td>
<td>1.091</td>
<td>-5459.69</td>
<td>-84.04</td>
<td>df = 1, p &lt; .001</td>
</tr>
</tbody>
</table>
Table 5.  Logistical Regression of Social Settings on Approval of Interracial Marriage, Without and With Social Friendship Variable Included

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLES</th>
<th>Without Friendship</th>
<th>With Friendship</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>P-value</td>
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<tr>
<td>Education</td>
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<td>Frequency of Church Attendance</td>
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<tr>
<td>Attend Church with Blacks</td>
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<td>.003</td>
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<tr>
<td>Employment Status</td>
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<td>.07</td>
</tr>
<tr>
<td>Work with Blacks</td>
<td>.27</td>
<td>.08</td>
</tr>
<tr>
<td>Blacks in Neighborhood</td>
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<td>.15</td>
</tr>
<tr>
<td>Shop with Blacks</td>
<td>-.27</td>
<td>.10</td>
</tr>
</tbody>
</table>

| CONTROL VARIABLES                      |       |         |           |       |         |           |
|                                        |       |         |           |       |         |           |
| Age                                    | -.77  | .001    | .46       | -.70  | .001    | .50       |
| Region                                 |       |         |           |       |         |           |
| West (Reference)                       | Wald  = 24.27 | (p <.001) | Wald  = 19.54 | (p <.001) |
|                                        |       |         |           |       |         |           |
| Northeast                              | -.51  | .06     | .60       | -.32  | .24     | .72       |
| Northcentral                           | -.63  | .01     | .53       | -.45  | .08     | .64       |
| South                                  | -1.19 | .001    | .31       | -1.03 | .001    | .36       |
| Income                                 | .15   | .05     | 1.16      | .17   | .03     | 1.19      |
| Political Party Identification          |       |         |           |       |         |           |
| Republican (Reference)                 | Wald  = 16.33 | (p < .001) | Wald  = 14.74 | (p < .001) |
|                                        |       |         |           |       |         |           |
| Don’t Know                              | .87   | .001    | 2.39      | .82   | .003    | 2.26      |
| Democrat                                | .56   | .001    | 1.75      | .55   | .001    | 1.74      |
| Friendship with Blacks                  | .31   | .001    | 1.37      |       |         |           |
| Constant                               | 2.57  | .001    | 13.12     | 1.85  | .001    | 6.36      |

MODEL FIT STATISTICS

<table>
<thead>
<tr>
<th></th>
<th>CONSTRAINED MODEL</th>
<th>FULL MODEL</th>
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</thead>
<tbody>
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</tr>
<tr>
<td>AIC</td>
<td>1.091</td>
<td>1.062</td>
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<tr>
<td>BIC</td>
<td>-5459.69</td>
<td>-5482.68</td>
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<tr>
<td>BIC’</td>
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<td>-107.03</td>
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<tr>
<td>Likelihood Ratio Chi-Square Test</td>
<td>Chi-Square = 29.85</td>
<td>df = 1</td>
</tr>
</tbody>
</table>
Figure 1 – The Social Contact Continuum Settings

Church College Workplace Neighborhood Shopping
Intimate, Equal Status, Cooperative (COHESIVE) Casual, Superficial, Hierarchical (HIERARCHICAL)