

# What Leads to Voting Overreports? Contrasts of Overreporters to Validated Voters and Admitted Nonvoters in the American National Election Studies

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Clarifying inconsistencies in the literature, seven years of data from the American National Election Studies was combined to examine variables that are predictive of vote overreporting. *Social* predictors include respondent age, level of education, race, and sex. Political *attitudes* include degree of political efficacy, caring about the outcome, interest, strength of party identification, and expressed knowledge. *Contextual* variables include interview week since the election, whether the survey was conducted during a presidential or nonpresidential election, and the election year. Overreporters are situated in between validated voters and admitted nonvoters in their age, and they are predominantly nonwhite. Overreporters are closer to validated voters than to admitted nonvoters in level of education and in strength of political attitudes. Overreporting is due to motivational concerns expressed as intentional deception in some respondents, and to motivated misremembering in others, as evidenced by its increased likelihood to occur the further the interview is from election day.

*Key words:* Survey reports; reported turnout; social desirability; memory; source monitoring.

## 1. Introduction

Although consistently observed, the overreporting of voting remains a puzzle that is not fully understood. Checks of voting records reveal a sizeable proportion of survey respondents who claim to have voted in the most recent election, when they did not. In attempts to explain vote overreporting, researchers have focused on two dimensions, the characteristics of those who overreport and the psychological process that lead to overreporting. In terms of characteristics, attention has been paid to two groups of measures. One group includes measures of social status such as age, sex, race, and levels of education and income; the other includes a set of political attitudes such as political interest, emotional involvement, and citizen duty (Hill and Hurley 1984; Sigelman 1982; Silver, Anderson, and Abramson 1986; Traugott and Katosh 1979; Weiss 1968). As for psychological processes, researchers have concentrated on motivational factors and memory phenomena that could lead to vote overreports. The motivation to overreport, as seen by a desire of respondents to appear in a socially desirable light or to reduce feelings of guilt associated

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with not voting, is often depicted as an intentional act to deceive (Bernstein, Chadha, and Montjoy 2001; Presser and Traugott 1992), but may also reveal its influence as a non-conscious result of motivated misremembering (Belli, Traugott, Young, and McGonagle 1999). Regarding memory, researchers have explained overreports as errors in episodic memory and source monitoring (Abelson, Loftus, and Greenwald 1992; Belli et al. 1999).

Research on social and attitudinal characteristics has produced equivocal results. With regard to age, Traugott and Katosh (1979) found overreporters to be younger overall, Hill and Hurley (1984) found overreporters to be younger than validated voters (respondents who reported having voted and who were found in records to have voted) but older than admitted nonvoters (respondents who reported not having voted and who were found in records not to have voted), and others have found overreporters to be more similar to validated voters in age and considerably older than admitted nonvoters (Sigelman 1982; Weiss 1968). As for sex, Traugott and Katosh (1979) found that overreporters, validated voters, and admitted nonvoters were equally split between men and women, whereas Hill and Hurley (1984) found that men were more often overreporters in comparison to women when contrasted against both validated voters and admitted nonvoters. Traugott and Katosh found that overreporters had educational levels similar to other respondents, whereas others found overreporters to be more highly educated than admitted nonvoters and nearly as educated as validated voters (Bernstein et al. 2001; Hill and Hurley 1984; Silver et al. 1986). Regarding levels of income, Traugott and Katosh found overreporters to be poorer than other respondents, whereas Hill and Hurley found overreporters to be wealthier than valid nonvoters and nearly as wealthy as validated voters. The only social variable that has demonstrated consistency is race. Nonwhite persons are more likely to be overreporters, and white persons are more likely to be either validated voters or admitted nonvoters (Bernstein et al. 2001; Anderson, Silver, and Abramson 1988; Sigelman 1982; Hill and Hurley 1984; Traugott and Katosh 1979).

As for political attitudes, Traugott and Katosh (1979) found that overreporters are similar to other respondents in their attitudinal levels. In contrast, others have found that overreporters are more interested, more involved, and have a higher sense of citizen duty than admitted nonvoters, and that these same overreporters are nearly as elevated as validated voters in the levels of these variables (Hill and Hurley 1984; Sigelman 1982).

With regard to psychological processes, evidence points to recall processes and motivational factors as responsible for overreporting. The best support for a role of recall arises from the observation that vote overreporting occurs more frequently for those interviews conducted further from election day than those interviews conducted closer in time to the election, implicating the role of episodic memory (Abelson et al. 1992; Belli et al. 1999). Respondents should have a clearer episodic memory of whether or not they voted the closer the interview occurs to election day; accordingly, respondents who do not have a clear memory about whether they voted or not will tend to overreport. Yet, if episodic memory alone was involved, one would expect both under and overreporting to occur equally often.

To explain the bias toward overreporting, researchers have argued for the presence of source monitoring errors and motivational factors. According to a source monitoring explanation, overreporting is the result of inferences about one's behavior that are made during the process of retrieving the past (Johnson, Hashroudi, and Lindsay 1993). Specific

to vote overreports, activities that are similar to voting, such as thinking about voting or having a history of voting, can be confused with having voted during the previous election for those who did not actually vote (Belli et al. 1999).

There have been two motivational accounts for vote overreporting. According to a social desirability explanation, citizens see voting in a more favorable light than not voting, and reporting that one voted becomes a preferred survey response (Presser 1990). More recently, Bernstein et al. (2001) have argued that respondents who have experienced pressure to vote but who have not actually done so would feel guilty if they also admitted to not voting; thus they claim to have voted when they did not.

Implicating the interaction between memory and motivational factors, question wording designed to attack these sources of reporting errors has been successful in reducing vote overreporting, especially for interviews that are conducted later during a data collection period (Belli et al. 1999). However, the precise contribution of each of these processes has yet to be spelled out fully. In particular, motivational factors can take different forms, either as an intentionally deceptive response or as a tendency to respond in a manner that reduces perceived threat in circumstances when there is inadequate access to an episodic memory of having not voted.

Many of the difficulties associated with gaining a clear picture surrounding vote overreporting arise because researchers have used different comparison groups. Traugott and Katosh (1979) contrast overreporters with all others who did not overreport. Weiss (1968), Sigelman (1982), and Hill and Hurley (1984) use separate analyses to contrast overreporters with validated voters and overreporters with admitted nonvoters. Silver et al. (1986), Anderson et al. (1988), and Bernstein et al. (2001) contrast overreporters only with admitted nonvoters, claiming that there is risk of overreporting having voted only in the case of nonvoters (see also Anderson and Silver 1986).

Moreover, much of the literature is based on single cross-sectional data collections, usually from the American National Election Studies (ANES), but other data sources have also been used. Cross-sectional studies potentially suffer from nuances associated with any particular election year. For example, even systematic differences such as whether the election for national offices was one in which the office of United States President was being decided (presidential election) or not (nonpresidential election) can affect characteristics associated with voting. Weiss (1968) collected data from a sample of African American welfare mothers following the 1964 presidential election. Traugott and Katosh (1979) and Hill and Hurley (1984) examined characteristics of overreporting in the 1976 presidential ANES, whereas Sigelman (1982) used data from the nonpresidential 1978 ANES. Silver et al. (1986) conducted analyses on both the 1978 nonpresidential and the 1980 presidential ANES. In a more comprehensive set of analyses, Anderson et al. (1988) and Bernstein et al. (2001) used data from multiple years of the ANES, but in both cases they limited their analyses by contrasting overreporters with admitted nonvoters and thus any systematic differences between overreporters and validated voters were overlooked.

The most complete data set to examine the accuracy of respondents in reporting their voting behavior lies in a series of seven cross-sectional surveys conducted by the ANES that included a record check validation component. In this article, we have combined this series of seven years of data from the ANES to examine variables associated

with overreporting, including social characteristics, political attitudes, and elapsed time between the dates of election and interview as a proxy for episodic memory. Within the political attitude mix, we also add expressed knowledge of politics. Since we are working with a time series, we also include the year of data collection and type of election, that is, whether the election included a presidential ballot or not. Regarding the type of election variable, elections for national Congressional offices in the United States occur every two years, with concurrent Presidential elections every four years.

Within the ANES time series, our analytic methods focus on distinguishing those who overreport (those who claim to have voted but did not) from those who are validated voters (those who claim to have voted and did) and admitted nonvoters (those who correctly admit to not having voted), in order to profile the levels of various other variables that are associated with overreporting. By looking at data in this combined form, we can assess trends in overreporting over time and by type of election. We also have sufficient sample size to assess differences observed in relatively small groups, as Bernstein et al. (2001) did. All of these are analytical possibilities that cannot be pursued in single cross-sectional databases.

## **2. Data Set**

The data used for this study are a combination of American National Election Studies (ANES) from 1964, 1978, 1980, 1984, 1986, 1988, and 1990, which were reconstituted into a longitudinal data set of comparable relevant variables. We excluded data from the 1972-74-76 ANES panel study for two reasons. First, the validation attempts were made at the conclusion of the entire panel, thus increasing the amount of missing data for the earlier elections and severely limiting the comparability with other studies that were validated immediately following the election (see Traugott (1989) for specific problems in the ANES validation for the 1972-74-76 panel study). Second, panel mortality and replacement make it difficult to conclude that all errors would be uncorrelated (see Bartels (2000) for more on problems with turnout measures in ANES panel data).

## **3. Results**

In Table 1, the ANES data are presented from 1964 to 1990 to illustrate the proportion and number of respondents who are validated voters (those who did vote and reported doing so), admitted nonvoters (those who did not vote and admitted that they had not), overreporters (those who did not vote but reported that they had), and underreporters (those who did vote but reported that they had not). Overreporting is sizeable for each of the years, varying from 7.9 percent to 14.2 percent. In contrast, underreporting is almost nonexistent, varying from 0.0 percent to 1.4 percent. Given the small proportion of underreporters in this and other data sets, concern has always centered on understanding the nature of the overreporting. In the analyses that follow, only validated voters, overreporters, and admitted nonvoters are included while underreporters are excluded.

In analyses, our intent was twofold: to determine how the comparison group (validated voters or admitted nonvoters) affects the interpretation of what characterizes overreporting, and to assess whether overreporters, validated voters, and admitted nonvoters each have characteristics that reliably distinguish them as members of different populations.

Table 1. Number and percentage of validated voters, overreporters, admitted nonvoters, and underreporters in the American National Election studies, 1964–1990

Year	Validated voters percent	Overreporters percent	Admitted nonvoters percent	Underreporters percent	Total <sup>a</sup> percent
1964 <sup>P</sup>	64.9	14.2	20.4	0.5	100.0 (1,306)
1978 <sup>N</sup>	41.9	12.8	44.0	1.3	100.0 (2,222)
1980 <sup>P</sup>	60.8	10.7	28.1	0.4	100.0 (1,279)
1984 <sup>P</sup>	64.2	9.0	26.9	0.0	100.0 (1,944)
1986 <sup>N</sup>	43.0	8.1	48.7	0.3	100.0 (2,111)
1988 <sup>P</sup>	58.8	10.1	30.4	0.7	100.0 (1,736)
1990 <sup>N</sup>	38.5	7.8	52.3	1.4	100.0 (1,966)
Combined	51.6	10.2	37.5	0.7	100.0 (12,564)

<sup>a</sup>Sample sizes (*N*s) are in parentheses.

<sup>P</sup>Presidential election.

<sup>N</sup>Nonpresidential election.

We conducted three sets of analyses, each contributing complementary information concerning the relationships among respondents' characteristics and the overreporting of voting.

In all analyses, we examined three sets of measures. *Social* measures include respondent age in years, level of education (1 = less than high school, 2 = high school, 3 = some college, 4 = college degree, 5 = some post graduate study), race (0 = nonwhite, 1 = white), and sex (0 = male, 1 = female). Measures of *political attitudes* include degree of political efficacy (from 0 = least efficacious to 3 = most efficacious), caring about the outcome of the election (from 1 = do not care at all who wins to 5 = care a lot who wins), interest in the campaign (1 = not really interested, 2 = somewhat interested, 3 = very interested), strength of party identification (0 = nonpartisan, 1 = weak or leaning partisan, 2 = strong partisan), and expressed knowledge of political individuals or groups (percentage of names given a liking judgment indicating that respondents recognized the items). *Contextual* variables include week since the election in which the interview took place (1 = first week, 2 = second week, 3 = third week, 4 = fourth week or more), election type (0 = nonpresidential election, 1 = presidential election), and the election year.

Measures of efficacy, caring, and expressed knowledge were coded from years of data collection in which either the same questions or the same response options were not used. Accordingly, coding was conducted based on the authors' decisions as to what procedures would provide the most consistency. In 1986, only half the respondents received any efficacy questions, and of those who did, only a dichotomous choice was offered instead of a 4-point response scale for the remaining years. As such, efficacy for cases from 1986 is coded as either missing data or as 0 or 3. Caring is coded from 1 to 5, but for some years the respondent only had two or four choices. With caring, in those years with only a binary answer the responses for caring are coded as either 2 or 4, while those years with four answer choices are coded 1, 2, 4, or 5. "Liking" judgments were in the form of feeling thermometer scores for a series of items. In all years but 1964, expressed knowledge was coded as the percentage of items to which respondents provided a judgment, as

they could otherwise volunteer a lack of recognition of an item. In 1964, the ANES included “do you know” filter questions before the feeling thermometers; for this year, the percentage of filter items in which respondents indicated having knowledge was used as the measure of expressed knowledge.

### 3.1. *Logistic regression models*

Our first set of analyses focused on the characteristics associated with overreporting and directly tested the equivocal findings in the literature concerning the differential characteristics of overreporters in comparison to other respondents that has arisen from the use of different comparison groups (Bernstein et al. 2001; Hill and Hurley 1984; Sigelman 1982; Silver et al. 1986; Traugott and Katosh 1979; Weiss 1968). We constructed two separate series of logistic regression models that contrasted overreporters either with validated voters or with admitted nonvoters (Abelson et al. 1992; Belli et al. 1999; Silver et al. 1986). One series of models examines respondents who reported that they had voted (**self-reported voters**) with a 0 assigned to respondents whose voting records indicated that they did vote (validated voters), and a 1 assigned to respondents whose records indicated that they did not vote (overreporters). In these analyses of self-reported voters, overreporters are directly contrasted with validated voters. In the second series of models, overreporters are directly contrasted with admitted nonvoters with analyses that included all of the **validated nonvoters**. In these analyses, the same overreporters were again assigned a 1 as with the first series, but a 0 was assigned to respondents who correctly admitted to not having voted (admitted nonvoters).

Initial logistic regression models were conducted for each measure entered alone as a predictor and with overreporting based upon either self-reported voters or validated nonvoters as the dependent variable. Since multiple comparisons are being made, to control for Type I errors significance levels are adjusted using a sequentially rejective multiple Bonferroni test procedure (Holm 1979). The regression coefficient beta statistics, reported in Table 2, are akin to a series of bivariate correlations. The most striking finding is that eight of the predictor variables reveal significant sign reversals when predicting overreporting with reported voters as compared to predicting overreporting with validated nonvoters. These eight predictor variables include age, level of education, all five political attitude measures (including expressed knowledge), and the election type. Clearly, which group is used as a base for calculating overreporters will dramatically affect the direction of respondents' characteristics that are predictive of overreporting.

For each of these eight variables, the valence of the sign is negative in the models based upon self-reported voters, and positive in the models that are based upon validated nonvoters, indicating that overreporters have lower levels of these characteristics in comparison to validated voters and higher levels in comparison to admitted nonvoters. For example, with age of respondents, overreporters are generally younger than validated voters but older than admitted nonvoters. Since the overreporters are the same respondents in both sets of models in which age serves as a predictor variable, validated voters can be seen as being generally older than admitted nonvoters, with overreporters having ages that are, in general, situated in between those for validated voters and admitted nonvoters. Similar conclusions can be drawn with regard to the remaining seven variables

Table 2. Bivariate logistic regression coefficients for social, attitudinal, and contextual predictors of vote overreporting, 1964–1990

Predictor	Self-reported voters	Validated nonvoters
Age	-.017 (.002)**	.012 (.002)**
Education	-.140 (.027)**	.320 (.029)**
Race (nonwhite = 0; white = 1)	-.905 (.082)**	-.184 (.079)*
Sex (male = 0; female = 1)	-.098 (.061)	-.171 (.063)**
Caring	-.155 (.024)**	.414 (.024)**
Efficacy	-.109 (.029)**	.282 (.030)**
Interest	-.245 (.044)**	1.024 (.047)**
Party strength	-.151 (.051)**	.698 (.053)**
Knowledge	-.814 (.175)**	1.652 (.180)**
Interview week	.116 (.027)**	.088 (.028)**
Election type (nonpresidential = 0; presidential = 1)	-.309 (.061)**	.689 (.064)**
Election year	-.012 (.004)**	-.050 (.004)**

\* $p < .05$ ; \*\* $p < .01$ , adjusted within columns using Holm's (1979) sequentially rejective multiple Bonferroni test procedure.

Standard errors are in parentheses.

The  $N$  for self-reported voters ranges from 7,192 to 7,768.

The  $N$  for validated nonvoters ranges from 5,783 to 5,990.

that show sign reversals. In comparison to validated voters, overreporters are younger, less educated, have lower levels of political caring, efficacy, and interest, weaker party identification, and are less knowledgeable. But in comparison to admitted nonvoters, overreporters are older, more educated, have higher levels of political caring, efficacy, and interest, stronger party identification, and are more knowledgeable. The interpretation of election type effects is driven by turnout being stronger in presidential elections. In comparison to nonpresidential elections, overreporters in presidential elections are less frequent while validated voters are more frequent. Also, in comparison to nonpresidential elections, overreporters in presidential elections are more frequent while admitted nonvoters are less frequent.

The race, interview week, and election year variables had consistently significant positive or negative coefficients with both self-reported voters and validated nonvoters. These coefficients indicated that overreporters are consistently higher or lower than both validated voters and admitted nonvoters in the levels of these variables. In comparison to both validated voters and admitted nonvoters, overreporters are less often white, more often responded later during the data collection period, and less often appeared in later election years than earlier ones. Only one of the coefficients for an independent variable, sex in the equation for self-reported voters, is not statistically significant. The significant negative correlation for sex with validated nonvoters indicates that overreporters are more often men while admitted nonvoters are more often women.

In summary, the bivariate analyses show that overreporters differ from validated voters and admitted nonvoters among various social characteristics, various measures of political attitudes, in how close the interview was to the date of the election, whether the survey was conducted following presidential or nonpresidential elections, and the year of the election. In the literature, standard analyses of vote overreporting have focused

on social characteristics and political attitude measures, and it might be possible that the additional contextual variables do not contribute toward explaining vote overreporting above the contributions from the standard variables. Yet week of interview, election type, and election year also contribute unique variance to the standard variables.

We tested two logistic multivariate regression models that included all the predictors, with one examining self-reported voters and the other validated nonvoters. Overreporting is significantly more likely to occur in later interview weeks with both self-reported voters ( $\beta = 0.07$ ,  $SE = 0.03$ ,  $p < .05$ ) and validated nonvoters ( $\beta = 0.06$ ,  $SE = 0.03$ ,  $p = .08$ ). In presidential elections, overreporters are less common than validated voters ( $\beta = -0.37$ ,  $SE = 0.08$ ,  $p < .0001$ ) when contrasted to the prevalence of each group in nonpresidential ones, but overreporters are more common than admitted nonvoters ( $\beta = 0.27$ ,  $SE = 0.09$ ,  $p < .01$ ) in presidential elections when contrasted to nonpresidential ones. Overreporting is less likely to occur during more recent years than in earlier ones, as seen with self-reported voters ( $\beta = -0.02$ ,  $SE = 0.005$ ,  $p < .001$ ) and validated nonvoters ( $\beta = -0.06$ ,  $SE = 0.006$ ,  $p < .0001$ ). Similarly, with the exception of strength of partisanship and expressed knowledge in the multivariate model with self-reported voters, and sex and efficacy in the model with validated nonvoters, the social and attitudinal measures maintained their levels of significance in the multivariate models compared to the bivariate ones. In summary, the multivariate models indicate that social characteristics, political attitudes, and contextual variables each contribute unique variance to the overreporting of voting.

Results from the logistic regression models illustrate that overreporters significantly differ from validated voters and admitted nonvoters for almost all of the characteristics that were tested, and in dramatically different ways depending on whether validated voters or admitted nonvoters are used as the contrast group. What is the best way, then, to characterize those who overreport? Anderson and Silver (1986) and Bernstein et al. (2001) have argued that the comparison of overreporters with admitted nonvoters is the only valid one, as only those who do not vote are at risk for overreporting. We take a different approach that proposes that those who claim to vote are also at risk for overreporting. In examining overreporters against both validated voters and admitted nonvoters, results point to the conclusion that overreporters, validated voters, and admitted nonvoters present themselves as three different populations who have unique characteristics. The best approach, then, is to conduct analyses in which the characteristics of these three different groups of respondents can be best revealed.

### *3.2. Analyses of group differences*

In subsequent analyses, we conducted a multiple discriminant analysis and analyses of mean differences to confirm that the predictor variables can discriminate among validated voters, overreporters, and valid nonvoters, to assess any overall structures within sets of variables in differentiating among these three respondent groups (see Sigelman 1982), and to determine the extent to which the characteristics of the three groups of respondents differ. Our main aim was to show that all three groups have characteristics that systematically differentiate them as reflections of three different populations of respondents.



### 3.2.1. Multiple discriminant analysis

In the multiple discriminant analysis, all 12 predictors were simultaneously entered to contrast among the three types of respondents (validated voters, overreporters, admitted nonvoters). Two significant discriminant functions were derived, with the first explaining 96.6 percent of the variance (Wilks' lambda = .70,  $p < .001$ ), and the second explaining 3.4 percent of the variance (Wilks' lambda = .99,  $p < .001$ ). Table 3 presents the total structure coefficients for all 12 predictors within both functions. The first function is dominated by all the political attitude measures, election type, education, and age. The second function is dominated by race, year of election, week of interview, and, less strongly, sex. The structure reflects the bivariate logistic regression associations observed in Table 2. The first function captures those predictors whose levels for overreporters are in between those for validated voters and admitted nonvoters, and the second function captures those variables in which overreporters differ from validated voters and admitted nonvoters, with these latter two groups similar to each other.

The group centroids in Table 3 illustrate these relations. Group centroids provide an indication of which group provides a greater (positive signs) and which a lesser (negative signs) abundance of the predictors that give meaning to each function. With the first function, validated voters can be identified as having the most favorable political attitudes toward the electoral process, as being the oldest and most well-educated respondents, and being most common during presidential elections in comparison to nonpresidential ones. Admitted nonvoters are best discriminated by having the least favorable attitudes,

Table 3. Discriminant analysis of respondent type (validated voters, overreporters; admitted nonvoters) by predictors, 1964–1990

Total structure coefficients	Function 1 <sup>a</sup>	Function 2 <sup>a</sup>
Interest	.661*	-.215
Caring	.567*	-.093
Party strength	.388*	-.178
Election type (nonpresidential = 0; presidential = 1)	.371*	.031
Education	.370*	.090
Age	.346*	.301
Efficacy	.306*	-.012
Knowledge	.305*	-.006
Race (nonwhite = 0; white = 1)	.172	.642*
Year	-.194	.485*
Interview week	-.028	-.303*
Sex (male = 0; female = 1)	-.030	.111*
Group centroids <sup>b</sup>		
(1) Validated voters	.538	.048
(2) Overreporters	.139	-.349
(3) Admitted nonvoters	-.830	.029
Eigenvalues	.406	.014
Canonical correlations	.538	.118

\*Largest absolute correlation between each variable and any discriminant function.

<sup>a</sup>Pooled within-group correlations between discriminating variables and standardized canonical discriminant functions.

<sup>b</sup>Unstandardized canonical discriminant functions evaluated at group means.

being the youngest and least well-educated, and most common in nonpresidential years. Overreporters have levels of these variables that are in between those for validated voters and admitted nonvoters, but their levels, overall, are closer to validated voters than to admitted nonvoters. With the second function, overreporters are less often white, less likely to be present in more recent years than earlier ones, and less likely to be interviewed in weeks closer to election day than more remotely. Both validated voters and admitted nonvoters are more likely to be white, more likely to be present in more recent years than past ones, more likely to occur with interviews that occur closer to election day, and more likely to be women than men.

### 3.2.2. Mean comparisons between groups

Although the results from the logistic regression analyses indicate that overreporters differ directionally from validated voters and admitted nonvoters, they are unable to provide direct information on the extent of the average differences between groups. In agreement with the logistic regression models, the first function in the discriminant analysis reveals that for a certain set of variables, overreporters are in between validated voters and admitted nonvoters. In addition, the discriminant analysis suggests that levels for overreporters are closer to validated voters than to admitted nonvoters. To refine these findings, we conducted a series of mean comparisons between overreporters and validated voters and between overreporters and nonvoters. These analyses are able to assess whether the mean levels of variables significantly differ between groups, and whether overreporters are significantly closer to validated voters than admitted nonvoters in mean levels. Also, for those variables in the second function of the discriminant analysis in which overreporters appear to have levels that are either consistently higher or lower than those of both validated voters and admitted nonvoters, the comparison of means will also be revealing.

Table 4 provides the means for each of the 12 predictors for validated voters (Column 1), overreporters (Column 2), and admitted nonvoters (Column 3). Descriptively, these means are consistent with results from the discriminant analysis. Overreporters exhibit mean levels in between those for validated voters and nonvoters for age, education, whether the election was presidential or nonpresidential, and all of the attitudinal measures (caring, efficacy, interest, strength of party identification, and expressed knowledge). And they reveal that overreporters are different (either higher or lower in mean levels) than both validated voters and admitted nonvoters for race, sex, interview week, and election year.

In addition, results from several *t*-tests between groups were conducted separately for each of the 12 predictors to examine whether overreporters significantly differ from validated voters (Column 4) and whether overreporters differ from admitted nonvoters (Column 5). To control for Type I errors associated with multiple comparisons, significance levels are adjusted using a sequentially rejective multiple Bonferroni test procedure (Holm 1979). These analyses reveal that all of the comparisons are significant except that the proportion of females does not significantly differ between overreporters and validated voters.

We also conducted *t*-tests to determine whether overreporters are significantly closer to validated voters or to admitted nonvoters in mean levels, again using Holm's (1979)

Bonferroni test procedure to control for Type I errors. In these *t*-tests, the difference between the respective differences of overreporters to validated voters and of overreporters to admitted nonvoters are assessed for significance (Column 6). The numerator of the *t*-test equations for measures in which the mean level of overreporters is situated between that of both validated voters and admitted nonvoters differs from that used when the mean level of overreporters is either higher or lower than those of both validated voters and overreporters. When computing each difference (between overreporters and either validated voters or admitted nonvoters), the sizes of each respective minuend and subtrahend have to be of the same direction, so that the minuends of each of the differences are both higher, or are both lower, than their corresponding subtrahends. Accordingly, the numerator is  $(\bar{x}_1 - \bar{x}_2) - (\bar{x}_2 - \bar{x}_3) = \bar{x}_1 - 2\bar{x}_2 + \bar{x}_3$  for variables in which the mean for overreporters is situated between that of validated voters and admitted nonvoters; and for measures in which the mean level of overreporters is either higher or lower than those of both validated voters and overreporters, the numerator is  $(\bar{x}_1 - \bar{x}_2) - (\bar{x}_3 - \bar{x}_2) = \bar{x}_1 - \bar{x}_3$ , in which for each variable  $\bar{x}_1$  is the mean for validated voters,  $\bar{x}_2$  is the mean for overreporters, and  $\bar{x}_3$  is the mean for admitted nonvoters.

For the eight variables where overreporters exhibit mean levels in between those of validated voters and admitted nonvoters, only with age are overreporters not significantly closer to either validated voters or admitted nonvoters (see Column 6). This lack of significance indicates that overreporters are relatively equidistant in age from the other two groups. With the seven other variables, overreporters, although significantly different in mean levels from validated voters and admitted nonvoters, are significantly closer to validated voters than to admitted nonvoters. Panel A of Figure 1 illustrates the mean levels for age, in which overreporters are equidistant from validated voters and admitted nonvoters, and Panel B illustrates the mean levels for caring, which is representative of the attitudinal variables, education, and election type, in which overreporters are significantly closer to validated voters than admitted nonvoters in mean levels.

Results for election type are somewhat complicated. The means in Columns 1 through 3 of Table 4 provide the proportion of each group who could be found in presidential elections while including nonpresidential elections in the base. For example, 60 percent of the validated voters were found in presidential elections, and 40 percent were found in nonpresidential ones. By themselves, these figures are not indicative of whether voting was more prevalent in presidential than nonpresidential elections, as this determination can only be made in comparison to how many respondents participated in presidential and nonpresidential surveys. Although four surveys were conducted during presidential years (1964, 1980, 1984, 1988), and three were conducted in nonpresidential ones (1978, 1986, 1990), the number of interviews was almost equally divided between each type of election. Among validated voters, overreporters, and admitted nonvoters, 50.02 percent of these respondents participated in presidential elections (see Table 1 for the sample sizes of each survey). Centering around a 50 percent expected value, then, the means illustrate that validated voters are more prevalent in presidential than nonpresidential elections (60 percent and 40 percent, respectively), admitted nonvoters are less prevalent in presidential than nonpresidential elections (36 percent and 64 percent, respectively), and overreporting is about equally prevalent in both presidential and nonpresidential elections (52 percent and 48 percent, respectively). The difference

Table 4. Mean values of predictors of respondent type and *t*-test comparisons, 1964–1990

Predictor	Group <sup>a</sup>		
	1 Validated voters	2 Overreporters	3 Admitted nonvoters
Age	48.08 (6,472)	43.58 (1,276)	39.71 (4,700)
Education	2.60 (6,448)	2.41 (1,270)	2.04 (4,676)
Race (nonwhite = 0; white = 1)	.91 (6,461)	.80 (1,269)	.82 (4,683)
Sex (male = 0; female = 1)	.56 (6,488)	.53 (1,280)	.57 (4,710)
Caring	3.96 (6,340)	3.71 (1,253)	2.91 (4,530)
Efficacy	1.23 (6,012)	1.10 (1,180)	.77 (4,173)
Interest	2.23 (6,446)	2.11 (1,272)	1.60 (4,689)
Party strength	1.29 (6,469)	1.23 (1,275)	.97 (4,675)
Knowledge	.91 (6,488)	.89 (1,280)	.83 (4,710)
Interview week	2.57 (6,484)	2.72 (1,280)	2.60 (4,703)
Election type (nonpres. = 0; pres. = 1)	.60 (6,488)	.52 (1,280)	.36 (4,710)
Year	1981.65 (6,488)	1980.88 (1,280)	1983.51 (4,710)

\* $p < .05$ ; \*\* $p < .01$ , adjusted within columns using Holm's (1979) sequentially rejective multiple Bonferroni test procedure.

<sup>a</sup>Mean values for each group are presented, with sample size ( $N$ ) in parentheses.

<sup>b</sup>Mean differences between groups are presented, with the standard error of the difference in parentheses.

<sup>c</sup>Each difference between the differences significance test determines whether the overreporters' value was significantly closer to either validated voters or admitted nonvoters, regardless of whether their value was in between, higher, or lower than both validated voters and admitted nonvoters. The equation for the *t*-test for measures in which the overreporters mean value is situated between that of validated voters and admitted nonvoters is  $t = \bar{x}_1 - 2\bar{x}_2 + \bar{x}_3 / \hat{\sigma} \sqrt{1/n_1 + 4/n_2 + 1/n_3}$ , and the equation for measures in which the overreporters mean value is either higher or lower than both validated voters and admitted nonvoters is  $t = \bar{x}_1 - \bar{x}_3 / \hat{\sigma} \sqrt{1/n_1 + 4/n_2 + 1/n_3}$ , in which  $\hat{\sigma}$  is the squared root of the pooled variance. The degrees of freedom for the *t*-test equal  $n_1 + n_2 + n_3 - 3$ . Standard errors are in parentheses.

between the proportion of validated voters interviewed in a presidential election year and the proportion of overreporters interviewed in a presidential year is significantly smaller than the difference of proportions between admitted nonvoters and overreporters interviewed in presidential years.

The mean levels reported in Table 4 provide the proportion *within-groups* of validated voters, overreporters, and admitted nonvoters that presented themselves during presidential elections as contrasted to nonpresidential ones, but Table 1 provides the proportion *between-groups* of validated voters, overreporters, and admitted nonvoters separately

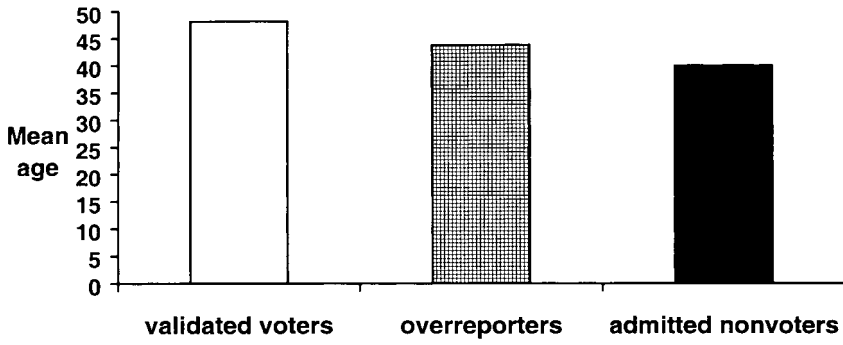
Table 4. Continued

Differences <sup>b</sup>		Difference between the differences <sup>c</sup>
4 Validated voters vs overreporters	5 Overreporters vs admitted nonvoters	6 Overreporters vs validated voters and admitted nonvoters
4.49**	3.87**	.63
(.523)	(.539)	(1.011)
.19**	.37**	-.18*
(.034)	(.035)	(.066)
.11**	-.03	.09**
(.010)	(.011)	(.020)
.02	-.04	-.01
(.015)	(.016)	(.029)
.25**	.80**	-.55**
(.040)	(.042)	(.078)
.14**	.33**	-.20*
(.035)	(.036)	(.067)
.12**	.51**	-.39**
(.021)	(.022)	(.040)
.05**	.27**	-.20**
(.019)	(.019)	(.036)
.02**	.06**	-.04**
(.006)	(.006)	(.011)
-.15**	.12**	-.03
(.035)	(.036)	(.068)
.08**	.17**	-.08*
(.015)	(.015)	(.029)
.77**	-2.63**	-1.86**
(.225)	(.232)	(.435)

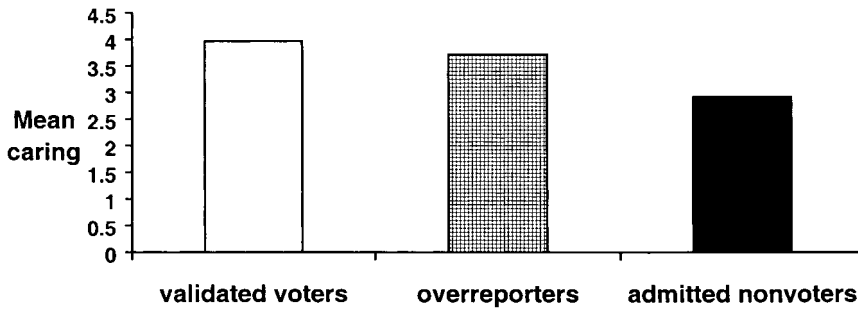
for each year that presidential and nonpresidential elections took place. The proportions in Table 1 provide data that offer another way to illustrate that validated voters are more prevalent during presidential than nonpresidential years, admitted nonvoters are more prevalent during nonpresidential than presidential years, and overreporters are about equally prevalent during both presidential and nonpresidential years. During presidential years, 62.1 percent ( $n = 3,894$ ) of respondents are validated voters, 10.7 percent ( $n = 671$ ) are overreporters, and 26.8 percent ( $n = 1,677$ ) are admitted nonvoters. During nonpresidential years, 41.2 percent ( $n = 2,594$ ) of respondents are validated voters, 9.7 percent ( $n = 609$ ) are overreporters, and 48.2 percent ( $n = 3,033$ ) are admitted nonvoters.

Pancel C of Figure 1 reveals the mean levels for interview week, which is illustrative of those comparisons in which overreporters reveal mean levels that were different from (either higher or lower than) those found with validated voters and admitted nonvoters. As shown in Table 4, overreporting is more likely to occur later after the election than either correctly reporting that one voted or admitting that one did not vote, and the mean interview week for overreporting is equidistant from that for validated voters and admitted nonvoters. Similarly, although women are more prevalent in all three groups as compared to men, they are least prevalent as overreporters and about equally as prevalent as validated voters and admitted nonvoters. As for race, the proportion of whites is

## PANEL A



## PANEL B



## PANEL C

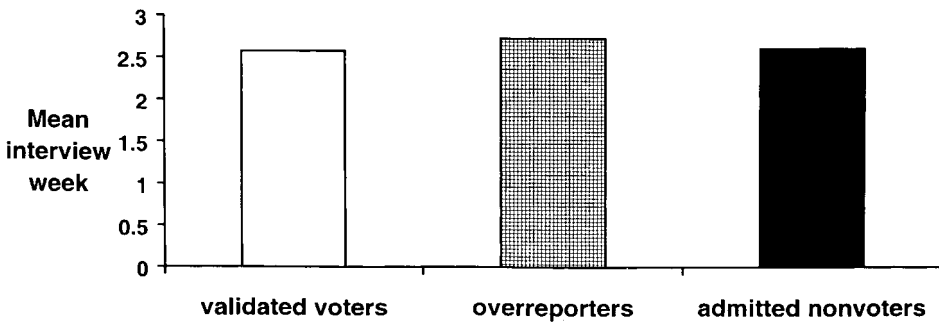


Fig. 1. Mean values for validated voters, overreporters, and admitted nonvoters for selected variables. Panel A: Mean age of respondents in years. Panel B: Mean levels of caring about election outcome. Panel C: Mean number of weeks since election day that the interview took place

highest for validated voters. Although the proportion of whites is significantly different between overreporters and admitted nonvoters, overreporters are significantly more nonwhite in comparison to validated voters than in comparison to admitted nonvoters. Finally, the proportion of admitted nonvoters is highest in more recent election years while the proportion of overreporters is highest in the more remote election years. Overreporting is significantly closer in mean level to the election year found with validated voters than that found with admitted nonvoters, and it is lower than both.

#### **4. Discussion**

The overreporting of voting is a complex phenomenon that includes attitudinal, social, and cognitive dimensions. Our results provide insights regarding two mechanisms of overreporting: the motivational factors involved in reports of voting, and the role of intentional deception and memory in claiming to have voted. Our methodology also has limitations associated with the generalization of results to electoral processes in nations other than the United States, which are also discussed.

##### *4.1. Mechanisms of overreporting*

###### *4.1.1. The desirability of voting*

Since overreporting occurs much more frequently than underreporting, there is a clear consensus among researchers that persons claim to vote because of motivational factors, including either social desirability or other self-presentation concerns such as feelings of guilt. Overreporters, although presenting less favorable political attitudes and expressed knowledge of politics than validated voters, are significantly closer to validated voters in these measures than they are to admitted nonvoters. Overreporters are similar to validated voters in that they see value in the political process. Thus, despite not having voted themselves, overreporters would prefer to present themselves to others or to see themselves as having voted.

Results with the education measure are similar to those found with the attitudinal ones in that validated voters are the most highly educated group, but overreporters are significantly closer to validated voters than they are to admitted nonvoters in their level of education. More highly educated individuals have a greater stake in the status quo than less educated ones. People who exhibit greater confidence and benefit from the political process are more likely to be susceptible to social desirability and self-presentation concerns that result from the expectation to participate in the political process but the failure to have done so (Silver et al. 1986).

Consistent with prior work, results show that nonwhite people are more prevalent as overreporters than they are as validated voters and admitted nonvoters (Anderson et al. 1988; Bernstein et al. 2001; Sigelman 1982; Hill and Hurley 1984; Traugott and Katosh 1979). Nonwhite people have benefited the least from the status quo, and their voting less often than for white people indicates their lack of investment in the political process. Explanations regarding the processes that lead nonwhites to overreport their voting must be related either to pressures that are distinct from perceiving value in the status quo, or to differences in the administrative procedures in the places where they vote that affect the

validation process (Presser, Traugott, and Traugott 1990). The expectations of nonwhites to vote could be associated with community values suggesting that the process of voting is the most effective means to instill change in the status quo to the benefit of those who have benefited least. Particularly within African American communities, there are often congregational exhortations to vote (Calhoun-Brown 1996; Morrison 1987) that may cause guilt feelings to be associated with admitting that one did not vote (Bernstein et al. 2001). Such guilt feelings may be stronger when being interviewed by nonwhite interviewers, as implicated by findings that overreporting occurs more frequently among nonwhite respondents when interviewed by nonwhite in comparison to white interviewers (Anderson et al. 1988).

A surprising finding is that overreporting had been found to be decreasing over those years of the ANES that we examined. In contrast, Bernstein et al. (2001; Table 1) report that overreporting was increasing in those presidential elections that took place from 1972 to 1998, as seen by examining the difference between the number of respondents who reported voting in the ANES and the number of people in the age-eligible population who voted. Essentially, whereas the number of respondents who report voting has been relatively consistent across years, there has been a well known and publicized decrease in voter turnout in American elections (see also the *1999 Statistical Abstracts of the United States*). Bernstein et al. (2001) speculate that either the ANES has become increasingly overrepresentative of those who vote or the increase in overreporting is real. As we have found overreporting to be decreasing in the ANES validation studies, an increasing unrepresentativeness in the ANES respondents is a more compelling explanation than accepting that there has been an increase in overreporting. An additional explanation for our observation of decreasing overreporting may be an artifact of the data, especially if vote validation efforts in the more recent ANES studies resulted in an improved ability to locate voters who are difficult to find (Presser et al. 1990; Traugott 1989). Since there have been no ANES validation studies since 1990, it is not possible to draw firm conclusions regarding any changes in the representativeness of the ANES respondents, nor regarding whether overreporting in the ANES is increasing, decreasing, or remaining relatively constant.

Findings for type of election are not particularly informative regarding the processes associated with overreporting. Rather, results simply indicate that the tendency to overreport is constant for presidential and nonpresidential years, and it is the rates of voting and admitted nonvoting that vary due to election type, with considerably more voting in presidential elections.

#### 4.1.2. Intentional deception or misremembering?

Although it is well recognized that claiming to have voted is associated with the desirability of voting, it has yet to be firmly established whether respondents are being intentionally deceptive or whether the misreporting is due to memory confusion about one's actual voting behavior in the most recent election (Belli et al. 1999; Presser 1990; Presser and Traugott 1992). According to the intentional deception hypothesis, respondents remember that they did not vote but report that they did either because of motivational concerns or because they interpret the turnout question as asking about intention rather than behavior. According to the misremembering hypothesis, respondents do not remember exactly



whether they did vote but are motivated to infer that they did through source monitoring processes that are influenced by social desirability or self-presentation concerns. Different elements of the population are more or less likely to be affected by these alternative processes.

One key variable that could best disentangle the intentional deception and misremembering hypotheses is the actual voting patterns of respondents (see Berinsky, Burns, and Traugott 2001 for the relevance of voting histories for explaining voting behavior). The source monitoring confusions that are responsible for hypothesized misremembering are possible only for respondents who vote intermittently; people who are habitual nonvoters would not be susceptible to misremembering their actual behavior in the most recent election as their nonvoting would be transparent to them (cf. Johnson et al. 1993). Although our results do not bear directly on this issue, they do provide insights on the respective viability of the intentional deception and misremembering hypotheses.

Our results are consistent with the interpretation that validated voters are represented mostly by habitual voters, that admitted nonvoters are mostly habitual nonvoters, and that overreporters are mostly individuals who have an intermittent voting history. The attitudinal and education measures depict overreporters as being slightly less invested in the political process than validated voters, but considerably more invested than admitted nonvoters, a pattern that is exactly what would be expected among a population that is interested in voting only once in a while.

In addition, results with age and sex are more interpretable in the context of being governed by the frequency of voting rather than the desirability to vote. People are more likely to vote as they grow older, indicating an increased investment in the political process with increasing age. Yet, overreporting is most prevalent among individuals who are equidistant in age (or nearly so) between validated voters and admitted nonvoters. There is no reason to infer that the pressure to claim to have voted is more exacerbated in the middle adult years in comparison to older years; rather, the overreporting results are likely to be a consequence of the middle adult years consisting of a more intermittent pattern of voting than the older years, and a more frequent voting pattern than for younger years. As for sex, results indicate small effects in which men are proportionally more prevalent as overreporters than they are as either validated voters or admitted nonvoters. As it is difficult to understand how desirability pressures would be stronger in men than in women, the increased levels of overreporting in men are likely associated with the fact that men constitute a larger proportion of intermittent voters than women.

Finally, the misremembering hypothesis gains credibility from results on the interview week measure. Consistent with prior work (Abelson et al. 1992; Belli et al. 1999), our results reveal that overreporting becomes more pronounced with increases in elapsed time between the date of election and the date of interview. There is no compelling reason to suggest that desirability concerns increase with elapsed time between election and reports; if anything, the desirability pressures associated with a recent election should dissipate with time. As memory for episodic detail loses clarity with the passage of time, uncertainty regarding one's actual voting behavior will increase when interviews are conducted later rather than earlier during the data collection period (Belli et al. 1999). Assuming that one has an intermittent history of voting in past elections, one will be compelled to make source monitoring errors in which memories of voting in

past elections, or of having thought about voting in the most recent election, result in reconstructing a memory that one did vote in the most recent election.

Since the interview week measure does not account for all of the variance in overreporting, misremembering is not compelling as a complete explanation of overreporting. Indeed, in devising a successful experimental question wording that reduced overreporting by attacking potential misremembering, Belli et al. (1999) found that the experimental question was only partly successful. In comparison to the standard ANES question wording, the experimental question successfully reduced overreporting only when interviews were conducted later during the data collection period, and a steady and sizable level of overreporting remained with interviews conducted throughout the period. Intentional deception is the most likely candidate that can account for this steady level of overreporting over time.

Moreover, Presser and Traugott (1992) provide evidence that reduces the appeal of the misremembering hypothesis. In their examination of the 1972, 1974, and 1976 ANES panel data, there is only the feeblest indication that the overreporters for the 1976 election had an intermittent pattern of voting that was more frequent than that observed with admitted nonvoters. Specifically, only 12 percent of the 1976 overreporters voted in at least one of the 1972 and 1974 elections, compared to 5.5 percent of admitted nonvoters; of the 1976 validated voters, 76 percent had voted at least once in the prior two elections. Perhaps a longer time-series would have provided findings that revealed a more promising intermittent voting pattern among overreporters. There is also the possibility that the overreporters who remained in the panel for all three years are not representative of overreporters generally, given that these are the most persistent respondents. In any case, only additional research will reveal the respective influences of intentional deception and misremembering as well as the prevalence of these influences among respondents who differ in attitudinal and social characteristics.

#### *4.2. Limitations of results*

The most serious limitation of this study is that it is based only upon analysis of data from the United States. While its longitudinal nature suggests that the relationships observed there are persistent, it leaves open the question of whether levels of overreporting or the explanations for it would be the same in political systems where the nature of elections differed in terms of their frequency, the campaign styles of the candidates or parties in a parliamentary system, levels of turnout, or the nature of press coverage of the process. These factors might affect the relative motivational or source monitoring problems associated with reporting voting behavior that might not be present in another political system. This is a problem that can be remedied with replication.

All of the ANES studies conducted during the presidential years involve intra-campaign panels where respondents are interviewed both before and after the election. This can create selection problems associated with some of the samples, particularly for the post-election interviews. The independent samples in the nonpresidential years involve only post-election interviews. The fact that turnout levels themselves are associated with these different types of elections (Campbell 1966) may also present difficulties for the generalization of the findings to other political systems.

## 5. Conclusion

Our results with attitudinal and social measures were able to clarify apparent inconsistencies in the literature (Hill and Hurley 1984; Sigelman 1982; Silver et al. 1986; Traugott and Katosh 1979; Weiss 1968) and to demonstrate unequivocally consistent findings in the relations among overreporters, validated voters, and admitted nonvoters. Noteworthy results indicated that validated voters, overreporters, and admitted nonvoters represent basic populations that differ in their characteristics. Overreporters are situated in between validated voters and admitted nonvoters in their age, level of education, and strength of political attitudes. With the exception of age, overreporters are significantly closer to validated voters than nonvoters in these measures. Overreporters are predominantly non-white, and overreporting occurs more frequently the further the interview takes place from election day.

Results support the notion that overreporting is due to a combination of motivational and memory factors. Progress is possible in reducing overreporting by attacking both responsible processes in tandem through effective question wording (Belli et al. 1999). However, the processes responsible for overreporting are only partly known. For example, in the context of motivational factors, it is interesting to speculate whether social desirability or similar processes affect not only the voter turnout question but also questions on political attitudes. The finding that overreporters are closer to validated voters in political attitudes than they are to admitted nonvoters is consistent with the explanation that overreporters consist of individuals who through motivational processes bias their responses in both the voter turnout and attitudinal questions. Unfortunately, there is currently no means to validate attitude measures as a way to provide a deeper understanding of the nature of vote overreports.

In summary, additional research is needed to gain a firmer understanding of the processes responsible for overreporting and those interviewing methodologies that will be most effective in mitigating their effects. Important outstanding issues include providing greater clarification on whether motivational biases are stronger in minority in comparison to nonminority individuals (see Bernstein et al. 2001) and the extent to which respondents are intentionally deceptive or affected by memory failures when overreporting.

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