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TO: Board of Overseers

FROM: Benjamin Highton and Raymond E. Wolfinger

RE: Estimating the Size of Minority Groups

DATE: January 23, 1992

The approximately 400 respondents who received Form One of the 1991 Pilot Study were asked:

> In the country as a whole, what percent of the U.S. population today would you say is black?
>
> What percent would you say is Jewish?
>
> What percent would you say is Hispanic?

The aggregate mean response to the three questions is 72 percent; the aggregate median is 65 percent. The real aggregate is just 23 percent. This is an amazing finding, or series of findings. It is not just that, once again, the American public is found to be uninformed. What we consider noteworthy is that almost all the errors were in one direction, as well as the sheer magnitude of the overestimates, a threefold exaggeration of the size of these minority populations.

But is this finding more than mere cocktail party fodder? The answer will be found in our ability to use the estimates as independent variables of attitudes toward policies of particular interest to blacks. Our modest success will be displayed in the third part of this report, which we will get to after a more detailed presentation of the distribution of responses to the three questions and then a look at the correlates of estimates of the black population.

I

Estimates of the Minority Population

Table 1

Estimates of the Proportion of Blacks

	sample (N=415)		blacks (N=42)		non-blacks (N=373)	
	Cumulative Estimate	Category Estimate	Cumulative Estimate	Category Estimate	Cumulative Estimate	Category Estimate
0-4 percent	1	1	2	2	1	1
5-9 percent	2	1	7	5	1	0
10-14 percent	12	10	24	17	10	9
15-19 percent	18	6	31	7	16	6
20-24 percent	32	14	36	5	32	16
25-29 percent	40	8	38	2	40	8
30-34 percent	63	23	45	7	65	25
35-39 percent	69	6	52	7	71	6
40-44 percent	82	13	69	17	83	12
45-49 percent	85	3	71	2	86	3
50+ percent	100	15	100	19	100	14
mean		31		35		31
median		30		35		30

According to the 1990 Census, 12 percent of the population is black. Hardly anyone estimated below this figure. Less than one respondent in 10 gave an estimate in the 10-15 percent range. If we grade generously and say that guesses up to 25 percent are acceptable, we still flunk two thirds of the sample. With only 42 black respondents, any conclusions about blacks necessarily are tentative. We note that blacks are more likely to know the right answer and also more likely to have very exaggerated ideas about their share of the total population. The obvious explanation for this latter tendency is that many blacks are so confined to segregated environments that most of the people they see in everyday life are also black.

Table 2

Estimates of the Proportion of Hispanics

	sample (N=409)		Hispanics (N=27)		non-Hispanics (N=382)	
	Cumulative Estimate	Category Estimate	Cumulative Estimate	Category Estimate	Cumulative Estimate	Category Estimate
0-4 percent	4	4	0	0	4	4
5-9 percent	14	10	0	0	15	11
10-14 percent	32	18	11	11	34	19
15-19 percent	45	13	19	8	47	13
20-24 percent	61	16	30	11	64	17
25-29 percent	71	10	37	7	74	10
30-34 percent	86	15	59	22	87	13
35+ percent	100	14	100	41	100	13
mean	22		37		21	
median	20		30		20	

The 1990 Census reports that 9 percent of the population is Hispanic. (Nearly 40 percent of the Hispanics in this country are not citizens, hence Hispanics will account for less than 9 percent of NES samples, which are based on the citizen population.) On this question, then, we have a few underestimators and somewhat more respondents who came fairly close to the right answer. If we say that a correct answer is anywhere between 5 and 20 percent, then 41 percent of the sample get this question right. Unlike blacks, Hispanic respondents do not perform better than the rest of the sample when standards are strict. Moreover, Hispanics are even more inclined than blacks to very inflated ideas of their own numbers. Something other than limited personal experience must be at work here, inasmuch as Hispanics are much less segregated than blacks, at least residentially.

Table 3

Estimates of the Proportion of Jews

	sample (N=389)	
	Cumulative Estimate	Category Estimate
0-4 percent	9	9
5-9 percent	27	18
10-14	48	21
15-19	54	6
20-24	71	17
25+	100	29
Mean	19	
Median	15	

The Statistical Abstract says that just 2 percent of the population is Jewish; what we have here, then, is the mother of all ethnic overestimates. Over 70 percent of the sample gave estimates at least five times the actual size of the Jewish population. Fully 46 percent were off by at least a factor of 10. Consistent with the Statistical Abstract, there were eight Jewish respondents in our sample. We did not think it worthwhile to tabulate their responses separately.

II

Who Gets It Wrongest?

We confine ourselves to describing correlates of estimates of the black population; findings for estimates of Jews and Hispanics are similar. The dependent variable in the next three tables is "Berror," an estimate of the black proportion less the true percentage. For example, a Berror value of 10 represents an estimate that 22 percent of the U.S. population is black.

Table 4

Estimates of the Black Population

by Education and Race

Berror of:

Level of Education	Whites [a] (N=348)	Blacks (N=42)
No more than high school	24	30
Some college	19	13
College graduates	10	5

a. Includes all respondents except blacks and Hispanics

Table 4 makes two points perfectly clear. The first is that better educated people, whether black or white, have more realistic--if not actually accurate--ideas about the size of the black population. The second point is that blacks' tendency to exceed whites in their estimates of their own share of the population is an artifact of their lower educational level. To be sure, Table 4 includes just sixteen black respondents with at least some exposure to college. But the conclusion is equally well supported by Table 5, which substitutes political information for education.

Table 5

Estimates of the Black Population

by Information and Race

Berror of:

Items Correct [a]	Whites [b] (N=348)	Blacks (N=42)
0-1	29	32
2	19	16
3+	13	13

Tables 4 and 5 look pretty much alike. They are not merely two different ways of saying the same thing, however, as can be seen in Table 6, which crosstabulates Berror by information and education for all respondents except blacks. (Readers scornful of this Dick-and-Jane exposition should be reassured that a regression is coming.)

Table 6

Berror by Education and Information [a]

Items Correct	High School	Some College	College Graduates
0-1	29	28	21
2	22	18	14
3+	17	19	8

a. Includes all respondents except blacks.

A number of variables were unrelated to Berror, including party identification, ideological self-identification, age, 1988 presidential vote, feeling thermometer ratings of blacks, and the proportion of whites in the respondent's county. This last measure is not the same as the percentage of blacks in the county, which was modestly related to Berror, with the breaking point coming at about 10 percent black population.

For multivariate junkies, we present the following OLS equation. Respondents' actual estimates of the proportion of blacks were regressed on the indicated independent variables, coded as shown. Blacks were excluded.

Table 7

Multiple Regression of Estimates of the Black Population

	B	Beta
Follow politics (1-3)	-2.2*	-.12
Education (1-3)	-3.3**	-.19
Information (1-3)	-3.5**	-.28
Black Proportion in County (0-100)	.28*	.20
White Proportion in County (0-100)	.05	.05

Adjusted R^2 = .24

* $p < .05$

** $p < .01$

III.

Consequences of Overestimation

So few respondents correctly estimated any minority that we could not compare them with the exaggerators. After trying various ways of categorizing respondents according to their estimates, we concluded that there were no tipping points beyond which estimates of the size of a minority would produce any sort of heightened sensitivity that would be reflected in relevant attitudes. Hence we generally settled for dividing the sample into "low" estimators, those who guessed blacks were anything less than 30 percent of the population, and the rest, whom we call "high" estimators.

Variations in estimates of the size of the Jewish population were unrelated to any conceivably relevant variables.

Unlike the other two minorities, the proportion of Hispanics has been growing substantially in the past two decades. The Pilot Study included five questions about the likely consequences of this trend. The Hispanic estimates were similar to those of the Black estimates in terms of displaying no tipping points. Thus we divided the sample at the median. Those that responded less than 20 percent are classified as "low" estimators. We refer to the others as "high" estimators. Assuming that reactions to the increasing Hispanic population might be related to popular ideas of its dimensions, we compared the percentage of high and low estimators who took a dim view of the consequences of Hispanic growth in their answers to the five questions. (High and low estimators did not differ on their feeling thermometer evaluations of Hispanics, no matter what control variables we introduced.)

Looking at everyone but Hispanics, we found noteworthy differences on two of the questions. Forty percent of the low estimators and 50 percent of the high estimators thought that "an increase in crime" was a likely consequence of "the growing number of Hispanic people in the United States." The counterpart findings were 16 and 24 percent who thought that more Hispanics would "threaten the place of English as the country's common language."

We found many larger differences when we compared high and low estimators after subdividing the sample by education, party identification, or ideological self-identification. The problem is that these differences produce no consistent pattern. For example, 27 percent of college-educated low estimators and 8 percent of high estimators think that more Hispanics will "improve our culture with new ideas and customs." The opposite is true of college dropouts; where high estimators are more positive about the cultural benefits. This is the only educational group, however, where high estimators are more worried than low estimators that Hispanics will "take jobs away from people who are already here." They are also the group where high estimates are most strongly related to greater fear of crime. The most concerned people about crime are the least educated, but their worries are quite unrelated to estimates of the number of Hispanics.

The control for party identification produces equally baffling findings. Among Democrats, 63 percent of low estimators and 53 percent of high estimators think that "higher taxes due to more demands for public services" will be a result of Hispanic immigration. The relationship goes the other way for Republicans: 42 percent of the low estimators and 64 percent of the high estimators expect higher taxes. Among low estimators, more than twice as many Democrats as Republicans (18 against 7 percent) are worried about the threat to English. Among high estimators, on the other hand, this concerns 22 percent of Democrats and 28 percent of Republicans.

These are not the only examples were 20 or more percentage points separate respondents making high and low estimates of the Hispanic population. In short, sometimes the estimation variable differentiates groups of respondents and sometimes it does not.

We can think of two ways that estimates of the size of the black population might affect whites' policy preferences: 1) With respect to an acknowledged problem afflicting blacks that also affects the white community, higher estimates might fuel belief in greater efforts to deal with that problem. Thus as estimates of the number of blacks increase, so might support for stepping up the fight against drugs. 2) On the other hand, if the issue presents a direct zero sum situation, like student quotas, then a higher estimate might be associated with more reluctance to favor blacks at the expense of whites.

This distinction, however plausible, was not of great help when we analyzed the data. We often found a distinct pattern, but could not explain why that pattern appeared and disappeared. We begin with Table 8, which shows the level of support for six different policies of particular, if not exclusive benefit to blacks. Respondents are divided two ways, by estimates of the black population and by feeling thermometer ratings of blacks.

Table 8

Estimates of Blacks, Esteem for Blacks, and Support for Liberal Policies [a]

	Low [b] Esteem for Blacks		High [b] Esteem for Blacks	
	Low Estimate %	High Estimate %	Low Estimate %	High Estimate %
Spend more on Food Stamps	10	14	9	14
Student Quotas	21	28	38	29
Preferential Hiring	13	21	23	19
More help for blacks	18	17	31	23
Reserve jobs for minorities	9	11	11	10
Spend more to fight drugs	39	72	56	57

a. All respondents except blacks.

b. Low esteem is feeling thermometer scores of 0-50 for blacks. High esteem is scores over 50.

Whites who are favorably inclined toward blacks are no more supportive of liberal positions on Food Stamps or reserving jobs for minorities, irrespective of beliefs about the size of the black population. On the other four policy questions, white low estimators who like blacks are appreciably more liberal than those with cool feelings toward blacks. This is quite predictable. What is quite unpredictable is the lack of any such tendency among people who think that blacks amount to at least 30 percent of the population. For high estimators, friendly feelings toward blacks are not associated with support for more liberal policies. Indeed, high estimators with warm feelings for blacks are considerably less likely to support an expanded War on Drugs. (We acknowledge the ideological ambiguity of the War.)

The drug issue provides the clearest illustration of another set of relationships in Table 8: As their estimates of the size of the black population rise, whites with low opinions of blacks are more supportive of policies desired by blacks. Spending more to fight drugs is supported by 39 percent of the anti-black low estimators and 72 percent of the high estimators, while the preferences of pro-blacks remain the same. There is an obvious explanation: the more blacks there are, the bigger a problem drug addiction is, hence the greater the need to control it. This is a pretty limited explanation, however. For one thing, it does not apply to people who like blacks. What is more, it does not seem to be a plausible explanation for a more extensive pattern: higher estimates of the black population are associated with an increase in the proportion of anti-blacks taking the liberal position on quotas and preferential hiring, and a decrease in the proportion of pro-blacks with liberal positions on these issues and also on assistance to blacks. The pattern is unmistakable, the explanation elusive.

Findings similar to those in Table 8 were obtained by replacing ratings of blacks with party identification, ideological self-identification, or assessments of the pace of the civil rights movement. The estimates had differential effects across the categories of these variables. However, this phenomenon did not always appear and we are unable to explain what is going on. Rather than go through all the data, we content ourselves with presenting in Table 9 two of the more striking examples. For both Democrats and liberals higher estimates of the black population lead to diminished support for quotas. For Republicans and conservatives the opposite is true. Higher estimates are associated with higher levels of support for quotas, though the magnitudes of the differences are smaller.

Table 9

Estimates of Blacks, Political Inclinations, and Support for Student Quotas[a]

	Percent favoring students quotas:	
	Low Estimate of Black Population (0-29%)	High Estimate of Black Population (over 29%)
Democrats	35	21
Independents	30	27
Republicans	22	32
Liberals	42	25
Moderates	36	31
Conservatives	19	26

a. All respondents except blacks.

Education may confound the above discussed relationships. In part II we showed how education is strongly related to the estimates of the black population. To the extent that education is also related to attitudes toward the War on Drugs and student quotas, our crosstabulations may be misleading. As a result, we conducted several OLS regressions to control for the potential effect of education.

In the regressions we use two measures of the estimates of the size of the black population. The first is the two-category one which divides respondents into low and high estimators. The second is the respondent's actual estimate, which could range from zero to one hundred.

Table 10

Regression of Attitudes Toward the War on Drugs

on Estimates of the Black Population and Education [a]

	Regression 1		Regression 2		Regression 3		Regression 4	
	B	Beta	B	Beta	B	Beta	B	Beta
ESTIMATE OF BLACK POPULATION								
2 Category (0-1)	.43**	.32	.37**	.27				
Actual Estimate (0-100)					.013**	.31	.010**	.23
EDUCATION (1-3)			-.23**	-.28			-.21**	-.25
Adjusted R^2	.10		.17		.09		.15	

** $p < .01$

a. includes nonblack respondents who have low esteem for blacks. War on Drugs ranges from 1 (decrease spending) to 3 (increase spending).

For the War on Drugs we looked at those respondents who had low esteem for blacks, those whose feeling thermometer scores for blacks were fifty or less. Recall that the crosstabulation showed significant growth in the percentage of such respondents supporting increased spending for the War on Drugs as estimates of the size of the black population increased.

The first and third regressions in Table 10 show this relationship again. Does education bias these estimates? Regressions two and four show that the answer is: not much. Education has an effect on attitudes toward spending, but the magnitudes of the population estimate coefficients are only decreased slightly. Our confidence that estimates of the size of the black population affect attitudes for those with low esteem for blacks is strengthened.

On the other hand, regressing attitudes toward quotas on education and estimates of the size of the black population do not permit confident conclusions. When we used the dichotomous measure of estimates of the black population, the coefficients were small and not statistically significant ($p>.05$) regardless of the inclusion of education in the equations. Using the continuous measure of population estimates yielded the same results for both Democrats and liberals. The coefficients were small and not statistically significant. For Republicans, the inclusion of education minimally affects the population estimate coefficient (.007 to .006, $p<.05$). For conservatives, the inclusion of education resulted in an increase in the size of the estimate coefficient from .003 to .006 ($p<.05$). The sample size for each of the equations was approximately 100, which prevented an examination of the discrepant findings from using the different measures of the estimates of population size.

IV

Conclusion

What does it all mean? We have one theoretically explicable finding: the effect of higher estimates of the black population on attitudes toward drug program spending of people with modest esteem for blacks. We have several mystifying findings for blacks and Hispanics. And we have a great many non-findings. The wise conclusion might be that the proposed questions are not very useful. On the other hand, perhaps there is an idea here that merits some further thought about question wording.

We have waited until now to express our suspicion that the Pilot Study items may have elicited, in at least some respondents, something very close to non-attitudes. Some estimates of ethnic proportions may reflect a fixed conviction that "we" are being overwhelmed by "them," but for much of the sample they may be spur-of-the-moment reactions to the interview. Our failure to get much mileage from these items may be caused by a mingling of stable and unstable responses to the three questions. That is, there may be two kinds of misestimators: those whose answers are based on nothing but a reluctance to admit ignorance and those who worry about a

rising tide of nonwhites. Support for this hunch comes from the existence of 19 percent of the sample whose successive estimates of the proportion of blacks, Hispanics, and Jews added up to 100 percent or higher. (Another 15 percent had cumulative estimates of 76 to 99 percent.)

Asking the same questions of the same respondents in another wave of the panel would help sort out the two types of misestimators. And so would a tiny bit of interactive interviewing: After putting the three questions, the interviewer would add up the answers and the ask, "Do you really mean that only 27 percent of the country is not black, Jewish, or Hispanic?" But then, having to go back over the ground again might take up too much time.

Possibly many respondents do not know what a percentage is and are particularly unclear on the key point that 100 percent is the absolute limit except for George McGovern. Maybe so. We note that weather forecasters and football commentators invariably use percentages when talking about the chances of rain or success on third down plays. But there is a difference between probability and proportion, both of which may be expressed in percentages. People who understand a 50 percent chance of rain may not grasp that one cannot have more than 100 percent of something. We conclude with this unimpeachable statement.