RUNNING HEAD: Race of Interviewer Effects

Race of Interviewer Effects under Explicit and Implicit Race Matching in a Telephone Survey

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Abstract

Race of interviewer effects on data quality in both face-to-face and telephone surveys have been investigated for some time. These effects are particularly strong when the topic is racially sensitive (Hatchett & Schuman 1975-1976; Cotter, Cohen & Coulter 1982.) The impact of race of interviewer effects depends upon whether the respondent is able to determine the race of the interviewer (Cotter, Cohen & Coulter 1982). In order to further examine these effects in a telephone interview, the Annual Racial Attitudes Survey of Pulaski County (AR) matches the race of interviewer to that of the respondent in every interview. Given demographics of Pulaski County, of which Little Rock is the county seat, only respondents who reported their race as "White" or "Black or African American" were race-matched for the interview. Data collection for the 2006 cycle of the Annual Racial Attitudes Survey of Pulaski County included a quasi-experiment. The purpose of this was to assess potential effects of explicit versus implicit race-matching. The protocol included random assignment to two primary groups.

Respondents in Group 1 received explicit notification at the beginning of the survey that the interviewer was of the same race and received a brief overview of the rationale for the race match. Respondents in Group 2 were not notified of the race match, but each respondent was asked to identify the interviewer's race at the conclusion of the survey. Accordingly, this group can be divided into two subgroups - those respondents who realized they were race matched even without explicit early notification and a much smaller proportion who did not realize they were of the same race as the interviewer. The goal of this analysis is to assess the potential differences, if any, among these groups by comparing responses to the most racially sensitive items on the questionnaire. Although public opinion scholars recognize the potential benefits of race-matching on telephone surveys, few surveys actually employ race matching protocols. Thus, this analysis contributes to knowledge of the potential implications for the variety ways of implementing race-matching.

Extensive research literature addresses methods for collecting sensitive data. An increased likelihood of measurement error often occurs in the collection of these data relative to those measuring less sensitive data. Tourangeau and Smith (1996) classify a question as sensitive if "it raises concerns about disapproval or other consequences (such as legal sanctions) for reporting truthfully or if the question itself is seen as an invasion of privacy." One such topic that has been shown to be sensitive in the United States to interviewers and respondents alike, is the measurement of racial attitudes. The measurement of racial attitudes introduces an additional potential source of error into the data collection process. Interviewer administered surveys of racial attitudes must consider race of interviewer effects that may impact data quality. These effects may persist regardless of whether the survey is conducted using a face-to-face or a telephone mode.

In a face-to-face interview, the race of the interviewer is quite apparent to the respondent. The respondent need only rely upon visual cues to determine the interviewer's race, which becomes more salient as a result of the racially sensitive questionnaire items. However, in a telephone interview, the respondent may only rely upon the presence of aural cues. These aural cues are often sufficient for the respondent to correctly identify the race of the interviewer. The effect of this identification upon racially sensitive items can depend upon a number of factors, many of which are not traditionally controlled in an interview.

The racial match or mismatch of interviewer and respondent can affect the direction of bias on responses. Whites who are interviewed by whites often proffer more conservative racial opinions when compared to whites who are interviewed by a black

interviewer (Sudman and Bradburn, 1974; Hatchett and Schuman, 1975; Campbell, 1981). Conversely, blacks who are interviewed by blacks offer more racially liberal opinions than would occur if one were to be interviewed by a white interviewer.

Face-to-face interviews have sometimes employed a race matching method in hopes of reducing the impact of race of the interviewer as a source of bias in the measurement of racially sensitive items. If respondents are uniformly interviewed by a member of their own race, the survey has a greater potential to yield unbiased estimators. At the very least, the bias that is introduced as a result of race of interviewer effects will be reduced. It is asserted that this race matching may also have beneficial effects in telephone surveys of racial attitudes. The same potential for reducing bias exists in telephone surveys, although the logistics of race matching respondents and interviewers using an RDD sampling frame often proves difficult (Cotter, Cohen and Coulter 1982).

A further analysis of the effects of race matching on the measurement of racial attitudes collected via telephone will allow researchers to understand the implications of this methodology for bias and variance of the estimates of racially sensitive items. Implications for implementing race matching methodologies will also be explored.

PROJECT BACKGROUND

The Institute of Government Survey Research Center at the University of Arkansas at Little Rock conducted the fourth wave of the Annual Survey of Racial Attitudes in Pulaski County from September 29 to November 27, 2006. The Racial Attitudes Survey was conducted via telephone, using an RDD design to sample a cross section of respondents. The survey oversampled black respondents, both those who live within the city limits of Little Rock and those that live in outside the city limits of Little

Rock, but within the borders of Pulaski County. About half of the respondents to the survey, or 851 respondents, were white while 814 were black. Respondents of all races were eligible to participate in the survey, but only whites and blacks are included in the analysis. The project staff included 33 telephone interviewers, 27 of whom had prior interviewing experience. The response rate to the survey was 36.3% calculated using AAPOR Response Rate 3. Approximately half of the interviewers were white, while the remaining 17 were black. The interviewers' workload varied greatly, with each interviewer completing an average of 50 interviews. The number of cases that an interviewer completed ranged from six to 288. The modal value of completed interviews is 31.

Each telephone interview conducted with either a white or a black respondent was completed with an interviewer whose race matched that of the respondent. I will refer to these as race matched interviews. If the respondent self identified his race as Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native or another race, he was interviewed by any interviewer, regardless of race. As previously mentioned, these cases are excluded from the analysis.

The process for race matching each interview depended on immediate self identification of race by the respondents. The first question of the survey asked the respondent to report his race. This self identification created one of two situations. First, if a race match existed between the interviewer and the respondent, the interview continued. Second, if the race of the interviewer did not match that of the respondent, the interviewer had two options. He or she could locate an available interviewer of a different race to complete the interview with the respondent immediately. These two

interviewers would then exchange call stations, and the interview would commence. If another interviewer of the appropriate race were not available, the interviewer would make an appointment with the respondent, informing him that the facility would like to call him back to complete the interview at another time. This sample line would then be transferred to a phone file to which only one race of interviewer would be assigned. The decision of making an appointment to call the respondent back or exchanging call stations was left to the interviewer's discretion.

Each race matched interview was randomly assigned to one of two experimental conditions. Under the first condition, respondents were informed immediately of the fact that the interviewer was the same race as the respondent. Interviewers conducting interviews under this condition informed the respondent, "Before we start the short interview, I want to tell you that research shows that some people feel more comfortable sharing their opinions on race relations with someone of their own race. I have been selected to conduct this interview with you because I am also [BLACK/WHITE]." These interviews form a group for comparison and are referred to as the "informed race match" group.

The remaining respondents did not receive this notification. Instead, these respondents were assigned to the second condition where they were asked an additional question at the end of the interview. This question asked the respondents to identify the race of the interviewer. It reads, "Now, what do you think is my race?" and is an open ended question. Responses to this question further formed 2 additional groups that are used for comparison. The second group correctly identified the race of the interviewer. This group is referred to as the Correct group. Membership in the Correct group

connotes that the respondent was not informed of the presence of the race match at any point in the interview.

The third group that is formed by the experiment is comprised of respondents who were not explicitly informed of the presence of a race match between the interviewer and the respondent. In accordance with the methodology that was employed during this experiment, this group was asked to identify the race of the interviewer at the end of the interview. Members of this group either guessed that the interviewer's race was something other than his actual race, or responded that they did not know the interviewer's race. It is hypothesized that these respondents experienced similar race of interviewer effects in that they did not think that the interviewer was of the same race as them, regardless of whether they guess incorrectly or they responded that they did not know. The authors refer to this group as Incorrect. Table 1 provides a racial breakdown of the number of respondents in each of the three groups.

Table 1. Frequency of Experimental Group Membership by Race

Whites		**Blacks**	
Group	**n**	**Group**	**n**
Informed	**435**	Informed	**406**
Not Informed, Guess Race Correctly	**303**	Not Informed, Guess Race Correctly	**242**
Not Informed, Guess Race Incorrectly	**98**	Not Informed, Guess Race Incorrectly	**139**

In 30 cases, the random assignment of a respondent to the uninformed group was violated. In a majority of these cases, the interviewer informed the respondent of the interviewer's race at the request of the respondent. This request often took place at the race matching juncture, most frequently when interviewers exchanged call stations. One can imagine that some respondents inquired why they could not complete the interview

with the interviewer who originally called them. In other cases, respondents would inquire as to the race of the interviewer before answering certain survey questions. In these cases, the interviewer would choose the option of "Told" in response to the final question concerning the interviewer's race. These 30 cases are not included in Table 1.

The experiment above creates, either naturally or by proxy, a number of interviewer to respondent racial pairings. Each of these pairings may have an effect upon the responses to racially sensitive items, as the following hypotheses demonstrate. Table 2 illustrates the composition of these pairings, the experimental condition under which they occur, and the expected direction of the effect upon responses. Table 2 does not include any hypotheses about the intensity of the effects, although it is hypothesized that the effects for the Correct group will be weaker than those for the Informed group. This hypothesis stems from the fact that those respondents who were explicitly informed of the presence of the race match will have no doubt about the race of the interviewer. Respondents who are able to identify the race of the interviewer but are not explicitly informed may realize a minimized effect of the race match.

Table 2. Experimental Conditions, Actual/Proxied Effects and Hypothesized Direction by Race

	White			Black		
Condition	**Interviewer**	**Respondent**	**Direction**	**Interviewer**	**Respondent**	**Direction**
Informed	White	White	Conservative	Black	Black	Liberal
Uniformed, Correct	White	White	Conservative	Black	Black	Liberal
Uniformed, Incorrect	?	White	Liberal	?	Black	Conservative

First, white respondents who are unable to identify the interviewer as white will provide more liberal responses to racially sensitive items when compared to the other two groups. The incorrect identification of the interviewer's race can effectively serve as a proxy for the absence of a race match at all. When these white respondents are

answering the survey questions, including all racially sensitive items, they either do not believe that they are speaking with a white person or are not confident that this is the case. Accordingly, the responses that they provide to racially sensitive items will be more racially liberal than those of their counterparts.

Conversely, black respondents who do not realize that the interviewer to whom they are speaking is also black will provide more racially conservative responses to sensitive items when compared to black respondents in the other experimental groups who are cognizant of the race match.

Third, the responses to racially sensitive items of those respondents who are explicitly informed of the race match and those who are implicitly informed through aural cues will be quite similar. This hypothesis does, however, require an assumption about the temporal ordering of the implicit race match. Those respondents who received an explicit notification of the race match did so before answering any survey items. However, respondents who did not receive this notification did not receive an opportunity to correctly identify the race of the interviewer until the end of the interview. Therefore, in order to equate respondents in the Informed and Correct groups, this hypothesis assumes that respondents in the Correct group were able to correctly identify the race of the interviewer before responding to the first substantive item in the questionnaire. It is certainly possible that the respondent was not able to identify the race of the interviewer until midway through the interview, or did not think to do so until asked at the end of the interview. Differences in responses between these two groups may be attributed to situations such as these. These differences may also manifest themselves in the magnitude of differences between respondents in the two groups, if not in the direction of

the differences. It is important to acknowledge that the presence of these situations cannot be identified under the conditions of the experiment.

Finally, the direction of the effects will differ among blacks and whites. White respondents will provide racially conservative responses to white interviewers while black respondents will respond to sensitive items with more liberal attitudes to black interviewers when knowledge of the race match is present.

METHODS

The analysis performed predicts whether membership in a particular experimental group influences respondents' answers to racially sensitive questions. In order to examine these effects, binary logistic regression was performed. All analyses are performed with weighted data. The weights for these data were comprised of post stratification weights corresponding to the age, race, and gender of the respondent relative to their incidence in the population of Pulaski County. Since within household selection of respondents was also performed, a weight for the inverse of the probability of selection within a household was developed. The total weight for the data is the product of these two separate weights.

A number of control variables were included in the logit model. Each of these control variables are hypothesized to influence respondents' answers to the survey item that is the dependent variable. The model controlled for the age of the respondent, using dummy variables for age categories, the income of the respondent, using dummy variables for categorical income levels, education, using dummy variables for collapsed categorical levels of education and whether the respondent was a resident of the city of Little Rock or a resident of a place outside of the city limits. Black respondents who are

urban, less educated and older have been shown to possess a greater racial group identity, which in turn would affect their racial attitudes (Broman, Neighbors, & Jackson 1991). In addition, Schuman & Converse (1971) found that higher race of interviewer effects among blacks are experienced when those respondents have lower incomes.

There are 2 independent variables that are of interest in this model, both of which are indicator variables that designate membership of a respondent in an experimental group. The first compares respondents who were explicitly informed of the race match to those that were not informed. This variable is called Informed. The second variable compares respondents who were not informed of the race match during the interview, and were unable to identify the interviewers' race when asked (Incorrect) to those respondents that were either informed of the race match explicitly (Informed) or those who were able to identify the race of the interviewer and thus were implicitly informed of the match through aural cues (Correct). This variable is called Incorrect. It is expected that those who are not able to identify the race of the interviewer will differ in their answers from the reference group, as a result of not being either explicitly or implicitly informed of the race match. Given this formation of independent variables, the intercept of the model provides the effect of membership in the group that was not informed of the race match, but correctly guessed the race of the interviewer (Correct) upon the log odds of responding to the comparison group of the dependent variable.

An individual model is formed for many, though not all, items in the questionnaire.

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_{Informed}\chi_{Informed} + \beta_{Incorrect}\chi_{Incorrect} + \beta_{Income}\chi_{Income} + \beta_{Age}\chi_{Age} + \beta_{Education}\chi_{Education}$$

The dependent variable is a dummy variable for the responses to each question within the survey. Reference groups and comparison groups were formed for these items based upon both the distribution of responses and natural separations of response categories. The items, their distributions and the reference groups can be found in Appendix A. It is recognized that the expected direction of responses may differ depending upon the race of the respondent. However, models that examine the effect of the experiment upon black and white respondents share the same dependent variables.

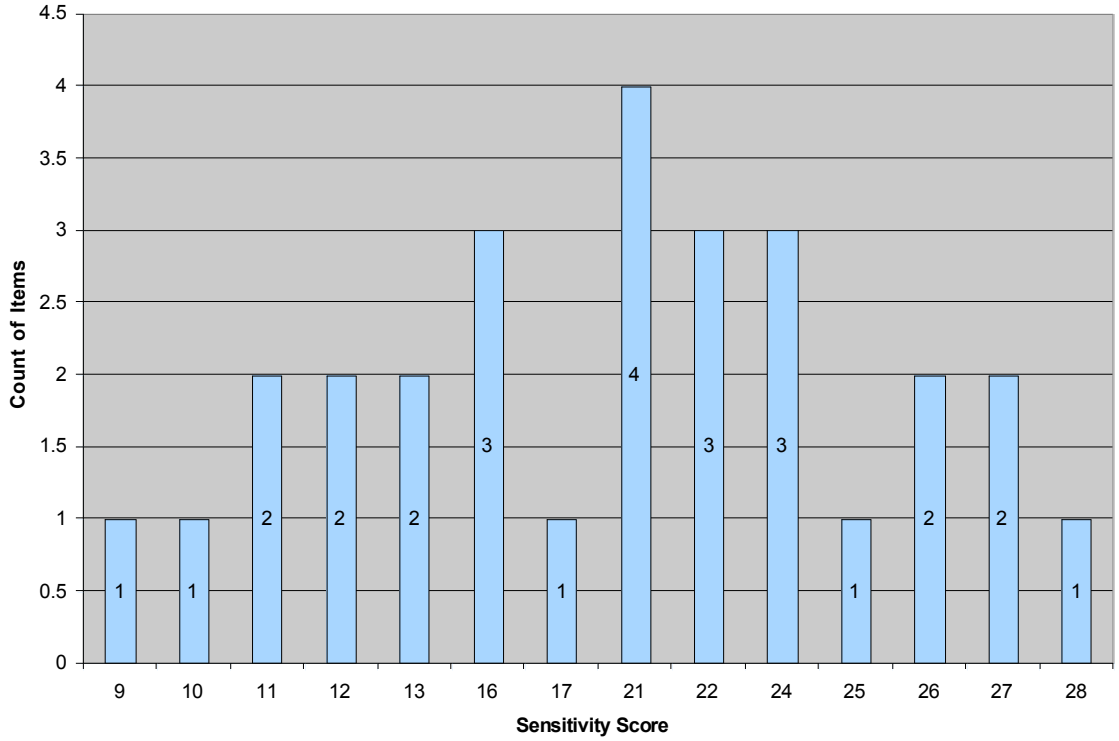
As one would expect, the items differ in their level of racial sensitivity. The racial sensitivity of items in the questionnaire is identified by using ratings from a group of eight students in the Program for Survey Methodology at the University of Michigan. They rated each item in the questionnaire, including demographic items, as either Extremely Sensitive, Very Sensitive, Somewhat Sensitive or Not Sensitive At All. Each item receives an additive sensitivity score, which ranges from 8 – 32. An item will have a sensitivity rating of eight if all independent raters scored the item as Not Sensitive At All. The item will have a rating of 32 if each rater scored the item as Extremely Sensitive. For example, each rater scored an item that recorded the gender of the respondent as Not Sensitive At All. This item received one point for each rating of Not Sensitive At All, so this item has a sensitivity rating of eight.

This scoring system will allow the researcher to identify specific items that are hypothesized to be more subject to the race of interviewer effects that occur in the various experimental treatments. Figure 1 displays the distribution of cumulative sensitivity scores across the items in the questionnaire.

The responses of white and blacks to a single survey item are not compared within one model. The analyses will utilize separate models for blacks and whites in order to account for both main effects of key independent variables as well as interaction effects of race with covariates.

Although the raters scored each item in the questionnaire, a model was not formed to predict answers to every item in the questionnaire. Figure 1 displays the sensitivity scores for all items that were used as dependent variables in the analysis. The standard deviations of these items ranged from .354 to 1.302, with an average of .8356.

Figure 1. Distribution of Sensitivity Scores of Questionnaire Items Range 8-32



FINDINGS

As mentioned previously, each item uses 2 dummy variables to make comparisons between the 3 groups of respondents in this survey. Table 3 displays the

presence of significant relationships broken down by the four levels of item sensitivity. Each significance level is based upon a one-tailed test of significance where p< .05.

Table 3. Distribution of Items Among Sensitivity Categories & Significance by Race

		Black					White			
Sensitivity Score	Number of Items	Number Of Informed Sig	Percent	Number of Incorrect Sig	Percent	Number of Items	Number Of Informed Sig	Percent	Number of Incorrect Sig	Percent
8-13 (Not At All Sensitive)	8	3	37.5%	5	62.5%	8	3	37.5%	2	25.0%
14-19 (Somewhat Sensitive)	4	2	50.0%	3	75.0%	4	4	100.0%	3	75.0%
20-25 (Very Sensitive)	11	6	54.5%	8	72.7%	11	6	54.5%	8	72.7%
26-32 (Extremely Sensitive)	5	3	60.0%	5	100.0%	5	0	0.0%	3	60.0%

One-tailed test of significance p< .05.

As one can observe from this table, the results do not conform exactly to the hypothesis. There are significant relationships seen in the groups at the lower levels of sensitivity. The magnitude of these significant relationships, however, conforms to the hypothesized results for the most part. This is illustrated by the fact that, among blacks, all responses to the Extremely Sensitive items by those respondents in the Incorrect group differ significantly from the reference group. Among blacks, the ratio of significant coefficients to total coefficients increases as items become more sensitive. This is seen in the fact that 62.5% of Incorrect coefficients are significant in the models formed by the least sensitive questions, while 100% of coefficients are significant in the most sensitive questions. This pattern is not replicated among white respondents. It is possible that whites are able to avoid the race of interviewer effects, not proffering racially conservative responses because the sponsor of the survey is a liberal state university.

First, let us examine the effects of one particular item in order to clearly illustrate the model and its results. One item in the questionnaire reads: "How about Blacks? Generally speaking would you say that you can trust them A lot, Some, Only A Little, or Not At All?" For black respondents, the log odds of responding either "A Lot" or "Some" to this question increase by .365 as one moves from not being informed of a race match to being informed controlling for income, age, Little Rock residency, and education. This result is significant at the $p<.05$ level. Furthermore, black respondents who were not aware that they were speaking with a black interviewer were significantly more likely to respond "A Lot" or "Some." In this particular model, there is no significant difference between the effect of group membership on those in the Informed group and those in the Incorrect group. This item is rated as Extremely Sensitive by the independent raters.

These results do not conform to the hypothesized direction of the effects. It is hypothesized that black respondents who are interviewed by a black interviewer will respond with more liberal responses when compared to those who are not informed that they are speaking with a black interviewer. Responding that one trusts blacks "A lot or Some" in this case is classified as a racially liberal response. The group that is informed of the race match is more likely to respond to the item by saying A lot or Some. This is also true of the group that does not know that they are speaking with a black interviewer. The contrast statement test reveals that it cannot be stated that one group is more likely to respond in this manner than another (not shown).

To further explore the explanatory power of the model, the results of this model for white respondents is presented. Here, it is expected that white respondents will be

more racially conservative in their response about trusting blacks when informed of the fact that they are speaking with a white interviewer. Therefore, a significant negative coefficient of the Informed variable will confirm the hypothesized direction of the effect. White respondents who are informed that they are speaking with a white interviewer are not significantly more likely to respond that they trust blacks "A Lot" or "Some" when compared to those who are not informed of the race match. The coefficient is negative, which is the hypothesized direction, but not significant. Additionally, whites who are not able to identify that the interviewer to whom they are speaking is also white are significantly less likely to respond they trust blacks "A Lot" or "Some."

Table 4 illustrates the coefficients, odds ratios, standard errors, intercepts, and significance levels for each item analyzed and both dummy variables within each item. This table presents each item sorted by its sensitivity score. These coefficients are displayed by race. This table also shows the mean response within the experimental group to the corresponding dummy variables within each item. This mean response is equivalent to the proportion of respondents who responded to the item with a value that is coded 1. For example, the responses to question 22 are "Yes" and "No." The comparison group, which is coded as 1, is "Yes." Therefore, the mean of the item, 28.4, is the percent of respondents who answered "Yes" to the item.

Contrast statements analyzed whether the two independent variables of interest were different from one another in each model. In other words, these results demonstrate whether or not the effect of being in the Informed group is different than the effect of being in the Incorrect group. Of the five extremely sensitive items, four displayed

significant differences for black respondents between the coefficients using an alpha level of p<.05 in a two-tailed test of significance.

The analysis performed illustrates the effect of group membership upon the probability of responding to an individual item in the questionnaire in a certain manner.

Table 4. Logistic Regression Coefficients (Standard Errors) and Means For Each Item By Race and Sensitivity Score

	Black		White	
	Coefficient (se)	**Mean**	**Coefficient (se)**	**Mean**
Extremely Sensitive Score 26 - 32				
Q22 When you were in Kindergarten through 12 grade, did you ever feel you were treated unfairly because you were BLACK/WHITE?				
Informed	0.324 (.138)*	28.4	0.065 (.231)	5
Incorrect	-0.687 (.202)*	23.1	-0.111 (.394)	6.4
β_0	-0.412 (.232)*	27.1	-2.075 (.263)**	6.6
Q31 Do you think only a few white people dislike blacks, many white people dislike blacks, or almost all white people dislike blacks?				
Informed	-0.079 (.132)	41.4	-0.218 (.148)	21
Incorrect	-1.298 (.203)**	23	-0.025 (.225)	22.2
β_0	0.017 (.222)	37.7	-0.1475 (.185)**	23.8
Q32 Do you think only a few black people dislike whites, many black people dislike whites, or almost all black people dislike whites?				
Informed	-0.626 (.133)**	39	-0.056 (.125)	40.9
Incorrect	-1.345 (.195)**	30.8	0.648 (.193)*	48.9
β_0	0.093 (.222)	42.6	-0.745 (.156)**	41.6
Q35 How about Whites? Generally speaking, would you say that you can trust them A lot, Some, Only a little, or Not at all?				
Informed	0.022 (.132)	61.5	-0.372 (.249)	93.5
Incorrect	1.839 (.246)**	83.9	-0.74 (.349)*	89.9
β_0	0.819 (.234)**	65.3	4.375 (.380)**	94.3
Q36 How about Blacks? Generally speaking would you say that you can trust them A lot, Some, Only a little, or Not at all?				
Informed	0.365 (.135)*	67.3	-0.169 (.243)	92
Incorrect	0.807 (.191)**	78.7	-0.681 (.352)*	89.9
β_0	1.33 (.261)**	66.8	4.629 (.389)**	91.9
Very Sensitive Score 20-25				
Q1. Over the past year, do you think that relations between blacks and whites in Pulaski County have improved, remained about the same, or have gotten worse?				
Informed	-0.357 (.148)*	25.8	-0.173 (.172)	18.3
Incorrect	0.221 (.186)	31.2	-0.495 (.284)*	20.2
β_0	-1.75 (.26)**	25.9	-1.91 (.224)**	18.3

Q2 In general, how important do you think it is that children socialize with children of different races?				
Informed	0.5 (.186)*	88.1	0.294 (.133)*	71.7
Incorrect	0.828 (.277)*	91.6	0.524 (.220)*	75.7
β_0	2.231 (346)**	79.2	0.469 (.165)*	63.9

Q3 Racial integration of schools benefits both whites and blacks.				
Informed	0.715 (.713)**	85.9	-0.107 (.159)	79.6
Incorrect	0.745 (.239)*	83.8	-0.416 (.243)*	81.8
β_0	0.54 (.267)*	83	0.943 (.187)**	78.4
Q5White If two equally qualified students, one white and one black, applied to a major U.S. college or university, who do you think would have the better chance of being accepted to the college?				
Informed	0.106 (.143)	68.3	0.528 (.182)*	17.3
Incorrect	-0.879 (.179)**	56.5	-0.05 (.309)	10.5
β_0	1.107 (.240)**	69.5	-1.512 (.216)**	13.2
Q5Same If two equally qualified students, one white and one black, applied to a major U.S. college or university, who do you think would have the better chance of being accepted to the college ?				
Informed	-0.062 (.145)	29.3	-0.381 (.128)*	50.4
Incorrect	0.903 (.181)**	40.6	-0.058 (.200)	64
β_0	-1.302 (.248)**	28	-0.282 (.158)*	56.4
Q6 Which comes closer to your view about evaluating students for admission into a college or university?				
Informed	0.422 (.147)*	73.8	-0.25 (.172)	84.9
Incorrect	0.267 (.192)	68.5	0.667 (.334)*	85.6
β_0	-0.146 (.235)	65.8	2.022 (.230)**	84.4
Q9 How much trust do you have in school board members, administration, and principals to decide and implement policies that are equally fair to WHITES and BLACKS. Would you say you Trust them a lot, trust them some, trust them only a little, or not at all?				
Informed	-0.136 (.131)	61	-0.139 (.143)	74.4
Incorrect	0.571 (.182)*	64.5	-0.404 (.213)*	71.4
β_0	0.263 (.219)	61.4	0.965 (.173)**	79.8
Q10 How much trust do you have in teachers to treat BLACK and WHITE children with equal fairness. Would you say you Trust them a lot, trust them some, trust them only a little, or not at all?				
Informed	0.236 (.141)*	72	-0.929 (.211)**	85.3
Incorrect	0.962 (.209)**	72.5	-0.541 (.307)*	84.6
β_0	-0.022 (.299)	67.7	2.67 (.257)**	91.1
Q11 In general, do you think that black children have as good a chance as white children in your community to get a good education, or don't you think they have as good a chance?				
Informed	0.324 (.139)*	63.7	-0.304 (.146)*	76.7
Incorrect	0.443 (.186)*	65	-0.819 (.211)**	67.4
β_0	-0.045 (.227)	56.7	1.393 (.180)**	79.5

Q23 Did you feel you were treated unfairly rarely, sometimes or often?				
Informed	-0.541 (.350)	19.5	-3.335 (.983)*	23.8
Incorrect	0.833 (.503)*	15.2	18.366 (10788.82)	50
β_0	-2.307 (.540)**	17.2	5.558 (1.691)*	52.6

Q27 In your opinion, are the events at Central High still impacting black/white race relations in our Pulaski County community today?				
Informed	0.094 (.150)	73.7	0.214 (.131)	63.5
Incorrect	-0.192 (.191)	69	0.234 (.204)	63.6
β_0	1.333 (.251)**	78.4	0.486 (.158)*	62.5
Somewhat Sensitive Score 14-19				
Q18 Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no Black students?				
Informed	0.266 (.160)*	82.1	-0.285 (.129)*	36.2
Incorrect	-0.364 (.198)*	76.9	-1.057 (.217)**	30.1
β_0	1.472 (.274)**	81.4	0.018 (.156)	38.1
Q19 Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no White students?				
Informed	0.546 (.145)**	41.8	0.359 (.183)*	91
Incorrect	-0.37 (.185)*	33.8	0.217 (.310)	91.5
β_0	0.583 (.238)*	40.9	1.994 (.228)**	88.7
Q20 Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no Black teachers and administrators?				
Informed	0.156 (.133)	71	0.448 (.137)*	28.3
Incorrect	-0.177 (.175)	65.7	-0.726 (.251)*	17.2
β_0	-0.088 (.218)	64	-0.304 (.162)*	22.3
Q21 Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no White teachers and administrators.?				
Informed	0.195 (.145)	46.7	0.455 (.217)*	94.3
Incorrect	-0.468 (.183)*	40.1	-0.703 (.290)*	91.5
β_0	1.059 (.242)**	50.4	2.628 (.267)**	91.4
Not At All Sensitive Scores 8 - 13				
Q4 These days . . . how important is it for a person to have a college education to succeed in life?				
Informed	0.229 (.163)	82.6	0.33 (.137)*	71.5
Incorrect	0.827 (.251)*	88.3	0.113 (.213)	71.6
β_0	2.234 (.318)**	79.6	1.537 (.178)**	70.1
Q7 Overall, what is your opinion of the quality of education children are NOW receiving in PUBLIC kindergarten through 12th grade schools -- would you say it is Excellent, Good, Fair or Poor?				
Informed	0.345 (.135)*	45.1	-0.273 (.132)*	40.3
Incorrect	-0.035 (.178)	45.3	-0.612 (.213)*	31.8
β_0	-0.004 (.222)	45.7	-0.617 (.164)**	42.1

Q8 Overall, what is your opinion of the quality of education children are NOW receiving in PRIVATE kindergarten through 12th grade schools -- would you say it is Excellent, Good, Fair or Poor?				
Informed	0.32 (.162)*	74.9	-0.153 (.193)	82.2
Incorrect	0.613 (.233)*	76.9	-0.206 (.291)	81.5
β_0	1.524 (.297)**	72.4	2.505 (.261)**	87.1

Q17 Overall, how would you rate the quality of education you personally received from kindergarten through 12th grade -- would you say you are Completely Satisfied, Somewhat Satisfied, Somewhat Dissatisfied, or Completely Dissatisfied?				
Informed	0.025 (.170)	82.1	0.728 (.211)*	93.4
Incorrect	0.205 (.170)	84.5	0.02 (.294)	86
β_0	0.899 (.265)*	80.6	1.693 (.233)**	90.7
Q24 Are you satisfied or dissatisfied with your current level of education? Very or somewhat?				
Informed	-0.105 (.143)	66.3	0.252 (.178)	82
Incorrect	0.067 (.189)	70.9	0.563 (.308)*	81.9
β_0	0.991 (.249)**	63.3	1.882 (.232)**	81.5
Q30 Generally speaking, would you say that people can be trusted or that you can not be too careful in dealing with people?				
Informed	0.3 (.173)*	20.4	0.129 (.127)	51.4
Incorrect	1.313 (.201)**	27.5	0.321 (.2)	58.5
β_0	-0.999 (.252)**	16.2	0.537 (.156)*	48.5
Q33 People in your neighborhood - generally speaking would you say that you can trust them A lot, Some, Only a little, or Not at all?				
Informed	-0.075 (.134)	61.1	-0.357 (.252)	90.8
Incorrect	0.697 (.187)**	68.8	-1.251 (.326)**	89.4
β_0	1.152 (.238)**	65.5	4.799 (.422)**	91.7
Q34 People at your church or place of worship - generally speaking would you say that you can trust them A lot, Some, Only a little, or Not at all?				
Informed	0.087 (.603)	81.9	0.692 (.619)	98.2
Incorrect	1.317 (.309)**	90.6	2.219 (1.178)	97.6
β_0	3.127 (.454)**	85.8	4.856 (.877)**	98.9

* p<.05 ** p<.01 One tailed tests of significance

DISCUSSION

The results from this study have illustrated that our hypotheses are too conservative. It is not only the most racially sensitive items that are subject to the different race of interviewer effects that create a proxy for a non race match through the experimental conditions. A percentage of items that are rated as Not Sensitive at All

show differences in responses by respondents who were explicitly informed about the race match when compared to those who were not informed. Furthermore, differences are seen between the group that was not able to identify the race of the interviewer (Incorrect) and those groups that were either informed about the race match (Informed) or where the respondents guessed the interviewer's race correctly (Correct). These results demonstrate that the race of interviewer effects were not the same across the groups that were informed of the race match and those that guessed the race correctly, as previously hypothesized. This lack of similarity could potentially be due to the temporal concerns that were addressed earlier.

The results shown above support the claim that race of interviewer effects depend upon a number of factors. First, the racial sensitivity of the item in question is shown to affect the impact of the knowledge of a race match between interviewer and respondent. Next, as each model examined was statistically significant, the impact of age, education, income, and geography further explained variance in the model. The patterns of significance that emerged around the two dummy independent variables of interest were in no way clear. As a whole, there was a significant impact from respondents not being able to identify the race of the interviewer versus those who were either able to identify the race or were explicitly informed of the race match. This is by examining Extremely Sensitive questions where all coefficients for the Incorrect variables were significant for blacks, while 60% of those were for whites.

RECOMMENDATIONS

The significance levels could be further explained through an examination of variables that accounts for their order within the questionnaire. If the temporal concerns presented

earlier were to be explored, early items may experience larger effects as the uninformed respondent does not yet realize that the interviewer is of the same race. One would also expect an interaction here between ordering and sensitivity.

Further analysis may also consider characteristics of interviewers, including age, experience, shift times (day times versus evenings) and vocal intonation. An examination of the individual interviewers whose race was incorrectly identified frequently would complement the findings nicely.

The findings presented here have greater implications for the collection of racial attitude data via the telephone. However, the standardization of the race of interviewer effect can further the utility of comparing responses across respondents. It is seen through these results that the race of the interviewer relative to the respondent must be carefully considered when collecting racially sensitive data, even over the telephone.

Appendix A

Reference Categories are in **BOLD**

		Informed	Not Informed - Correct	Not Informed - Incorrect
Q1	Over the past year, do you think that relations between blacks and whites in Pulaski County have improved, remained about the same, or have gotten worse?			
	Improved	21.8%	21.8%	27.0%
	REMAINED THE SAME	69.4%	68.8%	60.8%
	GOTTEN WORSE	8.8%	9.4%	12.2%
Q2	In general, how important do you think it is that children socialize with children of different races?			
	Very important	75.4%	72.7%	85.9%
	Somewhat important	21.2%	25.6%	11.5%
	NOT AT ALL IMPORTANT	3.3%	1.7%	2.6%
Q3	Racial integration of schools benefits both whites and blacks.			
	Strongly Agree	57.7%	51.8%	62.6%
	Agree	24.9%	28.7%	20.4%
	DISAGREE	8.8%	11.0%	7.8%
	STRONGLY DISAGREE	8.6%	8.6%	9.1%
Q4	These days . . . how important is it for a person to have a college education to succeed in life?			
1	Very Important	78.0%	77.2%	81.9%
2	Somewhat Important	20.5%	21.5%	17.3%
3	**NOT AT ALL IMPORTANT**	1.4%	1.3%	0.8%
Q5 White	If two equally qualified students, one white and one black, applied to a major U.S. college or university, who do you think would have the better chance of being accepted to the college			
1	White Student	42.4%	38.6%	38.8%
2	**BLACK STUDENT**	17.6%	17.8%	11.6%
3	**WOULD HAVE THE SAME CHANCE**	4.0%	43.6%	49.6%
Q5 Same	If two equally qualified students, one white and one black, applied to a major U.S. college or university, who do you think would have the better chance of being accepted to the college			
1	**WHITE STUDENT**	See above. 2 dummy variables were created from this response set, as the substantive responses did not naturally break into 2 categories.		
2	**BLACK STUDENT**			
3	Would have the same chance			

Q6	Which comes closer to your view about evaluating students for admission into a college or university?			
1	Applicants should be admitted SOLELY ON THE BASIS OF MERIT, even if that results in few minority students being admitted (or)	20.5%	23.8%	24.5%
2	**AN APPLICANT'S RACIAL AND ETHNIC BACKGROUND SHOULD BE CONSIDERED TO HELP PROMOTE DIVERSITY ON COLLEGE CAMPUSES,**	79.5%	76.2%	75.5%
Q7	Overall, what is your opinion of the quality of education children are NOW receiving in PUBLIC kindergarten through 12th grade schools -- would you say it is			
1	Excellent	6.6%	4.5%	6.2%
2	Good	35.9%	39.2%	33.8%
3	**FAIR**	40.1%	38.4%	36.0%
4	**POOR**	17.4%	17.8%	24.0%
Q8	Overall, what is your opinion of the quality of education children are NOW receiving in PRIVATE kindergarten through 12th grade schools -- would you say it is			
1	Excellent	27.1%	24.9%	28.7%
2	Good	51.8%	55.7%	50.0%
3	**FAIR**	18.6%	16.2%	19.3%
4	**POOR**	2.6%	3.1%	2.0%
Q9	How much trust do you have in school board members, administration, and principals to decide and implement policies that are equally fair to WHITES and BLACKS. Would you say you			
1	Trust them a lot	16.3%	15.3%	16.4%
2	Trust them some	51.5%	56.2%	50.9%
3	**TRUST THEM ONLY A LITTLE**	22.6%	18.7%	23.7%
4	**NOT AT ALL**	9.5%	9.8%	9.1%
Q10	How much trust do you have in teachers to treat BLACK and WHITE children with equal fairness. Would you say you			
1	Trust them a lot	28.4%	24.6%	27.5%
2	Trust them some	50.6%	56.1%	49.8%
3	**TRUST THEM ONLY A LITTLE**	16.6%	14.8%	16.3%
4	**NOT AT ALL**	4.4%	4.5%	6.4%

Q11	In general, do you think that black children have as good a chance as white children in your community to get a good education, or don't you think they have as good a chance?			
1	As Good a Chance	70.0%	69.5%	65.9%
2	**DON'T HAVE AS GOOD A CHANCE**	30.0%	30.5%	34.1%
Q17	Overall, how would you rate the quality of education you personally received from kindergarten through 12th grade -- would you say you are			
1	Completely Satisfied	57.9%	55.1%	60.9%
2	Somewhat Satisfied	29.7%	31.1%	24.3%
3	**SOMEWHAT DISSATISFIED**	8.2%	8.5%	9.4%
4	**COMPLETELY DISSATISFIED**	4.2%	5.3%	5.5%
Q18	Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no Black students?			
1	All	13.6%	14.0%	11.0%
2	Many	18.0%	15.7%	18.6%
3	Some	27.1%	27.7%	27.7%
4	**FEW**	20.0%	20.3%	22.0%
5	**NONE**	21.3%	22.2%	19.5%
Q19	Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no White students			
	All	5.8%	6.3%	7.2%
	Many	21.1%	21.4%	18.2%
	Some	40.0%	39.8%	31.4%
	FEW	13.5%	18.0%	18.6%
	NONE	19.6%	14.5%	24.6%
Q20	Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no Black teachers and administrators.			
1	All	22.3%	18.1%	15.3%
2	Many	16.1%	12.4%	18.2%
3	Some	10.8%	10.5%	13.1%
4	**FEW**	20.9%	27.9%	28.8%
5	**NONE**	29.9%	31.2%	24.6%

Q21	Overall, in the Kindergarten through 12th grade schools you attended, would you say there were many, some, few, all or no White teachers and administrators.			
1	All	6.0%	5.5%	6.8%
2	Many	30.3%	28.5%	23.7%
3	Some	35.0%	39.2%	30.1%
4	**FEW**	12.7%	15.2%	19.1%
5	**NONE**	16.0%	11.6%	20.3%
Q22	When you were in Kindergarten through 12 grade, did you ever feel you were treated unfairly because you were BLACK/WHITE?			
1	Yes	16.5%	15.6%	16.5%
2	**NO**	83.5%	84.4%	83.5%
Q23	Did you feel you were treated unfairly rarely, sometimes or often?			
1	Rarely	19.7%	25.3%	20.5%
2	**SOMETIMES**	53.3%	49.4%	41.0%
3	**OFTEN**	27.0%	25.3%	38.5%
Q24	Are you satisfied or dissatisfied with your current level of education? Very or somewhat?			
1	Very Satisfied	47.2%	44.6%	48.9%
2	Somewhat Satisfied	26.9%	28.9%	26.4%
3	**SOMEWHAT DISSATISFIED**	18.2%	18.2%	15.7%
4	**VERY DISSATISFIED**	7.7%	8.3%	8.9%
Q27	In your opinion, are the events at Central High still impacting black/white race relations in our Pulaski County community today?			
1	Yes	68.6%	69.5%	66.8%
2	**NO**	31.4%	30.6%	33.2%
Q28	Overall, do you think the continuing impact on race relations is positive or negative?			
1	Positive	60.8%	61.8%	62.8%
2	**NEGATIVE**	28.2%	27.2%	27.7%
3	**BOTH (VOLUNTEERED)**	11.0%	10.9%	9.5%

Q30	Generally speaking, would you say that people can be trusted or that you can not be too careful in dealing with people?			
1	People Can be Trusted	36.3%	34.1%	40.1%
2	**YOU CANNOT BE TOO CAREFUL**	56.1%	59.8%	54.3%
3	**DEPENDS (VOLUNTEERED)**	7.6%	6.1%	5.6%
Q31	Do you think only a few white people dislike blacks, many white people dislike blacks, or almost all white people dislike blacks?			
1	**NONE**	1.0%	1.1%	2.7%
2	**FEW**	68.4%	69.2%	74.2%
3	Many	27.3%	27.3%	18.6%
4	Almost All	3.3%	2.4%	4.5%
Q32	Do you think only a few black people dislike whites, many black people dislike whites, or almost all black people dislike whites?			
1	**NONE**	0.5%	1.0%	1.8%
2	**FEW**	57.1%	55.2%	65.0%
3	Many	35.7%	40.6%	28.2%
4	Almost All	6.7%	3.3%	5.0%
Q33	People in your neighborhood, generally speaking would you say that you can trust them . . .			
1	A lot	42.3%	43.0%	42.5%
2	Some	33.7%	36.9%	34.3%
3	**ONLY A LITTLE**	15.3%	13.5%	15.9%
4	**NOT AT ALL**	8.5%	6.3%	6.9%
Q34	People at your church or place of worship, generally speaking would you say that you can trust them . . .			
1	A lot	55.5%	56.2%	56.5%
2	Some	29.6%	31.7%	32.3%
3	**ONLY A LITTLE**	7.5%	5.3%	3.9%
4	**NOT AT ALL**	2.1%	1.5%	2.6%
5	Does Not Apply (Treated as Missing)	5.4%	5.3%	4.7%

Q35	How about Whites. Generally speaking, would you say that you can trust them…			
1	A lot	21.1%	19.4%	25.7%
2	Some	56.5%	61.6%	60.6%
3	**ONLY A LITTLE**	17.3%	14.7%	11.5%
4	**NOT AT ALL**	4.5%	3.9%	2.2%
Q36	How about Blacks. Generally speaking would you say that you can trust them…			
1	A lot	18.3%	15.1%	19.6%
2	Some	61.6%	65.2%	63.6%
3	**ONLY A LITTLE**	16.3%	16.0%	14.7%
4	**NOT AT ALL**	3.5%	3.2%	2.2%

Reference Categories are in **BOLD**

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