

Are Blacks Really Less Trusting than Whites? Revisiting the Race and Trust Question

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Many scholars have concluded that blacks are less trusting than whites. The research presented here calls that conclusion into question. Previous research has been based on the standard trust measure, which may not be well suited to understanding how trust varies with social categories such as race. Building on theories of self-categorization and social identity, we argue that blacks are not less trusting than whites as suggested in previous work. Instead trust is expected to be greater within race-category boundaries than across race-category boundaries. A new experiment designed to test this argument is employed. The results strongly support our predictions. This research also addresses how trustworthiness varies with race-category. Results for trustworthiness do not map on to those for trust. Instead, blacks in this research show a higher level of trustworthiness than whites, regardless of other's race-category.

Are African Americans less trusting than whites? Many researchers have answered this question affirmatively (Brehm and Rahn 1997; Claibourn and Martin 1997; Demaris and Yang 1994; Ellison and London 1992; Patterson 1999; Putnam 2000). Importantly, results from previous work suggest that race-category differences in trust remain after controlling for numerous correlates of trust, such as income and education.

Potential race-category differences in trust are important because the literature points to many societal- and individual-level benefits of trust. To name a few examples, trust is associated with higher levels of civic engagement (Brehm and Rahn 1997; Jennings and Stoker 2004; Kwak, Shah and Holbert 2004; Uslaner 2002), political participation (Gutterbock and London 1983; Sullivan and Transue 1999; Watts 1973), and social cooperation (Kelley and Stahelski 1970; Rotter 1980; Yamagishi 2001).

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On the other hand, a lack of trust can have a number of deleterious effects (Kramer and Carnevale 2003). For example, distrust of others is often rooted in the belief that others have competitive intentions, which may lead low-trusters to act defensively or competitively (Rotter 1980). These actions can, in turn, bring about competitive actions from others, creating a self-fulfilling prophecy (e.g., Brewer and Brown 1998). Similarly, distrust can lead to self-isolation, such that perceptions of others' apparent lack of trustworthiness cannot be disproved (Gambetta 1988). In short, previous work on the benefits of trust (and negative effects of distrust) suggests that if there are trust differences between blacks and whites, these differences may partly determine other differences between race categories, such as inequality (Fossett 1988; Massey 1990; Oliver and Shapiro 1995; Wilson 1996) and blacks' lower levels of civic engagement and political participation (Bullock and Scicchitano 2001; Ellison and London 1992; London 1975).

Researchers have offered a number of possible explanations for *why* blacks are less trusting. But, they have done so without first convincingly demonstrating that blacks *are* less trusting than whites. The problem is that all existing research (to our knowledge) on race-category differences in trust uses some variant of the so-called "standard trust measure." Study after study, using a wide range of control variables, has found that blacks respond less trustingly than whites to the standard measure. The persistent difference in blacks' and whites' responses to the standard trust question is the basis for researchers' conclusion that blacks are less trusting.

This research calls into question the conclusion from previous work that blacks are less trusting than whites, arguing that the standard survey measure more likely tracks *category-based trust*, rather than race-category differences in generalized trust. To this end, we begin by reviewing work on race and trust and then point to some problems with the standard trust measure. These problems are especially acute when the standard measure is used to address whether there are race-category differences in trust. Thereafter, we build on social identity theory to predict how trust depends on race-category. The social identity approach suggests that trust will be higher within race-categories than between race categories.

Our category-based trust prediction is tested against the prediction from previous work that suggests a "main effect" of race category, i.e., blacks are less trusting than whites. We report the results of a new experiment designed to test arguments linking race category and trust. Although the premise of this research is race-category differences in trust, the experiment also affords us the opportunity to draw on previous work to address race-category differences in the counterpart to trust:

trustworthiness. We agree with Glaeser and colleagues (2000:812) that “experiments can be integrated with surveys to measure individual-level variation in traditionally hard-to-measure characteristics such as trust and trustworthiness.”

Previous Work on Race and Trust

While there are differences in how researchers define the term trust, an interdisciplinary review of the trust literature showed that the most common conception of trust is “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another.” (Rousseau et al. 1998:395) Much work, including most research on the benefits of trust, further delimit the definition to trust in strangers. This “generalized trust” entails an expectation that others *in general* will act in benign ways when there is an incentive for them to act otherwise (Yamagishi and Yamagishi 1994). After briefly reviewing results from previous work on race-category differences in generalized trust, we argue that this research (which uses the standard trust item) may be tracking *category-based trust* rather than generalized trust.

Researchers have addressed a wide range of antecedents of generalized trust (Alesina and La Ferrara 2002; Brehm and Rahn 1997; Delhey and Newton 2003), and have been especially interested in the effects of race category on trust. Specifically, previous studies have focused on the much lower levels of trust among blacks (compared to whites) in the United States, showing that these race-category differences in trust remain after controlling for a host of other factors that vary by race category and that are known to influence trust (e.g., income, education, community size). Importantly, the vast majority of these studies have been based wholly or in part on the standard trust question (Alesina and La Ferrara 2002; Brehm and Rahn 1997; Claibourn and Martin 2000; Demaris and Yang 1994; Glaeser et al. 2000; Hughes 1986; Marschall and Stolle 2004; Putnam 2000).

While there is some variation in the accounts given for why blacks are less trusting than whites, most arguments revolve around similar (and reasonable) assumptions. For example, Claibourn and Martin (2000:272) argue that, along with gender and education, race category serves as a key source of political inequality, “and people on the negative side of that inequality have more reason to be less trusting of their fellow humans than do people on the positive side of political inequality.” Consistent with this reasoning, they find that whites are more trusting than blacks.

More generally, Brehm and Rahn (1997:1016) suggest that blacks' lower trust may be due to experiences with "discrimination, insularity, or other unobserved processes." Similarly, Demaris and Yang (1994:327) suggest that trust differences stem from blacks' "disadvantaged position vis-à-vis whites in the socioeconomic opportunity structure." Importantly, however, these trust differences remain after controlling for education, income and other measures of socioeconomic status and opportunities (e.g., Alesina and La Ferrara 2002).

The Standard Trust Measure

The conclusion from previous work that blacks are less trusting than whites is based on the standard survey measure of trust. This measure simply asks respondents, "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" Despite its widespread use, a number of researchers have pointed to problems with this measure. Yamagishi and colleagues (1999) and Miller and Mitamura (2003) have suggested that the standard item may conflate trust with caution. In addition, Glaeser and associates (2000) have presented evidence that suggests the standard item may not accurately predict trusting *behavior* (see also Miller and Mitamura 2003). Interestingly, they find that the measure does predict *trustworthy* behavior (i.e., behavior that honors trusting behavior).

We suggest that the standard item may be especially problematic when researchers use it to study race-category differences in trust. This is due to the item's reference category. Specifically, respondents are asked whether "most people" can be trusted. The question is: who are "most people" and how does this depend on the respondent's race category?

According to the 2005 report by the U.S. Census Bureau, non-Hispanic whites make up about 67 percent of the U.S. population, while blacks make up only about 13 percent. In previous years, when much of the data on race-category differences in trust were collected, non-Hispanic whites outnumbered blacks by even larger numbers. Because whites have greatly outnumbered blacks in the U.S. population since researchers have been asking the standard question, it is reasonable to assume that the phrase "most people" in the standard measure triggers the cognitive category "white people" for both white and black respondents. The question thus becomes: what are the implications for how we interpret whites' vs. blacks' responses to the standard measure?

Race-category differences in responses to the standard trust measure may actually reflect *category-based trust* (Buchan, Croson and Dawes 2002; Orbell, Dawes and Schwartz-Shea 1994; Tanis and Postmes 2005),

rather than race differences in generalized trust. When trust is based on social categories, the potential truster's perceptions of others' intentions (whether they are perceived to be trustworthy) are influenced by salient social categories such as race. This research uses theories of self-categorization and social identity (Tajfel 1982; Turner 1985) to predict category-based trust: specifically, that blacks are not less trusting than whites as suggested in previous work, and that trust is higher within race-category boundaries than across race-category boundaries.

Social Identity and Category-Based Trust

Social identity theory (Tajfel 1982) and the related self-categorization theory (Turner 1985) explain how group- and category-boundaries influence a wide range of behaviors, such as cooperation, conflict and, most importantly for current purposes, interpersonal trust (Buchan, Croson and Dawes 2002; Kramer, Brewer and Hanna 1996). Social identity is "that part of the individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership." (Tajfel 1981:255) In contrast to personal identity, which is "highlighted by thinking of the self in terms of unique attributes," social identity "operates when an individual thinks in terms of similarities to other members of an in-group and differences from members of an out-group." (Deaux 1996:780)

Two fundamental findings from previous research on social identity guide our central argument linking race-category and trust. First, previous research shows that race and ethnicity are especially strong dimensions along which people categorize themselves and others (Brewer and Campbell 1976; Tajfel 1982). Second, researchers have long pointed to the effects of intergroup boundaries on interpersonal trust (see Tajfel 1982), predicting that actors trust ingroup members more than outgroup members.¹ In fact, Brewer (1999:433) goes a step a further by *defining* ingroups as "bounded communities of mutual trust and obligation that delimit mutual interdependence and cooperation." She goes on to note that this trust is generalized to all category members, even those with whom the truster has no direct personal experience. "An important aspect of this mutual trust is that it is depersonalized, extended to any member of the ingroup whether personally related or not." (Brewer 1999:433) This is the essence of category-based trust.

Previous studies have addressed the role of category-based trust for other types of social categories, such as gender (Orbell, Dawes and Schwartz-Shea 1994), university affiliation (Tanis and Postmes 2005; Yuki et al. 2005), and experimentally created "minimal groups."

(Buchan, Croson and Dawes 2002; Yamagishi and Kiyonari 2000) These studies generally report strong, but often conditional, effects of social categories on trust. For example, Orbell, Dawes and Schwartz-Shea (1994) found that both males and females expected females in general to be more trustworthy than males. However, these participants did not extend trust to any given *individual* based on the potential trustee's gender. According to these authors, target-based expectancies (based on characteristics of the individual other than gender) overwhelmed category based expectancies.

Similarly, Tanis and Postmes (2005) found that, when participants could only identify each other by category memberships (based on university affiliation), they extended higher levels of trust to ingroup members than outgroup members. But when participants were shown a photo of the ostensible other, "interpersonal" trustworthiness overrode the category-based trust effect, resulting in similar levels of trust in ingroup- and outgroup-members.

These results show that actors extend trust based on social categories, but individuating information (a photo or view of the target of trust) can thwart category-based expectancies. However, we expect that trust (or distrust) stemming from a target's membership in the same (or different) race category as the potential truster will be less affected by individuating information than social categories addressed in previous work, such as gender or university affiliation. We expect the effects of race-based expectancies to be more durable for a number of reasons. Perhaps most importantly, the United States is far more segregated by race than other categories like gender or university affiliation. As a result, most people find themselves in situations of interdependence with persons of a different gender more frequently than with persons of a different race. To name one obvious example, U.S. households are far more likely to be heterogeneous with respect to gender than race (Hobbs 2005). As a result of this – not to mention the long history of more general race-based societal divisions – we expect the trust within (and distrust between) race-based social categories to be much stronger and less subject to elimination via limited amounts of individuating information about the other (e.g., simply being able to see him or her) than is the case for gender or other bases of social categorization.

To sum up, the social identity and category-based trust approach suggests that race-category will guide trusting behavior. That is, if actors use the black/white dimension to categorize themselves into ingroups and outgroups (as strongly suggested in previous research), and actors trust ingroups more than outgroups, it follows that actors will display

more trusting behavior toward their own race-category than a different race category. Thus,

Hypothesis 1a: Trusting behavior will be higher within race categories than between race categories.

Note that Hypothesis 1a, when applied to blacks and whites, stands in sharp contrast to the conclusions of previous work. Previous studies predict a main effect for race category, such that whites will be more trusting than blacks:

Hypothesis 1b: Whites will show more trusting behavior than blacks.

Race & Trustworthiness

While there has been much research on trust and race, no work (to our knowledge) has addressed whether and how race category affects *trustworthiness*, i.e., behavior that honors trust (if trust is extended). This is an important omission because the decision to trust another necessarily raises the issue of trustworthiness. Of course, the absence of previous work offers little guidance for predicting how trustworthiness may vary within vs. between race categories. Thus, our discussion of trustworthiness is necessarily more tentative than the preceding discussion of trust.

Trust Surveys and Trustworthy Behavior

An important finding in the literature on trust is that it is positively related to trustworthiness. Previous work has established this basic relationship using both survey measures (Rotter 1980), as well as behaviors in controlled laboratory experiments (Orbell and Dawes 1993). Researchers have offered a number of possible explanations for the positive relationship between trust and trustworthiness. Rotter notes that, because they believe that others tend to be untrustworthy, there may be little moral pressure on low trusters to act in a trustworthy manner. Orbell and Dawes (1993) explain the relationship via a “cognitive miser” perspective. They suggest that actors simply project their own intentions onto others. Thus, trustworthy actors tend to believe that others are also trustworthy (i.e., trustworthy actors are trusting).

What are the implications of the positive correlation between trust and trustworthiness for current purposes (i.e., when considered in conjunction with arguments linking race category and trust)? If trust

is higher within than between race categories and trustworthiness is positively related to trust, then:

Hypothesis 2a: Trustworthy behavior will be higher within race categories than between race categories.

The positive relationship between trust and trustworthiness leads to a competing hypothesis when coupled with the basic conclusion of the race and trust literature, i.e., that whites are more trusting than blacks. If whites are more trusting and there exists a positive relationship between trust and trustworthiness, then whites should be more trustworthy than blacks. This gives:

Hypothesis 2b: Whites will show more trustworthy behavior than blacks.

Previous research by Glaeser et al. (2000) suggests that one may observe an effect like the outcome predicted by Hypothesis 2b, even if there is no support for the parallel trust prediction (Hypothesis 1b). Glaeser and colleagues found that the standard measure of trust does not predict trusting behavior, but that those who respond more trustingly to the standard measure tend to engage in more trustworthy behavior. (But see Alesina and La Ferrara 2002 for criticisms of Glaeser et al.'s results.) If so, this may lead to a pattern like the one outlined in Hypothesis 2b without support for Hypothesis 1b.

Testing the Hypotheses

The empirical component of this research, is experiment-based and thus represents a significant departure from the studies reviewed earlier, which tend to draw on surveys of representative samples of the U.S. population. It is therefore important to be explicit about what experiments on race category and trust can and cannot accomplish, relative to their survey counterparts.

We argued that a key problem with survey approaches to the study of race and trust is they are potentially based on a flawed measure, i.e., the "reference category" problem. A potential solution is to modify the question to correct for this problem and redistribute the survey measure to a representative sample. The trouble with this solution (besides the price-tag) is that other lines of research reviewed earlier suggest that survey measures of trust do not predict trusting *behavior* very well. Thus, even if the reference category problem is corrected, we may still

be left with a measure that does not map onto trusting behavior. For this reason, our predictions are tested using behavioral measures of trust in a laboratory setting.

Experiments are obviously based on a very different logic than representative surveys. Most importantly, participants in our experiments are not representative of any population. Thus findings cannot be generalized to any broader population (Lucas 2003; Martin and Sell 1979). Instead our experiment is designed specifically to test predictions about race-category-based trust generated from social identity theory. If the results support the predictions, then we can reasonably increase our confidence in the theory by some increment, and increase it even further pending the results of tests in other kinds of settings, experimental or natural. If they fail to support the predictions, the theory must be modified or rejected.

Design

Participants were recruited from introductory classrooms at a large southeastern university using the opportunity to earn money as an incentive. A total of 147 students (98 whites and 49 blacks) participated.

Settings and Procedures

Participants were scheduled in groups of eight or twelve.² We oversampled on the black undergraduate student population, but did not explicitly block on race. (Blacks make up slightly more than 13 percent of the university's undergraduate population and a third of the participants in our study.) Not blocking on race allowed us to vary the proportion of blacks in the groups. As a result, we are able to demonstrate the robustness of our results by showing that the impact of race-category on trust and trustworthiness does not depend on having a specific proportion of blacks and whites in sessions.³

Upon entering the laboratory, each participant was randomly assigned to one of eight or twelve desks arranged in a circle around a large room. A unique letter was attached to the front of each desk. The letters were used to identify participants to each other during the study. The desks were arranged such that each participant could clearly see all other participants, and so that participants seated in adjacent desks could not see each other's materials or responses.

Each desk was pre-assigned to interact with other desks in the room in a predetermined order. A series of packets on each desk contained instructions for each interaction. Participants were instructed to open each

packet one at a time, in the order in which they appeared. The first packet contained a consent form, a brief form containing basic demographic questions and a pre-experimental questionnaire that contained the standard trust measure and several filler items about friendship patterns.⁴ Subsequent packets included instructions and decision forms for each of our behavioral measures of trust and trustworthiness.

The Investment Game

Our measures of trust and trustworthiness are based on the investment game developed by Berg, Dickhaut and McCabe (1995). Since its introduction, the procedure has become one of the most widely used behavioral measures of trust and trustworthiness. The game involves two players, a sender (truster) and a receiver (trustee). The truster is given six resource points (which translate into money) and is told that he or she can send any amount ($0 \leq S \leq 6$) of those points to the trustee. Any amount, S , sent by the truster gets tripled before it reaches the trustee. Thus, for example, if the truster sends three of the original six resource points to the trustee, the trustee will receive nine. The trustee, in turn, may return any portion ($0 \leq R \leq 3S$) of the tripled amount to the truster. Unlike S , R is not subject to a multiplier. Thus, following the example above, imagine the trustee receives nine after the tripling of $S = 3$. Further assume that the trustee decides to send four of those nine back to the truster. In this case, the truster receives four points (in addition to the three that he or she kept from the initial endowment) and the trustee receives five points.

Following previous work (Berg, Dickhaut and McCabe 1995; Buchan, Croson and Dawes 2002; Glaeser et al. 2000), S and R are our measures of trust and trustworthiness, respectively. We also follow previous work (Fischbacher, Gächter and Fehr 2001; Oosterbeek, Sloof and van de Kuilen 2004) in assessing R via the "strategy method." The strategy method elicits a value of R from the trustee for each possible value of S . In other words, rather than being told the value of S selected by the truster and then deciding how much to return, the trustee indicates how much he or she will return if the truster sends one (or, after the multiplier, three), how much he or she will return if the truster sends two (after the multiplier, six), and so on. The instructions emphasize that the trustee is committed to whatever value of R he or she chooses that corresponds to the value of S actually selected by the truster.

The strategy method offers a number of advantages over simply assessing R for the specific value of S chosen by the truster. First, measuring R across the entire range of S values allows a more robust assessment of trustworthy behavior, i.e., one that is less subject to

particular values of S . In addition, the strategy method helped ensure that participants' choices were confidential.

To further ensure that choices were confidential, the instructions informed participants that they would not know anyone's choices during or after the study. (We also told participants that a constant would be added to their pay at the end of the study in order to disguise others' choices.) In fact, unbeknownst to the participants, the choices of trusters and trustees were completely independent. Imagine, for example, two participants A and B . Further imagine that Participant A 's instructions state that she is paired with Participant B (e.g., that A is the truster, and B is the trustee). In no case would Participant B 's instructions pair him or her with Participant A . Instead, all Participant B 's pairings would be with participants other than A .

Each participant made decisions in four investment games, twice as truster and twice as receiver. (The terms "trust" or "trustworthy" were not used in our instructions to participants.) No two participants were paired with each other more than once. Thus, each participant made a choice in each of four one-shot investment games.

The instructions emphasized that participants were not to communicate or gesture to each other at any point during or after the study. Several research assistants stationed around the room helped to ensure this did not happen. In addition to recording the race and gender of each participant, these same research assistants also rated each participant's physical attractiveness on a scale of 1 (very unattractive) to 5 (very attractive).⁵ Previous studies have reported effects of gender (Buchan, Croson and Solnick, Forthcoming; Orbell, Dawes and Schwartz-Shea 1994) and physical attractiveness (Mulford et al. 1998; Wilson and Eckel 2006; see also Solnick and Schweitzer 1999) on various aspects of trust and trustworthiness. Thus, these variables were included as controls.

After completing all decisions, participants answered a post-experimental questionnaire that asked, among other things, whether they knew any of the participants with whom they were paired in the investment games. Thereafter they were paid (payments averaged \$20) and dismissed.

Results

Replication of Standard Measure Results

Experimental support for the arguments would be much more convincing if we first establish that blacks in our sample respond less trustingly than whites to the standard trust survey measure. This is exactly what findings

indicate. Whites in our sample were nearly twice as likely as blacks to respond trustingly to the standard survey item (44.3 percent vs. 22.9 percent), $\chi^2 = 5.75$, $p = .02$, two-tailed. Thus, race-category differences in our sample are in line with those found in representative samples of the U.S. population. We now turn to whether behavioral differences in trust mirror these survey results, or whether they are more consistent with the social identity approach to trust and race-category.

Pairings and Analyses

Data were collected on 294 distinct pairings for both trusters and trustees. However, because we are interested in trust in (and trustworthiness toward) strangers, our analyses are based only on those pairings in which neither participant reported knowing the other. Of the 294 participant pairs for the trust data, at least one person in 42 pairings (13.6 percent of all pairings) reported knowing the other. Of the 294 pairings for the trustworthy data, at least one member of 23 pairs (or 7.8 percent) reported knowing the other. Thus, analyses of the trust data are based on 254 pairings, while analyses of the trustworthy data are based on 271 pairings.

Because there are multiple observations from each subject for each dependent measure, we should expect unmeasured errors to be correlated for each subject. To correct for correlated error, we estimated OLS regression models using a robust variance option that produces robust standard errors across clusters defined by an identification number given to each participant.

Control Variables

Findings from previous research point to the need to control for a number of factors. In addition to the genders of the participant and the person with whom he or she is paired for a given interaction, our analyses control for other's physical attractiveness. As noted earlier, our measure of physical attractiveness is a subjective rating (from 1 to 5) by a research assistant. The mean of this variable is near the midpoint of the scale (Mean = 3.12, S.D. = 1.13). Finally, our analyses control for the proportion of blacks in each experimental session. The proportion ranged from 0 to .75, with a median of .25.

Race Category and Trust

Main predictor variables are race of truster (black coded 1), race of trustee (black coded 1) and the term *race-difference*, which denotes whether the truster and trustee are of the same (coded 0) vs. different (coded 1) race-

Table 1: Estimates of Unstandardized Coefficients

Variable	Model 1	Model 2
	Trust	Trustworthiness
Black <i>Truster</i>	.11 (.32)	.00 (.02)
Black <i>Trustee</i>	.14 (.29)	.06 * (.03)
Race-Category Difference	-.63 ** (.25)	.02 (.02)
Participant's Gender (Male = 1)	.45 (.29)	.02 (.02)
Other's Gender (Male = 1)	.04 (.23)	-.01 (.02)
Other's Physical Attractiveness	-.07 (.09)	.00 (.01)
Prop. Black in Session	.40 (.80)	.03 (.06)

Note: * $p \leq .05$ ** $p \leq .01$

category. The dependent measure is simply the number of resources (from 0 to 6) entrusted to the trustee (Mean = 3.54, S.D. = 1.68). The results of this analysis are displayed in Model 1 of Table 1.

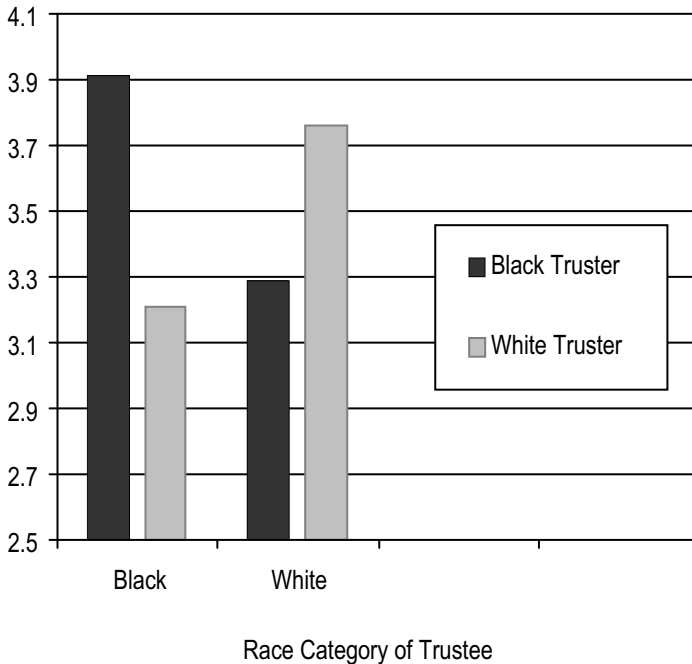
None of the control variables significantly predicted trusting behavior. Nor did race of truster ($p = .74$) or the race of the receiver ($p = .63$) independently affect trusting behavior. In fact, the only significant predictor of trusting behavior is the predictor variable, *race difference*. This indicates that participants entrusted significantly more to members of their own race category than to members of the other race category, $p = .01$. Importantly, these results occur independently of the proportion of blacks present in the experimental session.

In short, the Model 1 results provide no support for the conclusion from survey research that blacks are less trusting than whites (see Hypothesis 1b). Instead, the results provide strong support for the argument linking racecategory and trust (Hypothesis 1a). That the results are consistent with our application of social identity to category-based trust can also be seen in Figure 1, which gives mean amounts sent (entrusted) by the race categories of senders and receivers.

Race Category and Trustworthiness

Results relevant to trustworthy behavior are given in Model 2 of Table 1. Analyses are based on the average proportion returned for all possible values of S . That is, the dependent variable is $R/3S$, averaged across all

Figure 1. How Trusting Behavior varies with Race Category of Truster and Trustee



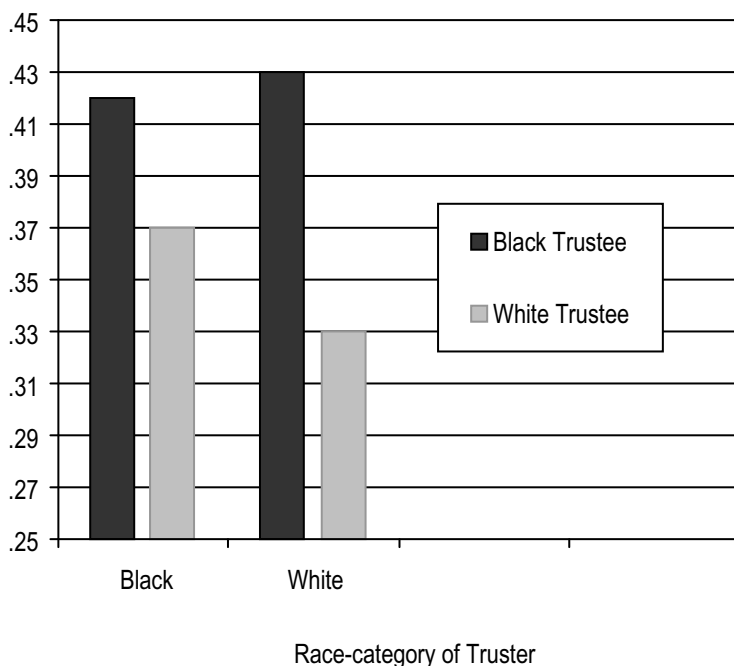
possible values of *S* (one through six), with a mean of .38 (*S.D.* = .14). We include all the same control variables and, as in the prior analysis, correct for multiple observations on the dependent measure by using a robust variance option that clusters by participant.

As shown in Model 2 of Table 1, no control variable had a significant impact on trustworthy behavior. In fact, only the race category of the trustee predicted trustworthiness, $p = .02$. However, it is in the *opposite* direction than suggested by Hypothesis 2b. That is, the results of the analysis show blacks engage in *more* trustworthy behavior than whites. As shown in Figure 2, regardless of the race category of truster, black participants returned an average of 23 percent more than whites. Thus, the analyses of the trustworthy data yield an unexpected, but interesting finding, which we take up in the discussion section.

Does the Survey Measure Predict Behaviors for Certain Race Categories Better than Others?

The results support the argument linking trusting behavior to race category. These behavioral data challenge the conclusions from previous

Figure 2. How Trustworthiness varies with Race Category of Trustee and Truster



work that blacks are less trusting than whites. Our theoretical argument (that trust is greater within than across race categories) is distinct from our suggestions about the potential problems with the trust measure that originally motivated us to develop that argument. But we can still ask whether the standard measure predicts trusting (and trustworthy) behavior for some combinations of social categories better than others. For example, does the measure predict the level of trust whites extend to other whites?⁶

To address this question, we regressed trusting behavior on responses to the standard survey measure for each of the four combinations of truster's and trustee's race categories (e.g., black truster and black trustee, black truster and white trustee, etc.). We controlled for own and others' genders, other's physical attractiveness and the proportion of blacks in the experimental session. We also corrected for correlated errors using the robust errors option.

The results of the four analyses are displayed in Table 2.⁷ The standard measure predicts trusting behavior for only one comparison. Whites who responded that "most people can be trusted" invested more in black trustees than whites who stated that "you can't be too careful" in dealing

Table 2: Estimates of Unstandardized Coefficients

Variable	White Ego	White Ego	Black Ego	Black Ego
	White Alter	Black Alter	Black Alter	White Alter
Survey Measure of Trust	.44 (.39)	1.49* (.58)	-.64 (.62)	-.53 (.48)
Participant's Gender (Male = 1)	.92* (.39)	.02 (.56)	-.64 (.63)	-.22 (.57)
Other's Gender (Male = 1)	.07 (.38)	-.61 (.55)	.56 (.69)	.56 (.45)
Other's Physical Attractiveness	-.11 (.12)	.09 (.36)	.73 (.44)	-.02 (.13)
Prop. Black in Session	-1.10 (1.20)	1.50 (1.50)	-1.36 (2.50)	.20 (1.51)

Note: *p ≤ .05

with strangers. Those characterized as “high” vs. “low” trusters using the standard measure do not demonstrate different levels of trusting behavior for any other combination of truster/trustee race category.

Does the lack of predictive power of the standard measure for all but one combination of truster/trustee race category constitute evidence against the arguments presented in this paper? Not at all. Our predictions were strongly supported by the experimental results reported in previous sections. That the standard trust measure did not track trusting behavior across race categories does not alter this pattern of support for the theoretical argument.

Although the lack of predictive power of the standard trust measure does not constitute evidence against our argument and hypotheses, when coupled with findings reported in previous work by Glaeser et al. (2000), the lack of predictive power in this study raises the question: why does the standard measure do such a poor job of predicting behavior, whether or not we account for the race-categories of trusters and trustees?

Does the standard trust measure predict trustworthiness, as found in previous work (Glaeser et al. 2000)? More importantly for current purposes, does the measure predict trustworthiness for certain combinations of trustee/truster race categories better than other combinations? To address this question, we conducted analyses like those for the trust data. . The results are given in Table 3.⁸ For the trustworthiness data, the standard trust measure only predicts trustworthiness of whites toward whites. For no other combination does the trust measure map onto trustworthy behavior. Thus, on the whole, the standard measure does not do a good job of predicting either trust or trustworthiness between various social categories.

Table 3: Estimates of Unstandardized Coefficients

Variable	White Ego White Alter	White Ego Black Alter	Black Ego Black Alter	Black Ego White Alter
Survey Measure of Trust	.10** (.03)	.06 (.04)	-.01 (.07)	-.01 (.04)
Participant's Gender (Male = 1)	.01 (.03)	.01 (.04)	-.11* (.05)	.06 (.06)
Other's Gender (Male = 1)	-.01 (.03)	-.11 (.08)	-.09 (.07)	.01 (.04)
Other's Physical Attractiveness	-.01 (.01)	.00 (.03)	.06 (.05)	.01 (.01)
Prop. Black in Session	-.04 (.10)	.24** (.09)	.07 (.19)	.00 (.11)

Note: * $p < .05$ ** $p < .01$

Discussion

The results reported above support the social identity argument linking race category and trust. Trusting behavior is significantly higher within race categories than across race categories. We found no support for the prediction taken from previous work, i.e., that blacks are less trusting than whites.

Race Category and Trustworthiness

While this research focused on category-based *trust*, the extension of trust necessarily raises the question of trustworthiness. Use of the investment game allowed us to address a heretofore neglected question: whether race-category differences in trustworthiness follow the same pattern as trusting behavior. We were able to ask whether extending higher levels of trust within vs. across one's race category is an optimal strategy. Results on trustworthiness, displayed in Figure 2, suggest that the answer – at least for white participants – is no. Blacks were more trustworthy than white participants regardless of the race category of the truster.

While our application of social identity theory predicts the key outcomes for this research (i.e., those associated with trusting behavior), we are not aware of any existing theory that would lead us to expect the patterns observed for trustworthiness. In fact, an extension of survey researchers' conclusions about trust to trustworthiness would lead us to expect exactly the opposite – that *white* participants would show more trustworthy behavior. We suggest two possible explanations for the unexpected finding that can be addressed in future work, one methodological and the other substantive.

Given our use of the strategy method to measure trustworthiness, it is possible that the findings for trustworthiness reflect race-category differences in the use of *contingency rules*, rather than trustworthiness. (We thank an anonymous reviewer for suggesting this possibility.) To at least partially address this explanation, we conducted follow-up analyses for return amounts (R) for each of the six possible values of S , controlling for the variables given in Model 2 of Table 1. For all six values of S (one through six), our results were consistent with the aggregate measure of trustworthiness given above: regardless of the amount sent and regardless of the race-category of the other, blacks participants acted in a more trustworthy way than whites (for all comparisons, $p < .05$). Although analyses provide additional confidence in the robustness of our results, future research should include a direct measure of trustworthiness to further assess the robustness of our strategy method findings.

Another possible explanation for the trustworthiness findings is that, compared to black trustees, white trustees believed they *deserved* a larger proportion of the gains from endowments entrusted to them and thus returned less, on average, than black trustees. Race-category differences in beliefs about deservingness are consistent with a range of sociological theories, including theories of legitimated inequality (Della Fave 1980; Walker and Zelditch 1993), and status and reward expectations theories (Berger and Webster 2006; Cook 1975). Although the specifics vary, these and related theories suggest that members of social categories who have traditionally occupied positions of power or who possess positively valued states of status characteristics (e.g. whites in the United States), tend to have a greater sense of entitlement than those who have less power or who possess negatively valued status characteristics. By this logic, white trustees in our study might have reasoned that they *personally* deserved a larger portion of the endowment than did black trustees. Such a process could have resulted in the outcomes observed for trustworthiness.

Unfortunately, we did not measure entitlement or personal deservingness in our study. And, to our knowledge, no research has looked at the relationship between these concepts and either trustworthiness in general, or return amounts in the investment game in particular. But future work should address these issues.

More generally, when coupled with the results reported above, the preceding discussion suggests that a social identity process determines how trust varies with race category, while a status or legitimated inequality process determines how trustworthiness varies with race category. The possibility that salient race categories generate divergent processes for trust and trustworthiness has a number of important implications for the maintenance of category boundaries and inequalities by social category and thus should be more fully explored in future work.

Race and Category-based Trust

Perhaps the most immediate contribution of this research is that it calls into question longstanding conclusions about race differences in trust. As discussed earlier, researchers have offered a number of different explanations of *why* blacks are less trusting without (at least to us) convincingly demonstrating that blacks *are* less trusting than whites. Thus, compared to previous answers to the race and trust question, interventions based on this research would shift the focus away from building trust within a given race category to establishing trust across race categories. Such an effort, of course, would entail a very different approach to how best to build trust.

Predicting Trusting Behaviors

A second contribution of our research is methodological. Like other recent studies (Glaeser et al. 2000; Miller and Mitamura 2003), this research suggests that researchers should exercise caution when using the standard survey measure of trust to understand actual trust differences. Specifically, while the measure predicted whites' trust of blacks, it did not predict trusting behavior for any other combination of own and other's race category. The question thus becomes why is the trust measure such a poor predictor of behavior?

The answer may lie in an extension of research reviewed earlier. Specifically, although individuating effects did not overwhelm race-category effects in our study, previous research has found that other category-based expectancies are subject to individuating effects. For example, as discussed earlier, Orbell, Dawes and Schwartz-Shea (1994) found that gender-based expectancies did not predict behaviors toward particular persons, arguing that individuating factors attenuated the effects of generalized gender-based expectancies.

A parallel process may explain the lack of predictive power of the standard measure for trusting behavior in our own and previous research. Specifically, when a respondent is asked whether "most people" can be trusted, he or she may have a specific (and large) collection of characteristics of those people in mind. Thus, when called upon to extend trust to a person in a face-to-face encounter, a wide range of factors, including physical features, mannerisms, and emotional expressions, may generate a divergence from a baseline attitude or belief about whether "most people" can be trusted.

Relatedly, the lack of predictive power of the trust measure may be explained with reference to the classic attitude-behavior problem in social psychology (LaPiere 1934). As noted by Ajzen and Fishbein (1977), there is

strong evidence that attitudes about general issues (e.g., whether “most people can be trusted”) do not predict specific behaviors (e.g., whether a person will trust another with a specific set of physical characteristics, mannerisms, and emotional expressions). Such factors likely cloud the predictive power of the standard measure.

The forgoing discussion suggests a critical gap in the literature on trust: what cues *do* actors use to determine whether an individual can be trusted? The studies by Orbell, Dawes and Schwartz-Shea (1994) and Tanis and Postmes (2005) found that individuating information overwhelmed the effects of certain forms of category-based trust. An important issue for future research is to understand which individual factors are most important in actors’ decisions to extend trust. We also need to address whether these factors do, in fact, accurately predict trustworthiness. To name one example, our findings showed that actors used trustee’s race category in deciding whether to extend trust. For instance, white participants in our study trusted other white participants more than they trusted black participants. Yet blacks were more trustworthy than whites toward white trusters. Thus, a key basis for white participants’ trust was erroneous.

Building Trust across Race Categories

The approach to the study of race and trust presented here suggests a range of other implications. Most exciting to us is that it suggests ways of increasing trust across race-categories. Specifically, results show that participants based their decisions about whether to trust on others’ race-categories. And, social identity theory predicts that actors have lower expectations regarding the trustworthiness of those from race categories other than their own. It follows that the key to increasing trust across race categories is to bring expectations about out-group members’ trustworthiness in line with those of expectations about in-group members’ trustworthiness.

One possible route to creating more positive expectations of out-group members’ trustworthiness is via the provision of information inconsistent with stereotyped expectations. Imagine, for example, a white person who must decide whether to extend trust to a black trustee. Further imagine that the truster subsequently receives feedback that is inconsistent with initial expectations (i.e., feedback indicating high trustworthiness), or consistent with initial expectations (low trustworthiness). Finally, imagine that the truster then interacts with a different black trustee. How will the second trust decision be affected by the feedback received following the initial trust decision?

Our application of social identity theory suggests that, because actors tend to base a decision to trust on a trustee's race category, any feedback the truster receives about the initial (black) trustee's trustworthiness will affect whether (or how much) trust is placed in subsequent (black) trustees. Feedback indicating high trustworthiness will lead to greater trust of someone from the same race-category as the initial trustee in subsequent interactions. Further social identity theory suggests that because trust decisions are made with respect to the race category of the trustee, the positive information about the trustworthiness of blacks will have a greater impact on subsequent decisions about whether to trust blacks than on decisions to trust whites. We are currently planning experiments designed to test these and related arguments.

Previous research suggests other possible interventions grounded in social identity theories. Classic field experiments in social psychology suggest that creating overarching goals can reduce inter-group conflict and hostilities (Sherif et al. [1961] 1988). Similar effects may obtain for building trust across race categories. More recently, Kurzban and colleagues (2001) have shown that the tendency to categorize others based on race category can be greatly reduced by making salient alternative (arbitrary) bases of categorization that cut across race category. Future research should address the implications of this work for creating trust across race-category boundaries.

Conclusion

As increased mobility has led to a weakening of recurrent local interactions and societies have become increasingly heterogeneous, the question of how trust varies with social-categories has become more and more important (Alesina and La Ferrara 2000; Putnam 2000). To this end, many researchers have attempted to address how trust varies along different dimensions of social differentiation. Arguably, the most active line of research in this regard has dealt with race-category differences in trust. Existing studies reviewed above have concluded that even after controlling for a host of other factors related to trust, blacks are less trusting than whites.

We have proposed that conclusions drawn from previous work on race and trust are not well justified. The problem is that previous research has been based on the standard trust measure, which is not well suited for understanding how trust varies with social categories such as race. Building on theories of social identity and category-based trust, we argued that blacks are not less trusting than whites. Instead, we predicted that trust is higher within race categories than across race categories. We

introduced a new experiment designed to test this argument, the results of which strongly support our predictions. Interestingly, however, results for trustworthiness did not map onto the trust results. Instead, blacks showed a higher level of trustworthiness than whites, regardless of other's race category.

There are a number of implications of our finding that blacks are not less trusting than whites. As noted earlier, we believe that one of the most important implications is that it suggests alternative approaches to increasing low levels of trust. We have already started planning an experiment, which will hopefully serve as a first step towards increasing trust across race categories. But many questions will undoubtedly remain, and this issue will keep researchers busy for some time. Given the many important benefits of trust, and the increasing heterogeneity of societies, we believe such prolonged efforts would be well worthwhile.

Notes

1. Yamagishi and Kiyonari (2000) offer an alternative to social identity theory's predictions about ingroup trust and favoritism. Specifically, these researchers question whether identity effects stem from a tendency for ingroup members to view their interests as interchangeable, as suggested by the standard social identity approach. They argued instead that identity increases cooperation with ingroup members by influencing actors' expectations about fellow ingroup members' behavior. Because this work focuses on minimal groups, it is not clear whether it applies to more significant real world social categories, such as race.
2. There was one too few participants in each of two experimental sessions. For these sessions, an undergraduate research assistant filled the vacancy. She was instructed to participate "as if" she was an actual participant. Her responses were, of course, not used in the analyses to follow. Actual participants did not express any suspicions about her involvement.
3. This is important for a second, related, reason: If we had blocked on race, and thus *all* our groups had an equal number of whites and blacks, each session would contain nearly four times the proportion of blacks that exists in the study population. Because, as explained below, participants were in full view of each other, this approach could have raised suspicions. The social category on which participants are frequently blocked in experimental studies (gender) does not pose the same problem, given the relatively equal proportions of males and females in most research university settings.
4. Thus, following previous work (Glaeser et al. 2000), we presented participants with the survey measure of trust prior to behavioral measures. An anonymous reviewer noted that this could have affected participants' responses on the behavioral measures. While possible, there are several reasons we do not believe this was the case. First, the filler items appeared

after the survey measure of trust, which should have reduced any tendency for participants to draw a connection between the survey and behavioral measures of trust. Perhaps more importantly, we know of no clear theoretical reason to expect that this would have influenced trusting behavior in the way we observed.

5. Admittedly, this is a crude measure. We could have taken photographs of participants and then had a panel of judges rate each photograph according to physical attractiveness. However, for current purposes, we did not feel that the possible payoffs for obtaining a potentially more reliable measure outweighed the potential drawbacks (e.g., participants' suspicions about why they were being photographed).
6. We thank several anonymous reviewers for suggesting these analyses. As noted by one of those reviewers, the standard measure is relatively insensitive. Thus, these analyses are intended to be exploratory.
7. One control variable (participant's gender) was statistically significant, but only for the white-truster/white-trustee model. Consistent with Buchan, Croson and Solnick (Forthcoming) results, this variable denotes higher levels of trust by males than females.
8. For these analyses, as can be seen in Table 3, gender was significant for one model (black trustees/black trusters), and the proportion of blacks in the session was significant for a different model (white trustees/black trusters). The gender finding denotes that females returned more than males, which is consistent with Buchan, Croson and Solnick (Forthcoming) results. The effect of the proportion of blacks variable denotes that whites returned more to a black truster when there was a greater number of blacks in the session. A possible explanation for this finding is that a greater number of blacks in each session led white participants to invoke a "politically correct" decision rule.

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