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Results of the 1980 Applied Behavior Analysis Survey or What People Do With Their Census Forms

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UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
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MEMORANDUM FOR Distribution List

From: Theresa J. DeMaio TJM
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Subject: Executive Summary: Results of the Applied Behavior Analysis Survey (PERM Report #61)

Background

The Applied Behavior Analysis Survey was designed as part of the census evaluation program, to investigate the dynamics of the mail response process in order to learn from whom, how and why nonresponse occurs. This report, which views the mail response process as consisting of five stages, presents the results of the survey and suggests how they may be used in planning for the next census.

Implications

- The high rate of reported nonreceipt of the census form suggests the necessity of improving the system for delivering census forms. Either improvements in the postal system or other methods such as list/leave or update list/leave may provide a better response at this stage.

- The limited role that the amount of work involved appears to play in starting to fill out the census form suggests that cooperation decisions are made which may have nothing to do with the appearance, length, or difficulty of the form. Perhaps methods of motivating respondents, such as postcard reminders or census publicity, would be a fruitful avenue for investigating how to improve response at this stage.

- The data suggest that simplifying the form may slightly increase the proportion of respondents who start filling out the census form; shortening the census form, as with a two-stage census, will probably not affect cooperation at this stage. Factors related to respondent burden are, however, associated with completion of the census form once it has been started, and may increase cooperation at this stage of the mail response process.

Survey Design

Personal visit interviews were conducted shortly after Census Day with a probability sample of approximately 10,000 households. The sample was selected from the address registers in mailout/mailback areas, and long form households and nonmail returns were purposely overrepresented. The response rate for the survey was 94 percent.

Major Findings

- The reported mail return rate according to the survey was 84.0 percent, which is quite close to the official 1980 census mail response rate for occupied housing units of 83.3 percent.

- Analysis of the characteristics of reported mail return and nonmail return households shows that:

    - mail return rates were highest for Whites, then Blacks, then Hispanics;

    - the higher the income, the more likely the household was to report return of its census form;

    - exposure to census publicity, awareness of a penalty for nonresponse, and district office type all differentiate between mail return and nonreturn households;

    - long form and short form households are equally likely to report return of their census forms.

- Reported nonreceipt of the census form was the primary contributor to reported nonmail return; the other stages, in order of their contribution, are not starting to fill out the form, not finishing the form, not opening the envelope, and not mailing the form.

- Reported nonreceipt of the form occurs most frequently among low income households, among households that do not receive their mail directly to their door or mailbox, and to households in multi-unit structures.

- Subjective measures of difficulty such as how hard the respondents thought the form looked and how long they thought it would take to fill out were important in whether they started to fill out the form; objective measures of the amount of work involved such as form length and household size were not important.

- In contrast, these objective measures were more important in whether the form was finished than the subjective measures were.

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1980 Census

PRELIMINARY EVALUATION RESULTS MEMORANDUM NO. 61

Prepared by: Theresa J. DeMaio TJD
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Subject: Results of the 1980 Applied Behavior Analysis Survey or What People Do With Their Census Forms

I. Introduction

Cost and data quality considerations have dictated a move in recent censuses to self-enumeration rather than interviewer enumeration. In the 1970 Decennial Census, mailout/mailback methods of enumeration were used in areas of the country containing 60 percent of the population; in the 1980 Decennial Census, the percentage was increased to 95 percent. However, the mail return rates achieved through the mailout/mailback method do not produce a full count of the population as mandated by the Constitution. To obtain as nearly a full count as possible, nonmail return cases are visited by census enumerators. This is a costly procedure--precensus estimates indicate that for each percentage point of households which do not return their forms in the mail, follow-up costs approach $2 million.

In spite of the Bureau's increasing reliance on mailout/mailback methods of enumeration, little (if anything) is known about what happens between the time the address list is compiled and the time the census form is returned (or not returned) in the mail.

The 1980 Decennial Census Applied Behavior Analysis Survey (ABAS) was conducted as part of the census evaluation program and represents a major effort on the part of the Census Bureau to learn more about the process of

self-enumeration.[1] The applied behavior analysis approach focuses on specific, concrete behaviors or events that occur in connection with a target behavior, and attempts to identify those secondary behaviors that either generate or deter the target behavior. In this particular implementation of the applied behavior analysis approach, the ultimate target behavior is the return (or nonreturn) of the census form. This target behavior is actually part of a larger mail response process, which consists of a series of stages, each contingent on completion of the preceding one. Those stages are as follows: receiving a form in the mail, opening the envelope, starting to fill out the form, completing the form, and mailing back the form.

The ABAS project was designed to investigate the dynamics of the mail response process in order to learn from whom, how and why nonresponse occurs. By viewing mail response in this way, it is possible to isolate particular components and attempt to determine why they cause problems. In this regard, a variety of situational, behavioral, and demographic factors were hypothesized to differentiate between cooperating and noncooperating households and were examined in relation to reported cooperation at each of the stages of the mail response process. Detailed information concerning nonmail response can be useful in the design and planning of future mail censuses.

This report contains a description of the design of the survey, a presentation of survey results, and a section outlining implications of the results for future censuses.

II. Design of the Survey

The data presented in this report were collected shortly after Census Day to minimize loss of memory about participation in the census process. Completion of each of the stages in the mail response process was determined by self-reported responses[2] to a series of detailed behavioral questions. The survey questionnaire also included items about other behaviors which were hypothesized to distinguish between cooperative and noncooperative households. (A copy of the ABAS questionnaire is included as Appendix I.) An effort was made to record these details as accurately as possible. To do this, the household member who actually did (or did not do) each step was contacted. This necessitated switching respondents at various points in the questionnaire, if different household members participated at different stages in the process. It was possible to interview up to seven different household members; in actuality, only three different respondents in a household were ever contacted, and this occurred in less than one percent of the households (unweighted).

1/A preliminary investigation of this topic was conducted during the 1978 Dress Rehearsal of Lower Manhattan. (See Moore and DeMaio, 1979; DeMaio and Moore, 1979.) Credit for the initial design of the project goes to Naomi D. Rothwell.

2/The data reported here were obtained solely through self-reports of respondents. Thus, the possibility of response errors is inherent in the data. Findings which are particularly likely to be influenced by response errors are noted throughout the report.

The ABAS sample was designed to obtain national estimates using a stratified two-stage design. The sample was clustered in 20 district offices (DOs) and purposely overrepresented long form and nonmail return households. Ten thousand, eight hundred and fifty addresses for interview were selected from the census tape address registers.[3/]

Personal visit interviews were conducted by current program interviewers working under the direction of a regional office supervisor. A large number of interviewers was assigned to the project to complete it before the beginning of Follow-up 1 and with as little interference as possible with census operations. The original plan was to complete ABAS interviewing within two weeks. As it turned out, the bulk of the interviewing was completed within one week at almost all the sites. However, due to problems in identifying nonmail return households (see Appendix II for a description of the problems), a supplemental sample had to be selected and interviewed. Interviewing for these cases was not completed until May 1.

Of the 10,850 cases selected for interview, 9,135 were eligible for interview[4/] and 8,550 interviews were completed for a response rate of 94 percent.

Completed questionnaires were edited on site by the interviewers and supervisors, and were coded and keyed in the Jeffersonville processing office.

III. Analytic Techniques

Prior to data analysis, weights were applied to each case so that the sample cases would be weighted up to population totals for occupied households. The weighted population total for the 8,550 interviewed cases is 71,672,363. Appendix II contains a more detailed description of the weighting scheme used.

Log-linear techniques constitute the principal analytic approach used in this report. Log-linear analysis is a multivariate technique designed to provide optimal descriptions of the relationships between two or more categorical variables. The specific program employed is CPLX, which analyzes contingency tables containing data obtained from complex sample designs. The jackknifed chi-square statistics (X_J) produced by this program, which take into account the use of weights and sample stratification, are presented with the tables. These statistics test whether or not the distribution of observed cell entries departs from what would be expected based on the marginal totals under the null hypothesis of independence. In selecting a model which best explains the patterns of data in multi-way tables, preferred models identified in the tables are those which provide

3/Further description of the sampling procedures is contained in Appendix II of this report; full details of the sample design procedure and probabilities of selection are available in a memorandum from R. Abrahamson to P. Biemer dated 7/17/81.

4/For one of several reasons, 1,715 cases were deemed ineligible. Those reasons included: vacancy, bad address, nonresidential address, unfit or demolished address, not in residence on Census Day, or clerical sample selection error.

an acceptable fit to the observed cell entries using the most parsimonious model.5/

IV. Results

The survey results are presented in three sections, which coincide with the three major purposes of the project. These are to learn from whom, how and why nonresponse occurs.

A. From whom does nonresponse occur?

The (weighted) self-reported mail response rate according to the survey is 84.0 percent, which compares favorably with the official 1980 census mail response rate for occupied housing units of 83.3 percent. This would seem to imply that overreporting of mail return is not a substantial problem in interpreting the results of the survey.6/

The data suggest that, in some ways, the characteristics of households which return forms in the mail are dissimilar from those of households which do not.

According to self-reports, mail return rates differed by racial/ethnic identity: as Table 1 shows, Whites7/ were most likely to return their forms (86.0 percent), then Blacks (74.7 percent), then Hispanics (66.5 percent). Differences between each of these groups are significant.8/

5/Appendix II contains a further explanation of the model-testing strategy used in the analysis.

6/See also PERM Report #8 by Jeffrey Moore, dated May 15, 1980. Comparison of the mail return rate as reported in the survey for each DO with the official mail return rate for the DO revealed that the differences were not significant.

7/"Whites" refers to Whites not of Hispanic origin, "Blacks" to Blacks not of Hispanic origin, and "Hispanics" to those of Hispanic origin regardless of race.

8/Whites vs. Blacks: $t = 5.385$, $df = 15$, $p<.001$; Blacks vs. Hispanics: $t = 2.122$, $df = 15$, $p<.10$. This significance test and others presented throughout the text comprise the ratio of the contrast lambda parameters to their associated standard errors. For both the X_J tests and the standard errors of the parameters, variances were estimated by a collapsed stratum approach based on grouping the 20 DOs (PSUs) in which data were collected into 5 collapsed strata of 4 PSUs each. Because each collapsed stratum contributes approximately 3 degrees of freedom to the computation of the variance, the quotients of the lambda parameters divided by the estimated standard errors were compared to the t-distribution with 15 degrees of freedom.

Differences in mail return rates were also evident according to household income[9]: the higher the income, the more likely the household was to report return of its census form (see Table 2).[10]

Respondents were asked whether they were aware of publicity about the census, which was widely available through a campaign conducted to inform the public at large about its occurrence and the importance of mailing back a form. The extent of exposure to such publicity was recorded as the number of sources (e.g., radio, television, newspapers) through which exposure occurred, regardless of how many times people were exposed to each source.[11] As Table 3 shows, reported mailback increased with reported level of exposure to census publicity.[12] The most dramatic difference occurs between households which reported no exposure and those which reported some exposure, regardless of how much.[13]

Two measures of knowledge about the census--expecting to receive a form in the mail and awareness of a penalty for nonresponse--also appear to have been associated with higher mailback rates, as shown in Tables 4 and 5.

This provides some evidence of the success of the public information campaign waged in the 1980 census, although the sample design used in the ABAS is not conducive to making causal inferences. For further evidence of the success of the public information campaign, see PERM Report #31 by Jeffrey Moore.[14]

A factor which indirectly results from the publicity-generating nature of a census--word-of-mouth publicity--also appears to differentiate between mail return and nonreturn households. However, word-of-mouth publicity had a negative effect on cooperation with the census. As Table 6 shows, respondents who reported talking to someone about whether or not to fill out a census form were less likely to mail back their forms than those who did not report talking to anyone. The proportion of the population who report such conversations is relatively small--22 percent. It may be that people who had critical conversations about the census were more inclined to remember them.

9/Household income categories are as follows: low (less than $10,000), medium low ($10,000 - 16,999), medium high ($17,000 - 24,999), high ($25,000 and over).

10/Linear trend: $t = 7.611$, $df = 15$, $p<.001$.

11/The maximum number of sources was six.

12/Linear trend: $t = 16.038$, $df = 15$, $p<.001$.

13/"No sources" vs. all others: $t = 16.260$, $df = 15$, $p<.001$.

14/This evaluation of the Knowledge, Attitudes, and Practices Survey was conducted using a pre/post design which can better measure the effect of exposure to census publicity on mailback behavior in the census.

Another factor which differentiates between mail return and nonreturn households is district office type. Table 7 shows that, as has been the case in previous censuses, decentralized offices have a higher (reported) mail return rate than centralized offices.15/

One factor measured in the survey does not appear to be related to mail response. As shown in Table 8, households receiving long and short forms (as recorded in the address registers) return their forms in similar proportions. This also replicates results from previous censuses, which have found that return rates for long and short forms are not different.

B. How does nonresponse occur?

Table 9 presents the respondents' reports of their participation in the process of completing and returning a census form. Since the mail return rate was so high, the incidence of the various nonresponse outcomes is necessarily low. Nevertheless, the relative incidence of the various outcomes is of interest here.

1. Most importantly,16/ nonresponse occurs because people report not receiving their forms in the mail--in 5.3 percent of the completed interviews, respondents said they never received a form.17/ This idea echoes one noted when a similar survey was conducted during the 1978 Dress Rehearsal of Lower Manhattan. During a pretest of the questionnaire used in the 1978 ABAS, it was noted that "a fair number of residents did not receive a census form in the mail."18/ This finding was generally discounted because the report was based on subjective observations in sections of the census area selected strictly by nonsystematic means. Results of the survey itself19/ showed that reported nonreceipt of the form was only the second most commonly cited stage of dropout (as contrasted with its primary contribution here); however, the level of such reports was much higher--in 17 percent of the completed interviews, respondents reported

15/Centralized vs. decentralized: $t = 3.486$, $df = 15$, $p<.01$.

16/The rate of dropout reported at this stage is significantly higher than that reported at the next most frequent stage--Not Received vs. Opened But Not Started: $t = 2.679$, $df = 15$, $p<.05$.

17/Although overreporting of nonreceipt is a potential problem, steps were taken in the interview to ensure the accuracy of the self-report. Respondents who initially said they did not receive a form were shown a copy of the envelope as a memory aid. In addition, confirmation of nonreceipt was obtained from a second household member in households containing more than one knowledgeable person. As noted previously, the accuracy of respondents' self-reports of mail response lends credence to their (unverifiable) reports of what occurred at each stage of the process.

18/See memorandum from T. DeMaio, J. Moore, T. Glynn, and A. Massillon to D. Rothwell, dated October 11, 1978.

19/See Moore and DeMaio, 1979; DeMaio and Moore, 1979.

that they did not receive a form in the mail. Characteristics of the Lower Manhattan area which were atypical of other areas (e.g.; only part of a city included in the census, high number of large apartment buildings and lofts) were thought to be responsible in large part for the magnitude of reported nonreceipt.

2. Secondly,[20] nonresponse occurs because people, having opened the envelope, do not start to fill out the census form--in 4.1 percent of the households in which respondents said they opened the envelopes, they reported not starting to fill out the form.[21]

3. Thirdly,[22] nonmail return occurs because people, having started to fill out the form, did not complete it. At the stage which involves the greatest investment of time and energy on the part of the respondent, only 3.3 percent of the households which started to fill out the form did not complete it.

4. Two other nonresponse outcomes--receiving a form but not opening the envelope, and completing the form but not mailing it back--occur with less frequency.[23] Approximately 2 percent of the households which had completed the stage previous to each of these outcomes "dropped out" at these two points.

C. Why does nonresponse occur at each stage?

1. Receipt vs. Nonreceipt

As noted previously, nonreceipt of the census form is the major contributor to dropout in the mail response process, according to respondent reports. Thus, determination of factors associated with receipt of the form is of critical importance to the improvement of the response rate in future mail censuses.

Failure to recall the actual receipt of the census form, because it was mistaken for junk mail, was investigated as a possible explanation for reported nonreceipt of the form. However, the data suggest that

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20/ The rate of dropout reported at this stage is significantly higher than that reported at the next most frequent stage--Opened But Not Started vs. Started But Not Finished: $t = 2.846$, $df = 15$, $p<.05$.

21/ In the 1978 ABAS, this stage was the primary contributor to dropout--in 21 percent of the households in which envelopes were opened, the form was not started. Thus, the two main contributors to dropout were the same in both surveys, but their order was reversed.

22/ The rate of dropout reported at this stage is significantly higher than that reported at the next most frequent stage--Started But Not Finished vs. Received But Not Opened: $t = 2.476$, $df = 15$, $p<.05$.

23/ The rates of dropout reported at these two stages are not significantly different--Received But Not Opened vs. Finished But Not Mailed: $t = .575$, $df = 15$, n.s.

reported nonreceipt did not occur because people threw the forms away inadvertently. There was no difference in the reported rates of receipt for respondents who, when shown a census envelope, did and did not think it looked like junk mail, as Table 10 shows. In addition, Table 11 shows that there was no difference between the rates for respondents who said they did and did not throw away junk mail without looking at it.

While we cannot determine with certainty why reported nonreceipt occurs (although we can speculate that the delivery system was not adequate), we can attempt to isolate where such an outcome is most likely to occur.

Analysis of the demographic characteristics of households which reported receipt and nonreceipt of census forms reveals that income differences are significant,[24] and racial/ethnic differences disappear when income is held constant (see Table 12; the last section of Appendix II contains an explanation of the model-fitting approach used). This may reflect a difference in housing conditions for income subgroups and concomitant differences in the reliability of mail delivery.

A key housing condition is how households receive their mail. As Table 13 shows, type of mail delivery appears to make a difference in whether or not a household reported having received a census form. Most of the American population receives its mail directly, either to their door or to their own mail box. This group was more likely to report receipt of a form than respondents who reported mail delivery to a common box, to a P.O. box, or to any other method of delivery (such as general delivery or receiving mail in care of another address).[25]

Further analysis reveals that households in multi-unit structures were less likely than households in single-unit structures to report receiving a census form (see Table 14).[26] Table 15 shows that no significant differences were found based on community size.[27]

[24]High vs. low income: $t = 6.757$, $df = 15$, $p<.001$.

[25]"To door," "to mailbox" vs. others: $t = 5.789$, $df = 15$, $p<.001$.

[26]Theoretically, this could result from poor listings of housing units in multi-unit structures as well as from poor delivery to those addresses. However, since the ABAS sample was selected from the address listings, mail delivery (i.e., nondelivery or mixups in delivery) is more likely to be the source of the problem.

[27]These measures were obtained by interviewer observation, which may be subject to some individual differences in definition.

2. Started vs. Not Started[28/]

This stage is one of the most important sources of dropout, second only to mail receipt. If census form receipt is viewed as generally out of the respondent's control, then the questions posed at this stage assume primary importance in terms of our knowledge of the dropout process. Why is it that people don't start to fill out the form? Investigation of the reasons for this behavior centered on the size of the form (is it too long?), the appearance of the form (does it look too difficult?), and the perceived urgency of filling it out (do people get sidetracked and forget about the form?).

Table 16 presents respondents' reports of their starting behavior according to whether the household received a long or a short form. The length of the form is an objective measure of the amount of work involved in filling out the census questionnaire. However, it is not an important factor in whether or not the form was reportedly started. The completion rates at this stage were similar for long and short forms.

Another indicator of the amount of work involved in filling the form is household size. Since the demographic questions must be completed for each household member, larger households require more labor in finishing the form. As Table 17 shows, this measure also provides no evidence of association between amount of work and starting to fill the form. The relationship between starting to fill the form and household size is not statistically significant.

Respondents' perceptions of the difficulty of the form--on a four-point scale ranging from "very hard" to "very easy"--comprise a subjective evaluation of the amount of work involved in filling the form. As Table 18 shows, reported cooperation was more affected by this measure than by the objective one. In general, the easier to fill the form was perceived, the more likely it was to be started.[29/] The most drastic difference, however, is the behavior of respondents who evaluate the form as "very hard" to fill. This group was much less likely than the others to start filling it out.[30/] This group comprises a very small segment of the population (8 percent), and there is no clue as to how much easier the form would have to look, or what kinds of changes would make it look easy enough, for these respondents to begin filling the form.

In the 1970 and 1980 censuses, recognition that a group will always exist who cannot participate in the self-enumeration process due to poor eyesight, inability to read, inability to speak English, etc., prompted the establishment of neighborhood assistance centers for the

28/The base for this section of the analysis is all the households in which a respondent reported that the envelope had been opened.

29/Linear trend: $t = 9.156$, $df = 15$, $p<.001$.

30/"Very hard" vs. all others: $t = 5.727$, $df = 15$, $p<.001$.

purpose of aiding in the filling of census forms. The questionnaire for this survey was designed to identify respondents who reported taking their forms to such a center for assistance, or who reported giving their forms to anyone else outside the household (such as a friend or relative). However, very few respondents (less than 1 percent) reported making use of assistance centers or other practitioners for assistance in completing their forms; approximately 3 percent reported seeking assistance at some point from friends or relatives who were not household members.

As Table 19 shows, long forms were generally perceived as more difficult to complete than short forms.31/ However, Table 20 shows that these differences are not associated with different rates of reported starting by type of form received. Respondents receiving long forms who thought the form looked very hard to fill were just as likely to start to fill it out as those receiving short forms.

A second subjective measure of difficulty was included in the survey--respondents were asked how long they thought it would take them to fill out the form. However, this measure did not turn out to predict much (data not shown). Almost all of the respondents who provided estimates of how long they thought it would take reportedly started to fill it out, regardless of how long that estimate was. Reported nonstarters, on the other hand, didn't even guess how long the task would take--99.5 percent of this group responded "don't know" to the question. This analysis is limited because only those nonstarters who reported looking at the form were asked the question (if you didn't look at the form, you couldn't have estimated how long it would take to fill out). Nevertheless it suggests that expected duration of the task is not an important determinant of whether or not the form was started.

Taken together, these results suggest that decisions about starting to fill out the census form had nothing to do with its length, and little to do with its appearance. To obtain a higher rate of cooperation at this stage, other intervention strategies should be developed, since simplifying the questionnaire seems to hold limited promise based on these results.

Besides measures related to the form itself, this research attempted to delineate behavioral factors which might distinguish between cooperators and noncooperators at a stage. The amount of time intervening between the receipt of the census form and the opening of the envelope may be indicative of whether respondents were sidetracked from census participation. Does cooperation benefit by swift completion of each of the stages, or does it make no difference how quickly they are executed? If rapidity is an asset to continued

31/"Very hard"--long vs. short: $t = 5.047$, $df = 15$, $p<.001$.
"Somewhat hard"--long vs. short: $t = 4.284$, $df = 15$, $p<.001$.
"Somewhat easy"--long vs. short: $t = 1,784$, $df = 15$, n.s.
"Very easy"--long vs. short: $t = 12.528$, $df = 15$, $p<.001$.

cooperation, then respondents should be encouraged to complete each step as quickly as possible.

Data presented in Table 21 suggest that some attenuation of the starting behavior does occur over time. Among households in which envelopes were opened later than the day after receipt, forms were less likely to be started.[32] However, opening the envelope the next day as opposed to the day of receipt did not appear to increase cooperation at the next stage.[33] Thus, if taking one step can be perceived as a stimulus to taking the next step, sending out follow-up reminders several days after the initial mailing may be an effective way to motivate some respondents toward further cooperation.

Analysis of the demographic characteristics of those households in which the census envelope was reportedly opened reveals that racial/ethnic origin and income have significant, independent effects on whether the form was started. As shown in Table 22, high income households are more likely to start their census forms[34]; Whites are more likely to start their census forms than either Blacks or Hispanics,[35] and the difference between the latter two groups is also significant.[36]

3. Finished vs. Not Finished[37]

The nonresponse which occurs because people did not complete the form once they started it is less critical (in terms of its magnitude) than the previous two stages in the overall pattern of dropout. Investigation of reasons for this behavior, too, focused on the difficulty of the form, its length, and the perceived urgency of filling it out.

Motivational problems which were apparent in starting to fill the form seem less important at this stage. In contrast, factors related to the amount of work involved seem to play a greater role. For one thing, people who started filling long forms were less likely to complete them than were recipients of short forms (see Table 23).

32/"Same day," "next day" vs. "later": t=3.326, df = 15, p<.01.

33/"Same day" vs. "next day": t = .652, df = 15, n.s.

34/High vs. low income: t = 4.378, df = 15, p<.001.

35/Whites vs. Blacks: t = 6.236, df = 15, p<.001.
Whites vs. Hispanics: t = 8.804, df = 15, p<.001.

36/Blacks vs. Hispanics: t = 2.146, df = 15, p<.05.

37/The base for this analysis is all households in which the previous step of starting to fill out the form was accomplished.

Form type also influences other variables hypothesized as important at this stage. Note that the two subjective measures of difficulty described previously--perceived difficulty of the form and expected amount of time required to fill the form--both show significant two-way associations with finishing the form (see Tables 24 and 26). These relationships, however, may be spurious since they can be accounted for by the fact that subjective difficulty varies by form type and finishing also varies by form type (see Tables 25 and 27).[38/]

Another indicator of the amount of work involved--the amount of time actually spent filling out the form--is also associated with whether or not the form is completed. Table 28 shows that the less time the respondents said they spent, the more likely the form was to be completed.[39/] However, further analysis (shown in Table 29) reveals that this relationship, too, can be accounted for by the fact that the amount of time spent varies by form type and finishing also varies by form type.[38/] Regardless of how long the respondent spent working on the form, short forms were more likely to be completed than long ones.

One might expect a frustration factor to come into play here, but this does not appear to be the case. Even those respondents who said they struggled for over an hour with a short form were more likely than their long form counterparts to complete the form.

The final indicator considered here of the amount of work involved in filling the form is household size. As Table 30 shows, the proportion of reportedly completed forms did vary significantly depending on the number of people in the household. The most dramatic difference occurred for households containing eight or more persons, for which an additional questionnaire was necessary.[40/] However, the difference between the proportion of forms completed in one- and two-person households is statistically significant,[41/] suggesting that households with eight or more members are not the only contributors to this relationship.

The stimulus of completing the previous stage quickly, which was important in starting to fill out the form, was not important in finishing the form. As Table 31 shows, the time lapse between opening the envelope and starting the form did not distinguish between cooperators and noncooperators at this stage. The proportion

38/ The preferred model identified in each of these tables is one that posits a direct relationship between completing the form and form type, and a direct relationship between the difficulty measure and form type but no relationship between completing the form and the difficulty measure. This model is the simplest, most parsimonious model which provides an acceptable fit to the data.

39/ Linear trend: $t = 5.739$, $df = 15$, $p<.001$.

40/ 8 + vs. others: $t = 2.450$, $df = 15$, $p<.05$.

41/ 1 vs. 2: $t = 2.219$, $df = 15$, $p<.05$.

of completed forms was similar regardless of when the form was started. Respondents who started filling the forms which sat around for two days or more after being opened were just as likely to complete them as people who started the form immediately upon opening the envelope.

Analysis of other behavioral measures included in the survey reveals that respondents who reported looking over the census form before starting to fill it out were more likely to complete it than those who started right in without sizing up the situation first (see Table 32). However, the use of the yellow instruction booklet before or during the filling of the form did not appear to increase the likelihood of completing it, as shown in Table 33.[42/]

In addition to assessing behavioral and perceptual factors which led to the completion or noncompletion of the form, respondents were also asked a series of attitudinal questions: whether it was hard for them to find time to fill the census form, whether they minded having to do it, and whether they had trouble with the form. Tables 34, 35, and 36 summarize these results. In each case, reported cooperation is significantly associated with the independent variable--people reporting difficulty or dislike had lower completion rates. It is important to note, however, that although people who, for instance, said it was hard for them to find time to fill the form, had a lower completion rate than their counterparts, they constitute a small minority of the population. Less than 11 percent of the population answered "yes" to any of the three questions.[43/]

Because these questions appear to be strongly associated with response at this stage, it is worthwhile to learn as much as possible about the reasons for respondents' answers. Some descriptive analysis of particular problems reported by respondents is available from follow-up questions included in the survey.[44/] Respondents who reported having trouble with the form were asked about particular

42/This measure of the use or value of instructions should not be considered complete. It does not include any information concerning whether or not respondents noticed or used the instructions that were printed on the census form itself. No measure of this aspect of the instructions was included in the survey.

43/The possibility exists, especially since the Census Bureau was asking these questions, that bias of the auspices and/or social desirability may be operating here.

44/These analyses are based on unweighted frequency counts and limitations of interpretation are introduced by the design of the ABAS questionnaire. Only nonstarters were asked this series of questions, so it is impossible to know whether starters of the form shared these views about the content of the questionnaire. Nevertheless, the analysis is useful to the extent that it furnishes some information about the views of nonrespondents at this stage of the process.

questions they didn't understand, didn't have enough information to answer, or didn't want to answer. Since respondents were not shown a copy of the census form at the time they answered the survey questions, their responses should be interpreted as a measure of the salience of particular questions rather than a comprehensive enumeration of problem questions. Nevertheless, it is worth noting the questions most frequently recalled by respondents as troublesome. Income (Q32,33) and property value (H11) were mentioned frequently in all three areas; year of birth (Q5), utility costs (H22) and household listing (Q1) were mentioned frequently in at least one area (data not shown).

Analysis of the demographic characteristics of reported finishers and nonfinishers reveals that race/ethnicity is significantly associated with the completion of the form, but income is not (see Table 37). Whites are significantly more likely than Blacks and Hispanics to complete their forms,[45] but the differences between Blacks and Hispanics are not significant.[46]

4. Opening vs. Not Opening[47]

The contribution of the "open the envelope" stage to dropout from the mail response process was relatively small--only 2.2 percent of households reporting receipt of a form did not report opening the envelope.

The possibility that the envelope was perceived as containing junk mail was investigated as an explanation for this behavior. The "junk mail" hypothesis does receive support at this stage, unlike the results at the "receipt" stage. Table 38 shows that respondents who reported that the census envelope looked important were more likely to say they opened the envelope than were respondents who said the census envelope resembled junk mail. Approximately 10 percent of the population fell into the latter category.

There was no difference in the rates of reported envelope opening between households receiving long and short forms (see Table 39).

Analysis of the demographic characteristics of respondents at this stage shows that race/ethnic differences are significant and income differences are not (see Table 40). Whites were more likely than Blacks and Hispanics to open the census envelope,[48] and the latter

45/Whites vs. Blacks and Hispanics: $t = 2.315$, $df = 15$, $p<.05$.
Whites vs. Blacks: $t = 1.933$, $df = 15$, n.s.
Whites vs. Hispanics: $t = 2.604$, $df = 15$, $p<.05$.

46/Blacks vs. Hispanics: $t = .147$, $df = 15$, n.s.

47/The base for this analyses is all households which reported receipt of the cenus form in the mail.

48/Whites vs. Blacks and Hispanics: $t = 2.193$, $df = 15$, $p<.05$.
Whites vs. Blacks: $t = 2.141$, $df = 15$, $p<.05$.
Whites vs. Hispanics: $t = 1.729$, $df = 15$, n.s.

two groups were equally likely to do so.[49] This situation is the same as that reported at the "finishing" stage.

5. Mailing vs. Not Mailing[50]

The final stage in the mail response process also has the smallest contribution to the dropout rate. Less than two percent of the population reported having completed the form but failed to mail it back.

Reported cooperation at this stage does not differ by form type, as Table 41 shows. Similar proportions of (completed) long and short forms were mailed back.

A significant association is observed, however, between demographic variables and cooperation at this stage. As at the "starting" stage, income and race/ethnicity have significant, independent effects on whether or not the form was mailed back (see Table 42). Low income households were less likely to mail back their forms.[51] The cooperation rate of Hispanics at this stage is particularly low[52]--8.2 percent of the Hispanics who said they completed the form failed to mail it back. The magnitude of this effect is surprising.[53]

V. Implications

A. The high rate of reported nonreceipt of the census form, as well as the failure of the "junk mail" hypothesis to differentiate between reported receivers and nonreceivers, suggest that the postal system used to deliver census forms to households was not adequate, and that improvements are needed in the system for delivering census forms. These improvements could involve improving the postal system's procedures for census form delivery or developing a different method of delivering census forms. For example, list/leave or update list/leave techniques in which the delivery of forms is executed by a census employee or agent other than

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49/Blacks vs. Hispanics: $t = .108$, $df = 15$, n.s.

50/The base for this analysis is all households in which the previous stage of finishing the census form was accomplished.

51/High vs. low income: $t = 2.283$, $df = 15$, $p<.05$.

52/Whites vs. Hispanics: $t = 3.181$, $df = 15$, $p<.01$.
Blacks vs. Hispanics: $t = 2.876$, $df = 15$, $p<.05$.
Whites vs. Blacks and Hispanics: $t = 2.481$, $df = 15$, $p<.01$.
Whites vs. Blacks: $t = .550$, $df = 15$, n.s.

53/Past research in connection with the evaluation of the Census Public Information Campaign has found Hispanics to be particularly susceptible to overreporting of socially desirable (census-related) behaviors (see Moore and Rothwell, 1978). A response bias may exist here; Hispanics may have reported that they completed the form but didn't mail it, when in fact they either didn't start or didn't complete it.

postal service personnel might be beneficial. The relative merits of these two approaches cannot be evaluated on the basis of these data.

Since certain types of households (i.e., low income households, households in multi-unit structures) are more likely to report nonreceipt than others, an optimum allocation of resources might suggest that district offices containing higher proportions of these types of areas should make more concerted efforts at improving the delivery system than others.

B. The limited role that the amount of work involved appears to play in starting to fill out the census form, and the fact that the majority of nonstarters didn't even make a guess about how long it would take to fill out the form, suggest that cooperation decisions are made which may have nothing to do with the appearance, length, or difficulty of the form. In order to obtain a higher rate of cooperation at this stage, some means of motivating respondents needs to be identified so that those decisions will, with increased frequency, result in starting rather than not starting to fill out the form.

More research is needed concerning the effectiveness of possible ways of motivating respondents. However, the data from this survey can suggest the direction that research might take.

One possible motivating mechanism is the public information campaign waged by the Advertising Council for the 1980 census. Self-reports of exposure to publicity about the census show that the more exposure respondents had, the more likely they were to mail back their forms.54/ (Tables III-1 through III-5 in Appendix III show that, in addition to having an effect in distinguishing between mail return and nonreturn households, exposure to census publicity also had an effect at almost every stage of the mail response process; Tables III-6 through III-15 indicate that other publicity-related variables are also significantly associated with cooperation at each stage of the mail response process.)

Another suggested motivating mechanism is the use of follow-up mailings or reminder postcards. The results concerning the timing of when the envelope was opened suggest that some sort of attenuation occurs over time, and another mailing might provide additional impetus for sidetracked respondents.

C. Regarding the layout or content of the questionnaire itself, the data suggest that simplifying the form (for example, with alternative questionnaire designs) may have a slight effect on increasing completion of the "start filling the form" stage of the mail response process, and that shortening the form (for example, by the use of two-stage or alternative sampling procedures) probably will not affect cooperation at this stage. Factors related to respondent burden--form length and household size--do not appear to make a difference in the level of reported cooperation at this stage.

54/As noted in section IV.A, the direction of this relationship cannot be established by these data. It might also be the case that people who mailed back their census forms were then more likely to notice census publicity.

D. In general, different processes seem to be operating with regard to nonresponse at the "start filling the form" stage and the "finish the form" stage. Factors related to respondent burden are associated with completion of the form once it has been started, unlike the results at the previous stage. This suggests that, although improvements in the design of the form (for example, with alternative questionnaire designs) or in the length of the form (for example, by the use of two-stage or alternative sampling procedures) may increase cooperation at the most burdensome stage of the mail response process, they will not increase cooperation at the more critical stage of starting to fill out the form.

E. There is some evidence that the appearance of the envelope is associated with noncooperation for people who said they received the envelope in the mail but did not open it. Ten percent of the people receiving a form thought the envelope looked like junk mail, and this group was less likely to report opening the envelope than the majority who thought the envelope contained important information. Changes in the design of the envelope might increase the mail response rate by increasing the proportion of people who open it up. More research is needed to determine what kinds of changes would be effective.

TABLE 1: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND RACE/ETHNICITY

		Race/Ethnicity		
Households in which census forms were reportedly:	Total*	Whites	Blacks	Hispanics
Weighted N	71,146,000	60,201,000	8,190,000	2,755,000
%	100.0	100.0	100.0	100.0
Mailed back	84.0	86.0	74.7	66.5
Not mailed back	16.0	14.0	25.3	33.5

Jackknifed Chi-square (X_J) = 7.43, df = 2, p<.001

*Weighted counts exclude 526,000 cases for which race/ethnicity is unknown.

TABLE 2: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND HOUSEHOLD INCOME

		Household Income			
Households in which census forms were reportedly:	Total*	Less than $10,000	$10,000 to $16,999	$17,000 to $24,999	$25,000 or more
Weighted N	65,240,000	20,726,000	15,068,000	14,100,000	15,346,000
%	100.0	100.0	100.0	100.0	100.0
Mailed back	84.9	78.7	84.4	88.3	90.5
Not mailed back	15.1	21.3	15.6	11.7	9.5

X_J = 5.69, df = 3, p<.001

*Weighted counts exclude 6,433,000 cases for which household income is unknown.

TABLE 3: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND LEVEL OF EXPOSURE TO CENSUS PUBLICITY

		Exposure to Census Publicity Through:			
Households in which census forms were reportedly:	Total	No Sources	One Source	Two Sources	3+ Sources
Weighted N	71,673,000	8,915,000	16,283,000	24,738,000	21,738,000
%	100.0	100.0	100.0	100.0	100.0
Mailed back	84.0	65.0	82.3	86.6	90.3
Not mailed back	16.0	35.0	17.7	13.4	9.7

$X_J = 11.05$, df = 3, $p<.001$

TABLE 4: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND EXPECTATION OF RECEIVING A FORM IN THE MAIL

		Expecting to Receive a Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	62,557,000	58,278,000	4,279,000
%	100.0	100.0	100.0
Mailed back	86.6	88.5	61.2
Not mailed back	13.4	11.5	38.8

$X_J = 7.87$, df = 1, $p<.001$

*Weighted counts exclude 9,116,000 cases for which expectation is unknown.

TABLE 5: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND AWARENESS OF PENALTY FOR NONRETURN OF FORM

		Aware of Penalty for Nonreturn of Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	71,422,000	40,661,000	30,760,000
%	100.0	100.0	100.0
Mailed back	84.1	89.6	76.9
Not mailed back	15.9	10.4	23.1

$X_J = 12.68$, df = 1, $p<.001$

*Weighted counts exclude 251,000 cases for which awareness is unknown.

TABLE 6: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND CONVERSATIONS ABOUT WHETHER TO FILL OUT THE CENSUS FORM

		Talked to Anyone About Filling Census Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	71,342,000	15,432,000	55,910,000
%	100.0	100.0	100.0
Mailed back	84.1	81.8	84.8
Not mailed back	15.9	18.2	15.2

$X_J = 4.01$, df = 1, $p<.001$

*Weighted counts exclude 331,000 cases for which presence of conversations is unknown.

TABLE 7: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND DISTRICT OFFICE TYPE

		District Office Type	
Households in which census forms were reportedly:	Total	Decentralized	Centralized
Weighted N	71,673,000	61,820,000	9,853,000
Mailed back	84.0	84.9	78.4
Not mailed back	16.0	15.1	21.6

$X_J = 2.95$, df = 1, $p<.01$

TABLE 8: PERCENT OF TOTAL HOUSEHOLDS BY MAIL RETURN STATUS AND FORM TYPE

		Form Type	
Households in which census forms were reportedly:	Total	Short	Long
Weighted N	71,673,000	59,090,000	12,583,000
%	100.0	100.0	100.0
Mailed back	84.0	84.3	82.9
Not mailed back	16.0	15.7	17.1

$X_J = -.17$, df = 1, n.s.

TABLE 9. REPORTED COMPLETION OF THE VARIOUS STAGES OF THE MAIL RESPONSE PROCESS

	N		As percent of completed interviews		As weighted percent of those who reported completion of the previous stage
	Unweighted	Weighted	Unweighted	Weighted	
Completed Interviews	8550	71,672,363	100.0	100.0	---
Rs who reported that they:					
did not receive a form	593	3,807,032	6.9	5.3	5.3
received a form, but did not open envelope	230	1,518,090	2.7	2.1	2.2
opened envelope, but did not start to fill form	532	2,728,844	6.2	3.8	4.1
started form, but did not complete it	361	2,087,713	4.2	2.9	3.3
completed form, but did not mail it	172	1,301,110	2.0	1.8	2.1
mailed it back	6662	60,229,952	77.9	84.0	

TABLE 10: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND REPORTED APPEARANCE OF CENSUS FORM

		Appearance of Census Form		
Households in which census forms were reportedly:	Total*	Looks Important	Looks Like Junk Mail	Other
Weighted N	70,209,000	61,397,000	7,269,000	1,543,000
%	100.0	100.0	100.0	100.0
Received	94.9	94.9	94.9	92.4
Not received	5.1	5.1	5.1	7.6

X_J = -.44, df = 1, n.s.

*Weighted counts exclude 1,463,000 cases for which appearance is unknown.

TABLE 11: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND REPORTED HANDLING OF JUNK MAIL

		Respondent reports that Household:	
Households in which census forms were reportedly:	Total*	Throws Away Junk Mail	Does Not Throw Away Junk Mail
Weighted N	71,019,000	32,727,000	38,292,000
%	100.0	100.0	100.0
Received	94.7	95.6	94.0
Not received	5.3	4.4	6.0

X_J = -.52, df = 1, n.s.

*Weighted counts exclude 654,000 cases for which method of handling is unknown.

TABLE 12: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF THE CENSUS FORM, RACE/ETHNICITY, AND HOUSEHOLD INCOME

Households in which census forms were reportedly:	Total*		Race/Ethnicity					
			Whites		Blacks		Hispanics	
	High	Low	High	Low	High	Low	High	Low
Weighted N (in 000's)	29,185	35,664	27,084	27,653	1,366	6,173	735	1,838
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Received	97.3	92.8	97.4	93.5	95.2	90.7	98.0	88.7
Not Received	2.7	7.2	2.6	6.5	4.8	9.3	2.0	11.3

*Weighted counts exclude 6,824,000 cases for which race/ethnicity or household income is unknown

Results of Model Testing:

Model		L^2	X_J	df	
[RI][CI]	(1)	121.63	.03	4	Preferred Model
[RI][CR][CI]	(2)	16.62	.07	2	
[RI][C]	(3)	842.82	6.28*	5	
[RI][CR]	(4)	602.11	5.88*	3	

Parameter Effects:

[CR]	(Model 3 - Model 4)	240.71	1.45**	2
[CI]	(Model 3 - Model 1)	721.19	8.05**	1
[CR][CI]	(Model 3 - Model 2)	826.20	7.24**	3
[CI]	(Model 4 - Model 2)	585.49	6.20**	1
[CR]	(Model 1 - Model 2)	105.01	.20	2

* $p<.05$
** $p<.01$

Note: C=Receipt of Census Form; R=Race/Ethicity; I=Income

TABLE 13: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND REPORTED TYPE OF MAIL DELIVERY

		Mail Delivered:				
Households in which census forms were reportedly:	Total*	To the Door	To a Mailbox	To a Common Box	To a P.O. Box	Other
Weighted N	71,640,000	28,783,000	37,646,000	1,131,000	3,253,000	827,000
%	100.0	100.0	100.0	100.0	100.0	100.0
Received	94.7	96.8	94.9	81.1	82.2	78.4
Not received	5.3	3.2	5.1	18.9	17.8	21.6

$X_J = 4.98$ df = 4, $p<.01$

*Weighted counts exclude 32,000 cases for which type of mail delivery is unknown.

TABLE 14: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND HOUSING TYPE

		Housing Type	
Households in which census forms were reportedly:	Total*	Single Family Residences	Multi-Unit Structures
Weighted N	71,507,000	50,588,000	20,919,000
%	100.0	100.0	100.0
Received	94.7	95.9	91.6
Not received	5.3	4.1	8.4

$X_J = 1.56$, df = 1, $p<.05$

*Weighted counts exclude 165,000 cases for which housing type is unknown.

TABLE 15: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF A CENSUS FORM AND COMMUNITY SIZE

		Community Size			
Households in which census forms were reportedly:	Total*	Urban	Suburban	Small Town	Rural
Weighted N	71,517,000	23,408,000	28,760,000	8,292,000	11,058,000
%	100.0	100.0	100.0	100.0	100.0
Received	94.7	93.9	96.4	92.9	93.3
Not received	5.3	6.1	3.6	7.1	6.7

X_J = .92, df = 3, n.s.

*Weighted counts exclude 155,000 cases for which community size is unknown.

TABLE 16: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND FORM TYPE

		Form Type	
Households in which census forms were reportedly:	Total	Short	Long
Weighted N	66,348,000	54,476,000	11,871,000
%	100.0	100.0	100.0
Opened and started	96.0	96.1	95.4
Opened and not started	4.0	3.9	4.6

X_J = 1.30, df = 1, n.s.

TABLE 17: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND HOUSEHOLD SIZE

		Household Size			
Households in which census forms were reportedly:	Total*	One	Two	3-7	8 or more
Weighted N	66,139,000	13,516,000	21,462,000	30,402,000	760,000
%	100.0	100.0	100.0	100.0	100.0
Opened and started	95.9	95.2	97.0	95.6	89.4
Opened and not started	4.1	4.8	3.0	4.4	1.6

X_J = .31, df = 3, n.s.

*Weighted counts exclude 209,000 cases for which household size is unknown.

TABLE 18: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND PERCEIVED DIFFICULTY OF THE FORM

		Perceived Difficulty of Form			
Households in which census forms were reportedly:	Total*	Very Hard	Somewhat Hard	Somewhat Easy	Very Easy
Weighted N	59,186,000	4,745,000	16,741,000	18,385,000	19,315,000
%	100.0	100.0	100.0	100.0	100.0
Opened and started	98.1	93.2	97.8	98.7	99.1
Opened and not started	1.9	6.8	2.2	1.3	.9

X_J = 3.71, df = 3, $p<.01$

*Weighted counts exclude 7,162,000 cases for which perceived difficulty is unknown.

TABLE 19: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY PERCEIVED DIFFICULTY OF THE FORM AND FORM TYPE

		Form Type	
Households in which census forms were opened and perceived as:	Total*	Short	Long
Weighted N	59,186,000	48,575,000	10,611,000
%	100.0	100.0	100.0
Very hard	8.0	6.6	14.5
Somewhat hard	28.3	25.9	39.2
Somewhat easy	31.1	31.3	36.2
Very easy	32.6	36.2	16.3

$X_J = 17.15$, df = 3, $p<.001$

*Weighted counts exclude 7,162,000 cases for which perceived difficulty is unknown.

TABLE 20: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR, PERCEIVED DIFFICULTY OF THE FORM, AND FORM TYPE

Households in which census forms were reportedly:	Total*		Perceived Difficulty of the Form							
			Very Hard		Somewhat Hard		Somewhat Easy		Very Easy	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Weighted N (in 000's)	48,575	10,611	3,208	1,537	12,586	4,155	15,198	3,187	17,582	1,732
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Opened and Started	98.2	98.0	92.5	94.8	97.8	97.8	98.6	99.2	99.1	99.0
Opened and Not Started	1.8	2.0	7.5	5.2	2.2	2.2	1.4	.8	.9	1.0

*Weighted counts exclude 7,162,000 cases for which perceived difficulty is unknown

Results of Model Testing:

Model	L^2	X_J	df	
[SD][DF]	16.87	-.82	4	Preferred Model
[SD][SF][DF]	10.19	-.97	3	
[SD][SF]	2292.23	17.10**	6	
[SF][DF]	808.38	3.05**	6	
[SD][F]	2293.56	16.50**	7	
[SF][D]	3043.39	16.53**	9	
[DF][S]	806.83	2.94**	7	
[S][D][F]	3060.49	17.56**	10	

** $p<.01$

Note: S=Starting to Fill Form; D=Difficulty of Form; F=Form Type

TABLE 21: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND TIME DELAY IN OPENING ENVELOPE

		Envelopes Opened		
Households in which census forms were reportedly:	Total*	Same Day	Next Day	Later
Weighted N	63,451,000	49,076,000	6,110,000	8,265,000
%	100.0	100.0	100.0	100.0
Opened and started	96.0	96.7	97.1	96.0
Opened and not started	4.0	3.3	2.9	4.0

$X_J = 2.33$, df = 2, $p<.01$

*Weighted counts exclude 2,897,000 cases for which time delay is unknown.

TABLE 22: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR, RACE/ETHNICITY, AND HOUSEHOLD INCOME

Households in which census forms were reportedly:	Total*		Race/Ethnicity					
			Whites		Blacks		Hispanics	
	High	Low	High	Low	High	Low	High	Low
Weighted N	27,909,000	32,333,000	25,922,000	25,356,000	1,277,000	5,410,000	710,000	1,568,00
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Opened and started	97.4	94.7	97.5	96.4	96.3	90.0	96.2	84.5
Opened and not started	2.6	5.3	2.5	3.6	3.7	10.0	3.8	15.5

*Weighted counts exclude 6,105,000 cases for which race/ethnicity or household income is unknown

Results of Model Testing:

Model		L^2	X_J	df	
[RI][SR][SI]	(1)	49.54	.66	2	Preferred Model
[RI][S]	(2)	875.70	9.15*	5	
[RI][SR]	(3)	197.18	6.86*	3	
[RI][SI]	(4)	579.10	8.46*	4	

Parameter Effects:

[SR]	(Model 2 - Model 3)	678.53	8.37**	2
[SI]	(Model 2 - Model 4)	296.61	5.62**	1
[SR][SI]	(Model 2 - Model 1)	826.16	8.21**	3
[SI]	(Model 3 - Model 1)	147.63	5.12**	1
[SR]	(Model 4 - Model 1)	529.55	9.33**	2

* $p<.05$
** $p<.01$

Note: S=Starting to Fill the Census Form; R=Race/Ethnicity; I=Income

TABLE 23: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND FORM TYPE

		Form Type	
Households in which census forms were reportedly:	Total	Short	Long
Weighted N	63,619,000	52,305,000	11,314,000
%	100.0	100.0	100.0
Started and finished	97.3	97.9	94.7
Started and not finished	2.7	2.1	5.3

$X_J = 9.57$, df = 1, $p<.001$

TABLE 24: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND PERCEIVED DIFFICULTY OF THE FORM

		Perceived Difficulty of Form			
Households in which census forms were reportedly:	Total*	Very Hard	Somewhat Hard	Somewhat Easy	Very Easy
Weighted N	58,086,000	4,424,000	16,369,000	18,153,000	19,139,000
%	100.0	100.0	100.0	100.0	100.0
Started & finished	97.7	94.9	97.4	97.4	98.8
Started & not finished	2.3	5.1	2.6	2.6	1.2

$X_J = 3.06$, df = 3, $p<.01$

*Weighted counts exclude 5,533,000 cases for which perceived difficulty is unknown.

TABLE 25: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR, PERCEIVED DIFFICULTY OF THE FORM, AND FORM TYPE

Households in which census forms were reportedly:	Total*		Perceived Difficulty of Form							
			Very Hard		Somewhat Hard		Somewhat Easy		Very Easy	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Weighted N (in 000's)	47,690	10,397	2,967	1,458	12,308	4,061	14,991	3,163	17,424	1,715
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Started & Finished	98.2	95.2	97.1	90.4	97.9	95.9	97.9	95.1	98.9	97.7
Started & Not Finished	1.8	4.8	2.9	9.6	2.1	4.1	2.1	4.9	1.1	2.3

*Weighted counts exclude 5,533,000 cases for which perceived difficulty is unknown

Results of Model Testing:

Model	L^2	X_J	df	
[CF][DF]	181.08	1.62	6	Preferred Model
[CD][CF][DF]	12.33	-.67	3	
[CD][CF]	2181.53	16.27**	6	
[CD][DF]	238.15	5.27**	4	
[CD][F]	2543.42	18.95**	7	
[CF][D]	2490.80	14.98**	9	
[DF][C]	608.02	7.95**	7	
[C][D][F]	3180.68	15.66**	10	

** $p<.001$

Note: C=Completing Form; D=Difficulty of Form; F=Form Type

TABLE 26: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND EXPECTED TIME TO FILL FORM

		Expected Time to Fill Form			
Households in which census forms were reportedly:	Total*	15 minutes or less	16-30 minutes	31-60 minutes	more than an hour
Weighted N	51,901,000	23,932,000	14,245,000	9,604,000	4,120,000
%	100.0	100.0	100.0	100.0	100.0
Started & finished	97.8	98.7	98.1	96.5	95.0
Started & not finished	2.2	1.3	1.9	3.5	5.0

$X_J = 5.33$, df = 3, $p<.01$

*Weighted counts exclude 11,718,000 cases for which expected time is unknown.

TABLE 27: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR, EXPECTED TIME TO FILL THE FORM, AND FORM TYPE

Households in which census forms were reportedly:	Total*		Expected Time to Fill Form							
			15 minutes or less		16-30 minutes		31-60 minutes		more than an hour	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Weighted N (in 000's)	42,826	9,074	22,409	1,523	11,849	2,395	6,544	3,860	2,024	2,096
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Started & Finished	98.4	94.9	98.8	96.8	98.5	95.7	97.4	94.4	96.5	93.6
Started & Not Finished	1.6	5.1	1.2	3.2	1.5	4.3	2.6	5.6	3.5	6.4

*Weighted counts exclude 11,718,000 cases for which expected time is unknown

Results of Model Testing:

Model	L^2	X_J	df	
[CF][EF]	132.62	.14	6	Preferred Model
[CE][CF][EF]	6.97	-.93	3	
[CE][CF]	6462.75	17.39**	6	
[CE][EF]	207.51	2.14*	4	
[CE][F]	6839.00	18.57**	7	
[CF][E]	6737.29	17.06**	9	
[EF][C]	553.79	11.28**	7	
[C][E][F]	7640.61	20.57**	10	

* $p<.05$
** $p<.01$

Note: C=Completing Form; E=Expected Time to Fill Form; F=Form Type

TABLE 28: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND TIME SPENT FILLING THE FORM

		Actual Filling Time			
Households in which census forms were reportedly:	Total*	15 minutes or less	16-30 minutes	31-60 minutes	more than an hour
Weighted N	58,395,000	32,051,000	16,262,000	6,973,000	3,110,000
%	100.0	100.0	100.0	100.0	100.0
Started & finished	97.9	98.4	98.2	95.9	96.0
Started & not finished	2.1	1.6	1.8	4.1	4.0

$X_J = 2.94$, df = 3, $p<.01$

*Weighted counts exclude 5,224,000 cases for which filling time is unknown.

TABLE 29: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR, TIME SPENT FILLING THE FORM, AND FORM TYPE

Households in which census forms were reportedly:	Total*		Actual Filling Time							
			15 minutes or less		16-30 minutes		31-60 minutes		more than an hour	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Weighted N (in 000's)	48,009	10,386	30,329	1,722	13,168	3,093	3,569	3,404	943	2,167
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Started & Finished	98.4	95.5	98.6	94.5	98.6	96.2	96.3	95.5	97.9	95.1
Started & Not Finished	1.6	4.5	1.4	5.5	1.4	3.8	3.7	4.5	2.1	4.9

*Weighted counts exclude 5,224,000 cases for which filling time is unknown

Results of Model Testing:

Model	L^2	X_J	df	
[CF][TF]	121.48	-.01	6	Preferred Model
[CT][CF][TF]	54.50	.19	3	
[CT][CF]	13634.26	13.44**	6	
[CT][TF]	272.37	5.80**	4	
[CT][F]	879.91	13.67**	7	
[CF][T]	13793.98	13.44**	9	
[TF][C]	471.45	6.28**	7	
[C][T][F]	14527.13	14.04**	10	

** $p<.01$

Note: C=Completing Form; T=Time Spent Filling Form; F=Form Type

TABLE 30: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND HOUSEHOLD SIZE

		Household Size			
Households in which census forms were reportedly:	Total*	One	Two	3-7	8+
Weighted N	63,420,000	12,869,000	20,820,000	29,051,000	679,000
%	100.0	100.0	100.0	100.0	100.0
Started & finished	96.7	98.3	96.5	96.5	83.8
Started & not finished	3.3	1.7	3.5	3.5	16.2

$X_J = 2.34$, df = 3, $p<.01$

*Weighted counts exclude 199,000 cases for which household size is unknown.

TABLE 31: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND WHEN FORM WAS STARTED

		When Form Was Started			
Households in which census forms were reportedly:	Total*	Right Away	Later Same Day	Next Day	After
Weighted N	59,783,000	12,685,000	10,778,000	15,063,000	21,257,000
%	100.0	100.0	100.0	100.0	100.0
Started & finished	97.0	97.4	96.8	97.3	97.0
Started & not finished	3.0	2.6	3.2	2.7	3.5

$X_J = -.46$, df = 3, n.s.

*Weighted counts exclude 3,836,000 cases for which time of starting is unknown.

TABLE 32: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND METHOD OF STARTING TO FILL FORM

		Respondents reported they:	
Households in which census forms were reportedly:	Total*	Looked over form first	Started to fill form right away
Weighted N	60,131,000	51,514,000	8,617,000
%	100.0	100.0	100.0
Started and Finished	97.7	98.0	95.8
Started and Not Finished	2.3	2.0	4.2

$X_J = 1.40$, df = 1, $p<.05$

*Weighted counts exclude 3,488,000 cases for which method of starting is unknown.

TABLE 33: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND INSTRUCTION-READING BEHAVIOR

		Respondents reported that they:			
Households in which census forms were reportedly:	Total*	Did Not Read Instructions	Read Instructions Before Starting	Read Instructions After Starting	Read Instructions Both Times
Weighted N	53,196,000	8,568,000	34,947,000	8,995,000	685,000
%	100.0	100.0	100.0	100.0	100.0
Started and Finished	98.0	97.1	98.4	97.4	98.9
Started and Not Finished	2.0	2.9	1.6	2.6	1.1

$X_J = .63$, df = 3, n.s.

*Weighted counts exclude 10,423,000 cases for which instruction-reading behavior is unknown.

TABLE 34: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND DIFFICULTY IN FINDING TIME TO FILL THE FORM

		Respondents reported it was:	
Households in which census forms were reportedly:	Total*	Hard to find time to fill the form	Not hard to find time to fill the form
Weighted N	60,103,000	5,298,000	54,806,000
%	100.0	100.0	100.0
Started and Finished	97.6	89.9	98.4
Started and Not Finished	2.4	10.1	1.6

$X_J = 9.98$, df = 1, $p<.01$

*Weighted counts exclude 3,516,000 cases for which assessment is unknown.

TABLE 35: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND WHETHER RESPONDENTS MINDED HAVING TO FILL THE FORM

		Respondents reported they:	
Households in which census forms were reportedly:	Total*	Minded having to fill the form	Did not mind having to fill the form
Weighted N	60,165,000	5,815,000	54,350,000
%	100.0	100.0	100.0
Started and finished	97.7	3.2	8.1
Started and not finished	2.3	6.8	1.9

$X_J = 6.29$, df = 1, $p<.01$

*Weighted counts exclude 3,454,000 cases for which assessment is unknown.

TABLE 36: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND REPORTED TROUBLE WITH THE FORM

		Respondents said they:	
Households in which census forms were reportedly:	Total*	Had trouble with the form	Had no trouble with the form
Weighted N	60,381,000	6,631,000	53,744,000
%	100.0	100.0	100.0
Started and finished	97.6	2.8	98.2
Started and not finished	2.4	7.2	1.8

$X_J = 11.92$, df = 1, $p<.01$

*Weighted counts exclude 3,244,000 cases for which assessment is unknown.

TABLE 37: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR, RACE/ETHNICITY, AND HOUSEHOLD INCOME

Households in which census forms were reportedly:	Total*		Race/Ethnicity					
			Whites		Blacks		Hispanics	
	High	Low	High	Low	High	Low	High	Low
Weighted N	27,195,000	30,628,000	25,281,000	24,435,000	1,229,000	4,867,000	684,000	1,325,000
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Started and finished	97.3	97.3	97.5	97.9	95.0	95.2	94.4	95.6
Started and not finished	2.7	2.7	2.5	2.1	5.0	4.8	5.6	4.4

*Weighted counts exclude 5,796,000 cases for which race/ethnicity or household income is unknown

Results of Model testing:

Model		L^2	X_J	df	
[RI][FR]	(1)	10.21	-.82	3	Preferred Model
[RI][F]	(2)	152.15	.68	5	
[RI][FI]	(3)	151.94	.81	4	
[RI][FR][FI]	(4)	1.02	-.98	2	

Parameter Effects

[FR]	(Model 2 - Model 1)	141.94	1.49*	2
[FI]	(Model 2 - Model 3)	.21	-.53	1
[FR][FI]	(Model 2 - Model 4)	151.13	.17	3
[FI]	(Model 1 - Model 4)	9.19	-.43	1
[FR]	(Model 3 - Model 4)	150.92	1.40	2

* $p<.05$

Note: F=Finishing the Census Form; R=Race/Ethnicity; I=Income

TABLE 38: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY RECEIVED BY OPENING BEHAVIOR AND APPEARANCE OF CENSUS FORM

		Appearance of Census Form		
Households in which census forms were reportedly:	Total*	Looks Important	Looks Like Junk Mail	Other
Weighted N	66,600,000	58,272,000	6,902,000	1,426,000
%	100.0	100.0	100.0	100.0
Received and opened	97.8	98.1	95.4	99.1
Received and not opened	2.2	1.9	4.6	0.9

$X_J = 3.64$, df = 1, $p<.01$

*Weighted counts exclude 1,266,000 cases for which perception of appearance is unknown.

TABLE 39: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY RECEIVED BY OPENING BEHAVIOR AND FORM TYPE

		Form Type	
Households in which census forms were reportedly:	Total	Short	Long
Weighted N	67,866,000	55,759,000	12,107,000
Received and opened	98.0	97.9	98.3
Received and not opened	2.0	2.1	1.7

$X_J = -.53$, df = 1, n.s.

TABLE 40: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY RECEIVED BY OPENING BEHAVIOR, RACE/ETHNICITY, AND HOUSEHOLD INCOME

Households in which census forms were reportedly:	Total*		Race/Ethnicity					
			Whites		Blacks		Hispanics	
	High	Low	High	Low	High	Low	High	Low
Weighted N	28,403,000	33,086,000	26,383,000	25,857,000	1,300,000	5,597,000	720,000	1,631,000
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Received and opened	98.3	97.7	98.3	98.1	98.2	96.6	98.6	96.2
Received and not opened	1.7	2.3	1.7	1.9	1.8	3.4	1.4	3.8

*Weighted counts exclude 6,377,000 cases for which race/ethnicity or household income is unknown

Results of Model testing:

Model		L^2	X_J	df	
[RI][OR]	(1)	24.49	-.53	3	Preferred Model
[RI][O]	(2)	77.39	.55	5	
[RI][OI]	(3)	55.21	.81	4	
[RI][OR][OI]	(4)	14.06	.17	2	

Parameter Effects:

[OR]	(Model 2 - Model 1)	52.90	1.54*	2
[OI]	(Model 2 - Model 3)	22.18	-.16	1
[OR][OI]	(Model 2 - Model 4)	63.33	.51	3
[OI]	(Model 1 - Model 4)	10.43	-.52	1
[OR]	(Model 3 - Model 4)	41.15	1.29	2

* $p<.05$

Note: O=Opening the Census Envelope; R=Race/Ethnicity; I=Income

TABLE 41: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY FINISHED BY MAILING BEHAVIOR AND FORM TYPE

		Form Type	
Households in which census forms were reportedly:	Total	Short	Long
Weighted N	61,531,000	50,867,000	10,665,000
%	100.0	100.0	100.0
Finished and mailed	97.9	97.8	97.9
Finished and not mailed	2.1	2.2	2.1

$X_J^2 = -.94$, df = 1, n.s.

TABLE 42: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY RECEIVED BY FINISHED BY MAILING BEHAVIOR AND HOUSEHOLD INCOME

Households in which census forms were reportedly:	Total*		Race/Ethnicity					
			Whites		Blacks		Hispanics	
	High	Low	High	Low	High	Low	High	Low
Weighted N	26,454,000	29,812,000	24,640,000	23,914,000	1,168,000	4,632,000	646,000	1,267,000
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Finished and mailed	98.6	97.1	98.9	97.2	97.1	98.2	90.7	92.3
Finished and not mailed	1.4	2.9	1.1	2.8	2.9	1.8	9.3	7.7

*Weighted counts exclude 5,265,000 cases for which race/ethnicity or household income is unknown

Results of Model testing:

Model		L^2	X_J	df	
[RI][MR][MI]	(1)	65.61	-.05	2	Preferred Model
[RI][M]	(2)	407.69	1.54*	5	
[RI][MR]	(3)	200.44	2.06*	3	
[RI][MI]	(4)	255.20	1.14	4	

Parameter Effects:

[MR]	(Model 2 - Model 3)	207.24	1.85*	2
[MI]	(Model 2 - Model 4)	152.48	2.09*	1
[MR][MI]	(Model 2 - Model 1)	342.08	2.54*	3
[MI]	(Model 3 - Model 1)	134.83	1.95*	1
[MR]	(Model 4 - Model 1)	189.59	1.86*	2

* $p<.05$

Note: M=Mailing Back the Census Form; R=Race/Ethnicity; I=Income

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Form Approved: O.M.B. No. 41-S79070

FORM D-896A
(1-11-80)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

APPLIED BEHAVIOR ANALYSIS SURVEY

20th Decennial Census – 1980

NOTICE – All information which would permit identification of the individual will be held in strict confidence, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any purposes.

1. ADDRESS LABEL

2. INTERVIEWER NAME

3. RECORD OF VISITS

Date (a)	Time started (b)	Outcome (c)
	a.m. p.m.	
	a.m. p.m.	
	a.m. p.m.	
	a.m. p.m.	
	a.m. p.m.	
	a.m. p.m.	

4. SEQUENCE OF INTERVIEW

Respondent (a)	Sex (b)	Item numbers (c)	
		Started with	Stopped at
1	☐ M ☐ F	1	
2	☐ M ☐ F		
3	☐ M ☐ F		

5. OUTCOME OF INTERVIEW

a. Completed interview
- 1 ☐ By personal visit
- 2 ☐ By telephone

b. Noninterview
- 3 ☐ Vacant unit
- 4 ☐ Refused – *Fill items 146–148*
- 5 ☐ Not at home
- 6 ☐ Other – *Specify*

6. CALLBACK ARRANGEMENTS

Name of desired respondent (a)	Telephone (b)		Best time to call (c)	Item number to start interview (d)
	Area code	Number		
			a.m. p.m.	
			a.m. p.m.	

INTRODUCTION

Hello. I am _____ from the United States Bureau of the Census. Here is my identification. We are conducting a survey and I'd like to ask you a few questions. Here is your official written notice.

NOTE – GIVE RESPONDENT PRIVACY ACT NOTICE.

1. First, let me ask you – how do you get your mail here? Is it delivered – *READ EACH OPTION UNTIL A RESPONSE IS GIVEN.*	1 ☐ Right to your door? 2 ☐ To your own mail box? 3 ☐ To a common box or table with mail for other households? 4 ☐ To a Post Office box? 5 ☐ To general delivery? 6 ☐ In care of another address? 7 ☐ Or some other way? *Explain* ↯ _____
2. Some people throw away certain kinds of mail automatically, almost without looking at it. Do you ever do that?	1 ☐ Yes 2 ☐ Depends 3 ☐ No 4 ☐ DK } *SKIP to 4*
3. What kind of mail do you throw away without looking at it? *MARK ALL THAT APPLY.* *PROBE:* Anything else?	1 ☐ All mail not personally addressed 2 ☐ Mail soliciting donations 3 ☐ Ads 4 ☐ Other – *Explain* ↯ _____
4. As far as you know, did a census form come to this (house/apartment) late in March – around the 28th?	1 ☐ Yes – *SKIP to 16* 2 ☐ No 3 ☐ DK
5. Just to be sure – did an envelope like this *(SHOW ENVELOPE)* come in the mail recently?	1 ☐ Yes – *SKIP to 16* 2 ☐ No 3 ☐ DK
6. Would you say an envelope like this *(SHOW ENVELOPE)* looks important or like junk mail to you?	1 ☐ Important 2 ☐ Junk mail 3 ☐ Other – *Explain* ↯ _____ 4 ☐ DK
7. Have you heard any news recently about the census?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 10*
8. Where have you seen or heard things about the census? *MARK ALL THAT APPLY.* *PROBE:* Anything else?	1 ☐ Newspaper 2 ☐ Magazine 3 ☐ Radio 4 ☐ TV 5 ☐ Poster or sign 6 ☐ Handbill or flyer 7 ☐ At a meeting 8 ☐ People talking 9 ☐ Other – *Explain* ↯ _____ 10 ☐ Don't remember

9. Were you expecting to get a census form in the mail?

1 ☐ Yes
2 ☐ No
3 ☐ DK

10. We are supposed to find out for sure whether a census form got to every household in this area. Is there someone else who lives here who might have seen the envelope without your knowing it?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} *SKIP to 133, page 17*

11. Who else might have seen the envelope?

Name(s) _____

If more than one person is mentioned, pick the person most likely to know who worked on the census form. Ask the next three questions about that person.

12. Is . . . here now so that I can talk to (her/him) when we're finished?

1 ☐ Yes – *Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 15.*
2 ☐ No

13. Is there a phone here that I can call . . . on when (he's/she's) home?

Telephone
Area code | Number
_____

2 ☐ No

14. What is the best time to find . . . at home?

_____ a.m.
p.m.

☐ No usual "best" time; DK

Ask items 133–148, page 17, of current respondent. Call back newly named respondent, and begin interview at item 15.

15. As part of the 1980 Census, census forms were supposed to have been mailed to every household in this area. As far as you know, did a census form come to this (house/apartment) late in March – around the 28th?

1 ☐ Yes – *SKIP to 17*
2 ☐ No
3 ☐ DK

} *END INTERVIEW*

16. Would you say an envelope like this *(SHOW ENVELOPE)* looks important or like junk mail to you?

1 ☐ Important
2 ☐ Junk mail
3 ☐ Other – *Explain* → _____
4 ☐ DK

17. Had you heard anything about the census before the census form came?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} *SKIP to 20*

18. Were you expecting to get a census form in the mail?

1 ☐ Yes
2 ☐ No
3 ☐ DK

19. Where have you seen or heard things about the Census?

MARK ALL THAT APPLY.

PROBE: Anything else?

1 ☐ Newspaper
2 ☐ Magazine
3 ☐ Radio
4 ☐ TV
5 ☐ Poster or sign
6 ☐ Handbill or flyer
7 ☐ At a meeting
8 ☐ People talking
9 ☐ Other – *Explain* _____
10 ☐ Don't remember

20. After the envelope arrived, was there any talk in your household about whose job it was to take care of the census form?	1 ☐ Yes – *SKIP to 22* 2 ☐ No 3 ☐ DK

NOTE – ASK 21 only if this is the first respondent in this household. Otherwise skip to 23.

21. Are there other people living in the household with whom you COULD talk about the form?	1 ☐ Yes, others living here – *SKIP to 23* 2 ☐ No, no others living here – *CHANGE TO ONE RESPONDENT HOUSEHOLD SUPPLEMENT AND BEGIN WITH S23.*
22. And what did you decide?	1 ☐ Respondent would take care of it 2 ☐ Other household member would take care of it 3 ☐ Look for outside help 4 ☐ Do nothing 5 ☐ No decision made 6 ☐ Other – *Explain* _____ 7 ☐ DK
23. Did anyone ever open the envelope?	1 ☐ Yes 2 ☐ No – *SKIP to 34* 3 ☐ DK – *SKIP to 26*
24. Was it someone who lives in your household?	1 ☐ Yes – *SKIP to 35* 2 ☐ No 3 ☐ DK – *SKIP to 36*
25. Was it a friend or relative who opened the envelope, or did you take it to an office where there were people to help fill out your form?	1 ☐ Friend or relative – *SKIP to 107, page 12* 2 ☐ Office – *SKIP to 82, page 10* 3 ☐ DK – *SKIP to 36*
26. Is there anyone else in the household who might know what happened to the census form?	1 ☐ Yes 2 ☐ No } *SKIP to 133, page 17* 3 ☐ DK }
27. Who else in the household might know what happened to the form?	Name(s) _____

If more than one person is mentioned, pick the person most likely to know what happened to the census form. Ask the next three questions about that person.

28. Is . . . here now so that I can talk to (her/him) when we're finished?	1 ☐ Yes – *Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 31.* 2 ☐ No
29. Is there a phone here that I can call . . . on when (he's/she's) home?	Telephone Area code | Number _____ 2 ☐ No
30. What is the best time to find . . . at home?	_____ a.m. _____ p.m. ☐ No usual "best" time; DK

Ask items 133–148, page 17, of current respondent. Call back newly named respondent and begin interview at item 31.

31. As part of the 1980 Census, an envelope containing a census form was mailed to your (house/apartment) late last month, and we're trying to find out what happened to it after it arrived. Do you know whether anyone opened the census envelope?	1 ☐ Yes, opened 2 ☐ No, not opened – *SKIP to 34* 3 ☐ DK – *END INTERVIEW*
32. Was it opened by someone who lives in your household?	1 ☐ Yes – *SKIP to 35* 2 ☐ No 3 ☐ DK – *SKIP to 36*
33. Was it a friend or relative who opened the envelope, or did you take it to an office where there were people to help fill out your form?	1 ☐ Friend or relative – *SKIP to 107, page 12* 2 ☐ Office – *SKIP to 82, page 10* 3 ☐ DK – *SKIP to 36*
34. As best you can remember, what happened to the envelope after it came?	1 ☐ Took to an assistance center – *SKIP to 82, page 10* 2 ☐ Gave to someone else to open – *SKIP to 91, page 11* 3 ☐ Lost – *SKIP to 121, page 15* 4 ☐ Thrown away – *SKIP to 123, page 15* 5 ☐ Accidently destroyed – *SKIP to 124, page 15* 6 ☐ Nothing; still unopened – *SKIP to 126, page 16* 7 ☐ Other – *Explain* _____ } *SKIP to 133, page 17* 8 ☐ DK – *PROBE by reading categories: If still "DK," SKIP to 133, page 17*
35. Who opened the envelope?	1 ☐ Respondent 2 ☐ Other – *Explain* _____ 3 ☐ DK
36. Was it opened the same day it arrived, the next day, or some time after that?	1 ☐ Same day 2 ☐ Next day 3 ☐ After 4 ☐ DK
37. Did anyone ever start to fill out the census form that was inside?	1 ☐ Yes 2 ☐ No – *SKIP to 45* 3 ☐ DK – *SKIP to 39*
38. Was it started right after it was opened, later the same day, the next day, or some time after that?	1 ☐ Right after opened 2 ☐ Later same day 3 ☐ Next day 4 ☐ After that 5 ☐ DK } *SKIP to 46*
39. Is there anyone else in the household who might know what happened to the form?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 133, page 17*
40. Who is that?	Name(s) _____

If more than one person is mentioned, pick the person most likely to know who worked on the census form. Ask the next three questions about that person.

41. Is . . . here now so that I can talk to (her/him) when we're finished?

1 ☐ Yes – *Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 44.*
2 ☐ No

42. Is there a phone here that I can call . . . on when (he's/she's) home?

Telephone
Area code | Number

2 ☐ No

43. What is the best time to find . . . at home?

_____ a.m.
_____ p.m.
☐ No usual "best" time; DK

Ask items 133–148, page 17, of current respondent. Call back newly named respondent and begin interview at item 44.

44. As part of the 1980 Census, a census form was mailed to your (house/apartment) late last month, and we're trying to find out what happened to census forms after people opened the envelopes. Do you know whether anyone ever started to fill out the form?

1 ☐ Yes, started – *SKIP to 46*
2 ☐ No, not started
3 ☐ DK – *END INTERVIEW*

45. As best you can remember, what happened to the form at that point?

1 ☐ Took to an assistance center – *SKIP to 82, page 10*
2 ☐ Gave to someone else to fill – *SKIP to 98, page 11*
3 ☐ Lost – *SKIP to 122, page 15*
4 ☐ Thrown away – *SKIP to 123, page 15*
5 ☐ Accidentally destroyed – *SKIP to 124, page 15*
6 ☐ Nothing; left unfilled – *SKIP to 128, page 16*
7 ☐ Other – *Explain* _____ } *SKIP to 133, page 17*
8 ☐ DK – *PROBE by reading categories; if still "DK," SKIP to 133, page 17*

46. Who worked on the form?

1 ☐ Respondent, alone or with others – *SKIP to 57*
2 ☐ Other – *Specify relationship to respondent* _____ } *SKIP to NOTE preceding item 54*
3 ☐ DK

47. Is there anyone else in the household who might know who worked on the form?

1 ☐ Yes
2 ☐ No } *SKIP to 133, page 17*
3 ☐ DK

48. Who else might know?

Name(s) _____

If more than one person is mentioned, pick the person most likely to know who worked on the census form. Ask the next three questions about that person.

49. Is . . . here now so that I can talk to (her/him) when we're finished?

1 ☐ Yes – *Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 52.*
2 ☐ No

50. Is there a phone here that I can call . . . on when (he's/she's) home?

Telephone
Area code | Number

2 ☐ No

51. What is the best time to find . . . at home?

_____ a.m.
_____ p.m.
☐ No usual "best" time; DK

Ask items 133–148, page 17, of current respondent. Call back newly named respondent and begin interview at item 52.

52. As part of the 1980 Census, a census form was mailed to your (house/apartment) late last month, and we're trying to find out what happened to the form. Do you happen to know who worked on filling out the census form?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} END INTERVIEW

53. Who was that?

1 ☐ Respondent – SKIP to 57
2 ☐ Other – Specify relationship to respondent ↘
_____
} See NOTE below
3 ☐ DK

▶ NOTE
If household member (but not current respondent) is mentioned, mark (X) here → ☐ CONTINUE with 54
If only assistance center is mentioned, mark (X) here → ☐ SKIP to 83, page 10
If other nonmember of household is mentioned, mark (X) here → ☐ SKIP to 107, page 12

54. Is . . . here now so that I can talk to (her/him) when we're finished?

1 ☐ Yes – Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 57.
2 ☐ No

55. Is there a phone here that I can call . . . on when (he's/she's) home?

Telephone
Area code | Number
_____

2 ☐ No

56. What is the best time to find . . . at home?

_____ a.m. p.m.
☐ No usual "best" time; DK

▶ Ask items 133–148, page 17, of current respondent. Call back newly named respondent, and begin interview at item 57.

▶ IF THERE IS A NEW RESPONDENT AT THIS POINT, ADD THE FOLLOWING INTRODUCTION –
We are asking people who saw the census form some questions about it.

57. When you first saw the form, did it look as if it would be hard or easy to fill?

1 ☐ Hard
2 ☐ Easy
3 ☐ DK – SKIP to 59

58. Would you say it looked very (hard/easy) or just somewhat (hard/easy)?

1 ☐ Very
2 ☐ Somewhat
3 ☐ DK

59. How long did you think it would take to fill the form?

_____ Minutes
☐ DK

60. Did you look the form over first before you started to fill it out, or did you just start right in answering the questions?

1 ☐ Looked over first
2 ☐ Started right in
3 ☐ DK

61. Did you notice a yellow instruction booklet along with the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} SKIP to 64

62. Did you read the instructions?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} SKIP to 64

63. Was that before you started to work on the form, or while you were filling it out?

1 ☐ Before
2 ☐ During
3 ☐ DK

64. Altogether, how much time did you spend filling out the form?	_____ Minutes ☐ DK
65. Some people have a hard time filling out different kinds of forms. Did you have any trouble with the form while you were working on it?	1 ☐ Yes 2 ☐ No – *SKIP to 71*
66. What kind of trouble did you have? Was the form confusing?	1 ☐ Yes 2 ☐ No 3 ☐ DK
67. Were there questions that you didn't understand?	1 ☐ Yes → **Which ones?** _____ _____ 2 ☐ No 3 ☐ DK
68. Did you have trouble getting the information to answer any of the questions?	1 ☐ Yes → **Which ones?** _____ _____ 2 ☐ No 3 ☐ DK
69. Were there any questions you didn't want to answer?	1 ☐ Yes → **Which ones?** _____ _____ 2 ☐ No 3 ☐ DK
70. Was there anything else that you had trouble with?	_____ _____ 2 ☐ No 3 ☐ DK
71. Did you mind having to fill out the census form?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 73*
72. What was it that bothered you about filling out the form? *PROBE:* Anything else?	_____ _____ _____ _____
73. Was it hard for you to find the time to fill out the form?	1 ☐ Yes 2 ☐ No 3 ☐ DK
74. Did you finish filling out the form?	1 ☐ Yes – *SKIP to 76* 2 ☐ No

75. What happened to the form after you stopped working on it?

1 ☐ Took to an assistance center – *SKIP to 82, page 10*
2 ☐ Gave to someone else to finish – *SKIP to 106, page 12*
3 ☐ Mailed back incomplete – *SKIP to 118, page 14*
4 ☐ Lost – *SKIP to 122, page 15*
5 ☐ Thrown away – *SKIP to 123, page 15*
6 ☐ Accidentally destroyed – *SKIP to 124, page 15*
7 ☐ Nothing; still unfinished – *SKIP to 132, page 16*
8 ☐ Other – *Explain* _____ } *SKIP to 133, page 17*
9 ☐ DK – *PROBE by reading categories; if still "DK," SKIP to 133, page 17*

76. Did anyone help you fill out the form, or did you do it by yourself?

1 ☐ Had help
2 ☐ Filled it alone – *SKIP to 78*

77. Who helped you with it?

1 ☐ Another household member
2 ☐ Relative, lives elsewhere
3 ☐ Friend or neighbor
4 ☐ Assistance center worker
5 ☐ Paid practitioner
6 ☐ Other – *Explain* _____

78. Do you still have the form, or was it mailed in?

1 ☐ Still have – *SKIP to 80*
2 ☐ Mailed in
3 ☐ DK – *SKIP to 133, page 17*

79. Did you mail it yourself or did someone else do it?

1 ☐ Respondent mailed it
2 ☐ Someone else mailed it } *SKIP to 81*
3 ☐ DK

80. Are you planning to mail it in?

1 ☐ Yes
2 ☐ No } *SKIP to 133, page 17*
3 ☐ DK

81. Do you happen to remember the date when it was mailed in?

_____ Date } *SKIP to 133, page 17*
☐ DK

Notes

QUESTIONS FOR RESPONDENT WHO TOOK THE CENSUS FORM TO AN ASSISTANCE CENTER

82. Did you get the help you were looking for when you went to the assistance office?

1 ☐ Yes
2 ☐ No – *Explain* _____ } *SKIP to 88*
3 ☐ DK

83. Did you fill out the form yourself or did someone at the office ask you the questions and write down the answers?

1 ☐ Filled it himself/herself
2 ☐ Assistance center worker filled it
3 ☐ DK

84. Did you have to wait before someone at the office helped you?

1 ☐ Yes
2 ☐ No – *SKIP to 86*

85. How long did you have to wait?

_____ Minutes
☐ DK

86. Once you were able to talk to someone, how long did it take you to get your census form filled out?

_____ Minutes
☐ DK

87. Did the assistance center keep the completed form, or did you bring it home with you?

1 ☐ Assistance center kept it – *SKIP to 133, page 17*
2 ☐ Brought it home
3 ☐ DK – *SKIP to 133, page 17*

88. Do you still have the form, or have you mailed it in?

1 ☐ Still have it
2 ☐ Mailed it in – *SKIP to 90*
3 ☐ DK – *SKIP to 133, page 17*

89. Are you planning to mail it in?

1 ☐ Yes } *SKIP to 133, page 17*
2 ☐ No
3 ☐ DK

90. Do you happen to remember the date when it was mailed in?

_____ Date } *SKIP to 133, page 17*
☐ DK

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS ENVELOPE OR FORM WAS GIVEN TO SOMEONE ELSE

91. Did you give the envelope to another member of this household, or to someone who doesn't live here?

1 ☐ Household member
2 ☐ Lives elsewhere – *SKIP to 107*

92. Who is that?

93. Is . . . here now so that I can talk to (her/him) when we're finished?

1 ☐ Yes – *Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 96.*
2 ☐ No

94. Is there a phone here that I can call . . . on when (he's/she's) home?

Telephone
Area code | Number

2 ☐ No

95. What is the best time to find . . . at home?

_____ a.m.
_____ p.m.
☐ No usual "best" time; DK

Ask items 133–148, page 17, of current respondent. Call back newly named respondent, and begin interview at item 96.

96. ___(*Previous respondent*)___ said that (he/she) gave the census envelope to you to open. Is that right?

1 ☐ Yes
2 ☐ No } *END INTERVIEW*
3 ☐ DK }

97. Did you open the envelope?

1 ☐ Yes – *RETURN to item 36*
2 ☐ No } *SKIP to 105*
3 ☐ DK }

98. Did you give the form to another member of this household or to someone who doesn't live here?

1 ☐ Household member
2 ☐ Lives elsewhere – *SKIP to 107*

99. Who is that?

100. Is . . . here now so that I can talk to (her/him) when we're finished?

1 ☐ Yes – *Ask items 133–148, page 17, of current respondent. Begin with new respondent at item 103.*
2 ☐ No

101. Is there a phone here that I can call . . . on when (he's/she's) home?

Telephone
Area code | Number

2 ☐ No

102. What is the best time to find . . . at home?

_____ a.m.
_____ p.m.
☐ No usual "best" time; DK

Ask items 133–148, page 17, of current respondent. Call back newly named respondent and begin interview at item 103.

103. ___(Previous respondent)___ said that (he/she) gave the census form to you to fill out. Is that right?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *END INTERVIEW*

104. Did you start to fill out the form?

1 ☐ Yes – *RETURN to item 57*
2 ☐ No

105. As best you can remember, what happened to the form at that point?

1 ☐ Took to an assistance center – *RETURN to 82, page 10*
2 ☐ Gave to someone else to fill – *CONTINUE with 106*
3 ☐ Lost – *SKIP to 122, page 15*
4 ☐ Thrown away – *SKIP to 123, page 15*
5 ☐ Accidentally destroyed – *SKIP to 124, page 15*
6 ☐ Nothing, left unfilled – *SKIP to 128, page 16*
7 ☐ Other – *Explain*

_____

_____

_____
} *SKIP to 133, page 17*

8 ☐ DK – *PROBE by reading categories; if still "DK," SKIP to 133, page 17*

106. Did you give the form to another member of the household to complete, or to someone who doesn't live here?

1 ☐ Household member
2 ☐ Lives elsewhere

107. Has the census form been completed?

1 ☐ Yes – *SKIP to 111*
2 ☐ No
3 ☐ DK

108. What happened to the form – is it back here now, does the person you gave it to still have it, or was it mailed in incomplete?

1 ☐ Form has come back – *SKIP to 110*
2 ☐ Other person still has – *SKIP to 133, page 17*
3 ☐ Mailed in incomplete – *ASK 109*
4 ☐ Other – *Explain*

_____
} *SKIP to 133, page 17*

5 ☐ DK

109. Who mailed the form in?

1 ☐ Household member
2 ☐ Person it was given to
3 ☐ Other – *Explain*

_____
} *SKIP to 117, page 13*

4 ☐ DK

110. Are you planning to complete the form and mail it in?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to 133, page 17*

111. Do you happen to know who completed it?

1 ☐ Yes
2 ☐ No – *SKIP to 113*

112. Was it completed by the person you gave it to, by someone who lives here, or by someone else?

1 ☐ Person it was given to
2 ☐ Household member – *SKIP to 115*
3 ☐ Other – *Explain*
_____
_____
4 ☐ DK

113. Has the form been mailed in?

1 ☐ Yes – *SKIP to 117*
2 ☐ No
3 ☐ DK

114. Who has the form now – has it come back here, does the person you gave it to still have it, or does someone else have it now?

1 ☐ Back here – *SKIP to 116*
2 ☐ Person it was given to still has it
3 ☐ Someone else has it now
4 ☐ Other – *Explain*
_____
_____
5 ☐ DK

} *SKIP to 133, page 17*

115. Has the form been mailed in?

1 ☐ Yes – *SKIP to 117*
2 ☐ No
3 ☐ DK

116. Are you planning to mail it in?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} *SKIP to 133, page 17*

117. Do you happen to remember the date when it was mailed?

_____ Date
☐ DK

} *SKIP to 133, page 17*

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS FORM WAS MAILED IN INCOMPLETE

118. Did anyone help you when you worked on the forms or did you do it by yourself?

- 1 ☐ Had help
- 2 ☐ Filled it alone – *SKIP to 120*

119. Who else helped you with it?

- 1 ☐ Another household member
- 2 ☐ Relative, lives elsewhere
- 3 ☐ Friend or neighbor
- 4 ☐ Assistance center worker
- 5 ☐ Paid practitioner
- 6 ☐ Other – *Explain*

_____

120. Do you happen to remember the date when it was mailed?

_____ Date } *SKIP to 133, page 17*

☐ DK

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS ENVELOPE OR FORM WAS LOST OR THROWN AWAY OR ACCIDENTALLY DESTROYED

121. Have you looked around to try to find the envelope?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} SKIP to 124

122. Have you looked around to try to find the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} SKIP to 124

123. Did you throw away the census form on purpose, or was it an accident?

1 ☐ On purpose – SKIP to 133, page 17
2 ☐ Accident

124. Did you try to get another form?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} SKIP to 133, page 17

125. What did you do to try to get another form?

MARK ALL THAT APPLY.

1 ☐ Called the Census Bureau
2 ☐ Visited a census office
3 ☐ Asked someone else to get one
4 ☐ Other – Explain →

_____

5 ☐ DK

} SKIP to 133, page 17

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS ENVELOPE WAS UNOPENED OR WHOSE CENSUS FORM WAS UNFILLED OR UNFINISHED

126. Are you planning to open the census envelope?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to 133*

127. Do you plan to fill out the census form?

1 ☐ Yes
2 ☐ No
} *SKIP to 133*

128. Have you looked over the census form?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to 131*

129. When you first saw the form, did it look as if it would be hard or easy to fill out?

1 ☐ Hard
2 ☐ Easy
3 ☐ DK – *SKIP to 131*

130. Would you say it looked very (hard/easy) or just somewhat (hard/easy)?

1 ☐ Very
2 ☐ Somewhat
3 ☐ DK

131. Are you planning to fill out the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to 133*

132. Are you planning to finish the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *CONTINUE with 133*

Notes

QUESTIONS FOR ALL RESPONDENTS

	FIRST RESPONDENT	LAST RESPONDENT
▶ *NOTE – Questions 133–145 should be asked only of the first and last respondents interviewed. If a second respondent refers you to another household member, end the interview for the middle respondent at this point.*		
133. Have you talked to anyone – or has anyone talked to you – about whether you should or should not fill out a census form and mail it in?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 136*	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 136*
134. Who did you talk to? Was it someone who lives in this household, a relative, a friend or neighbor, or someone else?	1 ☐ Household member 2 ☐ Relative, lives elsewhere 3 ☐ Friend or neighbor 4 ☐ Other – *Explain* → 5 ☐ DK	1 ☐ Household member 2 ☐ Relative, lives elsewhere 3 ☐ Friend or neighbor 4 ☐ Other – *Explain* → 5 ☐ DK
135. Did they say that you should or shouldn't fill out a form and mail it in?	1 ☐ Should 2 ☐ Shouldn't 3 ☐ Other – *Explain* → 4 ☐ DK	1 ☐ Should 2 ☐ Shouldn't 3 ☐ Other – *Explain* → 4 ☐ DK
136. If a household does not send back a completed census form in the mail, will the people who live there be counted in the census?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 138*	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 138*
137. How will they be counted?		
138. As far as you know, is there a penalty for not filling out the form and mailing it back?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 140*	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to 140*
139. Do you happen to know what the penalty is?	1 ☐ Jail 2 ☐ Fine 3 ☐ Other – *Explain* → 4 ☐ DK	1 ☐ Jail 2 ☐ Fine 3 ☐ Other – *Explain* → 4 ☐ DK
140. Has a census taker called on you?	1 ☐ Yes 2 ☐ No 3 ☐ DK	1 ☐ Yes 2 ☐ No 3 ☐ DK
141. As far as you know, will you be counted in the 1980 Census?	1 ☐ Yes 2 ☐ No 3 ☐ DK	1 ☐ Yes 2 ☐ No 3 ☐ DK

▶ *NOTE — Whenever there are two respondents — Ask items 142–145 of the second respondent only if the information has not been obtained from the first respondent.*

142. Just a couple more questions about you and your household to make sure that all kinds of people are included in the survey.

First, how many people are living in your household?

_____ People

143. Which of these categories best describes your household's income from all sources last year before taxes?

PERSONAL VISIT — Show respondent flashcard.

TELEPHONE INTERVIEW — Read categories.

1 ☐ **Under $10,000**
2 ☐ **$10,000 – $16,999**
3 ☐ **$17,000 – $24,999**
4 ☐ **$25,000 and over**
5 ☐ DK
6 ☐ Refused

Ask only if this is the first visit to the household

144. Is there a telephone number here in case we need to contact you again?

☐ No

Telephone
Area code | Number

145. And finally, may I please have the family name?

Name _____

INTERVIEWER OBSERVATION — Fill items 146–148 only once.

146. RACE/ETHNICITY

1 ☐ White, not Hispanic
2 ☐ Black, not Hispanic
3 ☐ Spanish/Hispanic
4 ☐ Asian, Pacific Islander
5 ☐ American Indian
6 ☐ DK

147. HOUSING TYPE

1 ☐ Single family dwelling unit
2 ☐ Multi-unit structure

148. COMMUNITY SIZE

1 ☐ Urban
2 ☐ Suburban
3 ☐ Small town
4 ☐ Rural

Notes

Form Approved: O.M.B. No. 41-S79070

FORM D-8968
1-4-79)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

ONE RESPONDENT HOUSEHOLD SUPPLEMENT

APPLIED BEHAVIOR ANALYSIS SURVEY

20th Decennial Census – 1980

NOTICE – All information which would permit identification of the individual will be held in strict confidence, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any purposes.

1. D.O. No.	2. ED No.
3. Serial No.	4. ID No.

▶ *INTERVIEWER – Be sure to complete items on the cover page of the main questionnaire.*

S23. Did you ever open the envelope?

1 ☐ Yes – *SKIP to S36*
2 ☐ No
3 ☐ DK

S34. As best you can remember, what happened to the envelope after it came?

1 ☐ Took to an assistance center – *SKIP to S82*
2 ☐ Gave to someone else to open – *SKIP to S107*
3 ☐ Lost – *SKIP to S121*
4 ☐ Thrown away – *SKIP to S123*
5 ☐ Accidentally destroyed – *SKIP to S124*
6 ☐ Nothing; still unopened – *SKIP to S126*
7 ☐ Other – *Explain*
_____
_____
} *SKIP to S133*
8 ☐ DK – *Probe by reading categories: If still "DK," SKIP to S133*

S36. Did you open it the same day it arrived, the next day, or some time after that?

1 ☐ Same day
2 ☐ Next day
3 ☐ After
4 ☐ DK

S37. Did you ever start to fill out the census form that was inside?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to S45*

S38. Did you start to fill it out right away after you opened it, later the same day, the next day, or some time after that?

1 ☐ Right away
2 ☐ Later, same day
3 ☐ Next day
4 ☐ After that
5 ☐ DK
} *SKIP to S57*

S45. As best you can remember, what happened to the form at that point?

1 ☐ Took to an assistance center – *SKIP to S82*
2 ☐ Gave to someone else to fill – *SKIP to S107*
3 ☐ Lost – *SKIP to S122*
4 ☐ Thrown away – *SKIP to S123*
5 ☐ Accidentally destroyed – *SKIP to S124*
6 ☐ Nothing; left unfilled – *SKIP to S128*
7 ☐ Other – *Explain*
_____
_____
} *SKIP to S133*
8 ☐ DK – *Probe by reading categories: If still "DK," SKIP to S133*

S57. When you first saw the form, did it look as if it would be hard or easy to fill?	1 ☐ Hard 2 ☐ Easy 3 ☐ DK – *SKIP to S59*
S58. Would you say it looked very (hard/easy), or just somewhat (hard/easy)?	1 ☐ Very 2 ☐ Somewhat 3 ☐ DK
S59. How long did you think it would take to fill the form?	_____ Minutes ☐ DK
S60. Did you look the form over first before you started to fill it out, or did you just start right in answering the questions?	1 ☐ Looked over first 2 ☐ Started right in 3 ☐ DK
S61. Did you notice a yellow instruction booklet along with the form?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to S64*
S62. Did you read the instructions?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to S64*
S63. Was that before you started to work on the form, or while you were filling it out?	1 ☐ Before 2 ☐ During 3 ☐ DK
S64. Altogether, how much time did you spend filling out the form?	_____ Minutes ☐ DK
S65. Some people have a hard time filling out different kinds of forms. Did you have any trouble with the form while you were working on it?	1 ☐ Yes 2 ☐ No – *SKIP to S71*
S66. What kind of trouble did you have? Was the form confusing?	1 ☐ Yes 2 ☐ No 3 ☐ DK
S67. Were there questions that you didn't understand?	1 ☐ Yes→ Which ones? _____ _____ 2 ☐ No 3 ☐ DK
S68. Did you have trouble getting the information to answer any of the questions?	1 ☐ Yes→ Which ones? _____ _____ 2 ☐ No 3 ☐ DK

69. Were there any questions you didn't want to answer?

1 ☐ Yes → Which ones? _____

_____

2 ☐ No
3 ☐ DK

70. Was there anything else that you had trouble with?

_____

☐ No
☐ DK

71. Did you mind having to fill out the census form?

1 ☐ Yes
2 ☐ No } SKIP to S73
3 ☐ DK

72. What was it that bothered you about filling out the form?

PROBE: Anything else?

_____

_____

73. Was it hard for you to find the time to fill out the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK

74. Did you finish filling out the form?

1 ☐ Yes – SKIP to S76
2 ☐ No

75. What happened to the form after you stopped working on it?

1 ☐ Took to an assistance center – SKIP to S82
2 ☐ Gave to someone else to finish – SKIP to S107
3 ☐ Mailed back incomplete – SKIP to S118
4 ☐ Lost – SKIP to S122
5 ☐ Thrown away – SKIP to S123
6 ☐ Accidently destroyed – SKIP to S124
7 ☐ Nothing; still unfinished – SKIP to S132
8 ☐ Other – Explain

_____ } SKIP to S133

_____

9 ☐ DK – Probe by reading categories if still "DK," SKIP to S133

76. Did anyone help you fill out the form, or did you do it by yourself?

1 ☐ Had help
2 ☐ Filled it alone – SKIP to S78

77. Who helped you with it?

2 ☐ Relative, lives elsewhere
3 ☐ Friend or neighbor
4 ☐ Assistance center worker
5 ☐ Paid practitioner
6 ☐ Other – Explain

_____

S78. Do you still have the form, or was it mailed in?	1 ☐ Still have – *SKIP to S80* 2 ☐ Mailed in 3 ☐ DK – *SKIP to S133*
S79. Did you mail it yourself or did someone else do it?	1 ☐ Respondent mailed it 2 ☐ Someone else mailed it 3 ☐ DK } *SKIP to S81*
S80. Are you planning to mail it in?	1 ☐ Yes 2 ☐ No 3 ☐ DK } *SKIP to S133*
S81. Do you happen to remember the date when it was mailed in?	_____ Date ☐ DK } *SKIP to S133*

Notes

QUESTIONS FOR RESPONDENT WHO TOOK THE CENSUS FORM TO AN ASSISTANCE CENTER

S82. Did you get the help you were looking for when you went to the assistance office?

1 ☐ Yes
2 ☐ No – *Explain* _____ } *SKIP to S88*
3 ☐ DK

S83. Did you fill out the form yourself, or did someone at the office ask you the questions and write down the answers?

1 ☐ Filled it himself/herself
2 ☐ Assistance center worker filled it
3 ☐ DK

S84. Did you have to wait before someone at the office helped you?

1 ☐ Yes
2 ☐ No – *SKIP to S86*

S85. How long did you have to wait?

_____ Minutes
☐ DK

S86. Once you were able to talk to someone, how long did it take you to get your census form filled out?

_____ Minutes
☐ DK

S87. Did the assistance center keep the completed form, or did you bring it home with you?

1 ☐ Assistance center kept it – *SKIP to S133*
2 ☐ Brought it home
3 ☐ DK – *SKIP to S133*

S88. Do you still have the form, or have you mailed it in?

1 ☐ Still have it
2 ☐ Mailed it in – *SKIP to S90*
3 ☐ DK – *SKIP to S133*

S89. Are you planning to mail it in?

1 ☐ Yes } *SKIP to S133*
2 ☐ No
3 ☐ DK

S90. Do you happen to remember the date when it was mailed in?

_____ Date } *SKIP to S133*
☐ DK

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS ENVELOPE OR FORM WAS GIVEN TO SOMEONE ELSE

S107. Has the census form been completed?

1 ☐ Yes – *SKIP to S111*
2 ☐ No
3 ☐ DK

S108. What happened to the form – is it back here now, does the person you gave it to still have it, or was it mailed in incomplete?

1 ☐ Form has come back – *SKIP to S110*
2 ☐ Other person still has – *SKIP to S133*
3 ☐ Mailed in incomplete – *ASK S109*
4 ☐ Other – *Explain* _____ } *SKIP to S133*
5 ☐ DK

S109. Who mailed the form in?

1 ☐ Respondent
2 ☐ Person it was given to
3 ☐ Other – *Explain* _____ } *SKIP to S117*
4 ☐ DK

S110. Are you planning to complete the form and mail it in?

1 ☐ Yes
2 ☐ No } *SKIP to S133*
3 ☐ DK

S111. Do you happen to know who completed it?

1 ☐ Yes
2 ☐ No – *SKIP to S113*

S112. Was it completed by the person you gave it to, by someone else, or did you complete it?

1 ☐ Person it was given to
2 ☐ Respondent – *SKIP to S115*
3 ☐ Other – *Explain* _____
4 ☐ DK

S113. Has the form been mailed in?

1 ☐ Yes – *SKIP to S117*
2 ☐ No
3 ☐ DK

S114. Who has the form now – do you have it, does the person you gave it to still have it, or does someone else have it now?

1 ☐ Respondent has form – *SKIP to S116*
2 ☐ Person it was given to still has it
3 ☐ Someone else has it now
4 ☐ Other – *Explain* _____ } *SKIP to S133*
5 ☐ DK

S115. Has the form been mailed in?

1 ☐ Yes – *SKIP to S117*
2 ☐ No
3 ☐ DK

S116. Are you planning to mail it in?

1 ☐ Yes
2 ☐ No } *SKIP to S133*
3 ☐ DK

S117. Do you happen to remember the date when it was mailed?

_____ Date } *SKIP to S133*
☐ DK

QUESTIONS FOR RESPONDENT WHOSE CENSUS FORM WAS MAILED IN INCOMPLETE

S118. Did anyone help you when you worked on the form, or did you do it by yourself?

- 1 ☐ Had help
- 2 ☐ Filled it alone – *SKIP to S120*

S119. Who else helped you with it?

- 2 ☐ Relative, lives elsewhere
- 3 ☐ Friend or neighbor
- 4 ☐ Assistance center worker
- 5 ☐ Paid practitioner
- 6 ☐ Other – *Explain*

_____

S120. Do you happen to remember the date when it was mailed?

_____ Date

☐ DK

} *SKIP to S133*

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS ENVELOPE OR FORM WAS LOST OR THROWN AWAY OR ACCIDENTALLY DESTROYED

S121. Have you looked around to try to find the envelope?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} SKIP to S124

S122. Have you looked around to try to find the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} SKIP to S124

S123. Did you throw away the census form on purpose, or was it an accident?

1 ☐ On purpose — SKIP to S133
2 ☐ Accident

S124. Did you try to get another form?

1 ☐ Yes
2 ☐ No
3 ☐ DK

} SKIP to S133

S125. What did you do to try to get another form?

MARK ALL THAT APPLY

1 ☐ Called the Census Bureau
2 ☐ Visited a Census office
3 ☐ Asked someone else to get one
4 ☐ Other — Explain: _____
5 ☐ DK

} SKIP to S133

Notes

QUESTIONS FOR RESPONDENT WHOSE CENSUS ENVELOPE WAS UNOPENED OR WHOSE CENSUS FORM WAS UNFILLED OR UNFINISHED

S126. Are you planning to open the census envelope?

1 ☐ Yes
2 ☐ No
3 ☐ DK } *SKIP to S133*

S127. Do you plan to fill out the census form?

1 ☐ Yes
2 ☐ No } *SKIP to S133*

S128. Have you looked over the census form?

1 ☐ Yes
2 ☐ No
3 ☐ DK } *SKIP to S131*

S129. When you first saw the form, did it look as if it would be hard or easy to fill out?

1 ☐ Hard
2 ☐ Easy
3 ☐ DK – *SKIP to S131*

S130. Would you say it looked very (hard/easy) or just somewhat (hard/easy)?

1 ☐ Very
2 ☐ Somewhat
3 ☐ DK

S131. Are you planning to fill out the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK } *SKIP to S133*

S132. Are you planning to finish the form?

1 ☐ Yes
2 ☐ No
3 ☐ DK } *CONTINUE with S133*

Notes

QUESTIONS FOR ALL RESPONDENTS

S133. Have you talked to anyone – or has anyone talked to you – about whether you should or should not fill out a census form and mail it in?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to S136*

S134. Who did you talk to? Was it a relative, a friend or neighbor, or someone else?

2 ☐ Relative, lives elsewhere
3 ☐ Friend or neighbor
4 ☐ Other – *Explain*

_____

5 ☐ DK

S135. Did they say that you should or shouldn't fill out a form and mail it in?

1 ☐ Should
2 ☐ Shouldn't
3 ☐ Other – *Explain*

_____

4 ☐ DK

S136. If a household does not send back a completed census form in the mail, will the people who live there be counted in the census?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to S138*

S137. How will they be counted?

_____

S138. As far as you know, is there a penalty for not filling out the form and mailing it back?

1 ☐ Yes
2 ☐ No
3 ☐ DK
} *SKIP to S140*

S139. Do you happen to know what the penalty is?

1 ☐ Jail
2 ☐ Fine
3 ☐ Other – *Explain*

_____

4 ☐ DK

S140. Has a census taker called on you?

1 ☐ Yes
2 ☐ No
3 ☐ DK

S141. As far as you know, will you be counted in the 1980 Census?

1 ☐ Yes
2 ☐ No
3 ☐ DK

S142. Just a couple more questions about you and your household to make sure that all kinds of people are included in the survey.

First, how many people are living in your household?

_____ People

S143. **Which of these categories best describes your household's income from all sources last year before taxes?**

PERSONAL VISIT – Show respondent flashcard.
TELEPHONE INTERVIEW – Read categories.

1 ☐ Under $10,000
2 ☐ $10,000–$16,999
3 ☐ $17,000–$24,999
4 ☐ $25,000 and over
5 ☐ DK
6 ☐ Refused

S144. **Is there a telephone number here in case we need to contact you again?**

☐ No

Telephone
Area code | Number

S145. **And finally, may I please have the family name?**

Name _____

INTERVIEWER OBSERVATION

S146. RACE/ETHNICITY –

1 ☐ White, not Hispanic
2 ☐ Black, not Hispanic
3 ☐ Spanish/Hispanic
4 ☐ Asian, Pacific Islander
5 ☐ American Indian
6 ☐ DK

S147. HOUSING TYPE –

1 ☐ Single family dwelling unit
2 ☐ Multi-unit structure

S148. COMMUNITY SIZE –

1 ☐ Urban
2 ☐ Suburban
3 ☐ Small town
4 ☐ Rural

Notes

APPENDIX II: METHODOLOGICAL APPENDIX

Description of Sampling Procedures and Operation

The ABAS sample was designed to obtain national estimates using a stratified two-stage design. District offices (DOs) using the mailout/mailback technique were divided into ten strata based on total population, geographic location and percent minority population in 1970. Two DOs per stratum were then selected with probability proportional to size. Enumeration districts (EDs) within the DOs were selected with probability proportional to size, and pages from the Address Registers (ARs) were selected so that each household in a centralized DO had the same probability of selection, and each household in a decentralized DO had to same probability of selection.

Initial plans called for addresses on the sampled pages of the ARs to be stratified by form type and by mail return status as of April 8 when the data collection began. After completion of this process, sampling fractions which would permit the oversampling of long forms and nonmail returns were to be applied to the sample pages in order to select the actual sample addresses. However, due to problems with the check-in of mail returns, we were unable to determine the mail return status of the addresses on the sampled pages, and this plan had to be abandoned.

Instead, the addresses were stratified only by form type. To ensure that a large enough number of nonmail return cases were sampled, a supplemental sample was selected. These cases consisted of addresses on the sampled pages which were not included in the initial sample and which had not been checked in as mail returns by April 22. This date was chosen based on availability of personnel to do the AR search as well as by a desire to avoid, as far as possible, overlap with Follow-up I which officially began on April 16.

Following these sampling procedures, 10,850 cases were selected for interview in the 20 selected DOs. The DOs and their assigned sample sizes are listed as follows:

District Office	DO #	Type of DO	Initial Sample Selected	Supplemental Sample Selected	Total Sample Assigned
Boston, MA	2140	Centralized	459	110	569
Bridgeport, CT	2146	Centralized	433	37	470
N. Manhattan, NY	2240	Centralized	420	145	565
S.E. Brooklyn, NY	2256	Centralized	432	124	556
Scranton, PA	2315	Decentralized	473	69	542
Baltimore, MD	2323	Decentralized	463	60	523
N. Philadelphia, PA	2341	Centralized	420	0	420
Dearborn, MI	2401	Decentralized	473	102	575
N. Cleveland, OH	2445	Centralized	446	111	557
Elgin, IL	2505	Decentralized	465	110	575
W.C. Chicago, IL	2542	Centralized	443	175	618
Louisville, KY	2553	Centralized	443	0	443
St. Louis, MO	2641	Centralized	427	76	503

Wilmington, NC	2808	Decentralized	462	171	633
St. Petersburg, FL	2916	Decentralized	421	110	531
Memphis, TN	2941	Centralized	441	30	471
Denver, CO	3140	Centralized	439	105	544
Phoenix, AZ	3141	Centralized	447	123	570
Salinas, CA	3220	Decentralized	460	145	605
Vallejo, CA	3226	Decentralized	460	120	580
			8,927	1,923	10,850

Current program interviewers working in the regional office areas in which the DOs were located were assigned to the ABAS, and a regional office supervisor was assigned to direct their work. A large number of interviewers were assigned to the project in order to complete it before the beginning of Follow-up 1 and with as little interference as possible with census operations. The original plan was to complete all the ABAS interviewing within two weeks. As it turned out, the interviewing for the initial sample was completed within one week at almost all of the sites. However, because a supplemental sample had to be selected and interviewed, some interviewing for the ABAS was not completed until May 1.

For the initial phase of interviewing, interviewer training was conducted at all 20 sites on April 8, by the regional office supervisor, using a script prepared by Field Division Training Branch. Address labels for all of the addresses on the sampled pages had been prepared prior to this time, and on the evening of April 8, the interviewers, supervisors (and in some cases, observers from Washington headquarters) verified the transcribed addresses, checked the ARs for added units and made out labels for any they found, and subsampled long and short form cases according to sampling fractions provided by SMD. At this point the lack of mail return entries in the ARs was noted, and a subsequent decision to use a supplemental sample was made.

Having selected the initial sample, however, interviewing began on April 9, and continued through the 17th in at least one office. In most of the offices, though, the overwhelming majority of cases was completed by April 12, four days after the start of the interviewing period.

For the supplemental sample, the mail return status as of April 22, of addresses not selected in the original sample was determined and a sample of nonmail return cases was selected for interview. Interviewing of these cases was done between April 22, and May 1, by the same interviewers who worked on the initial sample cases.

Derivation of Weights

Prior to data analysis, weights were applied to each case so that the sample cases would be weighted up to population totals for occupied households. Each weight consisted of four elements: one which reflected the probability of selection for the district office, one which pertained to the form type (short or long) within each DO; one which pertained to mail return status (mail return or nonreturn) within each DO, and a nonresponse adjustment. Ultimately, four weights were derived for each DO: (1) short form mail returns, (2) short form nonmail returns, (3) long form mail returns, and (4) long form nonmail returns. The weighted population total for the 8,550 interviewed cases is 71,672,363.

Further Description of Analytic Techniques

In log-linear analysis, models are hypothesized to approximate the observed frequencies in a cross-classification of variables. The hypothesized models fit certain marginals or joint distributions--the identity of the marginals which are fit depends on the particular model being tested.

Most of the analyses included in this report involve two-way cross-classifications between an independent variable and cooperation or lack of cooperation at one of the stages in the mail response process. However, some of the analyses involve three-way tables, and the models chosen for analysis reflect either an interest in the joint effects of two variables on an independent variable (e.g., Table 12), or the effect of an intervening variable on the relationship between two other variables (e.g., Table 20). The models used in these analyses are contained in the tables, and can be interpreted as follows: (1) capital letters identify variables included in the analysis; (2) brackets identify terms in the models; (3) when more than one capital letter is included within the brackets, a relationship between these variables is specified by the model; (4) when one capital letter is included within the brackets, the model is constrained to fit the univariate marginals for that variable; (5) L^2 is the likelihood ratio chi-square statistic computed in the analysis; (6) X_J is the jackknifed chi-square statistic computed in the analysis; and (7) df is the degrees of freedom.

So, for instance, the model [RI][CI] tested and reported in Table 12 includes a term positing an association between Race and Income [RI], and an association between Receipt of the Census Form and Income [CI] (but no association between receipt of the census form and race) in describing the relationship between these three variables. The value of the jackknifed chi-square statistic for this model is .03, which is not statistically significant with 4 degrees of freedom. That is, this model provides an acceptable fit to the observed cell entries obtained in the data.

In addition to testing models, the contribution of particular terms in the model can also be determined. Through hierarchical decomposition (i.e., comparison of two similar models, one which includes the term of interest and one which omits the term of interest), hypothesized models can be compared to determine whether particular terms significantly improve the fit of the model. Choice of the specific models for comparison reflects whether the contribution of the term of interest is measured by itself or controlling for other variables. So, for example, in Table 12, a comparison of models 3 and 4 measures the total contribution of Race to receipt of a Census form. A comparison of models 1 and 2 measures the significance of the relationship between these two variables, controlling for Income.

To determine whether a specified interaction is significant, the likelihood ratio chi-square of the model including the term of interest is subtracted from the likelihood ratio chi-square value of the model in which the term is omitted. If the difference in the chi-square values is significant relative to its degrees of freedom (calculated by subtracting the degrees of freedom of the lower order from those of the higher order model), the specified interaction is considered to have significantly improved the fit between the observed and the expected frequencies.

So, in Table 12, the contribution of [CR] is measured by subtracting Model 3 - Model 4 (842.82 - 602.11) = 240.11. The jackknifed chi-square for this comparison, 1.45 with 2 degrees of freedom, indicates that the contribution of the association between Race and receipt of a Census form is statistically significant. The contribution of [CR] controlling for income is measured by subtracting Model 1 - Model 2 (121.63 - 16.62) = 105.01. The jackknifed chi-square for this comparison, .20 with 2 degrees of freedom indicates that, controlling for income, the effect of Race on receipt of a Census form, is not statistically significant.

APPENDIX III: EFFECTS OF PUBLICITY-RELATED VARIABLES ON COOPERATION AT THE VARIOUS STAGES OF THE MAIL RESPONSE PROCESS

This appendix contains the two-way tables which describe the relationship between the various publicity-related variables and reported cooperation at each stage of the mail response process. A listing of the variables, a summary of the findings, and a locator for the individual tables is as follows:

Stage	Exposure to Census Publicity	Expecting to Receive a Form	Knowledge of Penalty for Nonresponse
Received vs. Not Received	$p<.01$ (Table III-1)	$p<.01$ (Table III-6)	$p<.01$ (Table III-11)
Opened vs. Not Opened	$p<.01$ (Table III-2)	$p<.01$ (Table III-7)	$p<.01$ (Table III-12)
Started vs. Not Started	$p<.01$ (Table III-3)	$p<.01$ (Table III-8)	$p<.01$ (Table III-13)
Finished vs. Not Finished	$p<.01$ (Table III-4)	$p<.01$ (Table III-9)	$p<.01$ (Table III-14)
Mailed vs. Not Mailed	n.s. (Table III-5)	$p<.01$ (Table III-10)	$p<.01$ (Table III-15)

TABLE III-1: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND LEVEL OF EXPOSURE TO CENSUS PUBLICITY

		Exposure to Census Publicity Through:			
Households in which census forms were reportedly:	Total	No Sources	One Sources	Two Sources	3+ Sources
Weighted N	71,673,000	8,915,000	16,283,000	24,738,000	21,738,000
%	100.0	100.0	100.0	100.0	100.0
Received	94.7	86.9	94.2	96.1	96.6
Not Received	5.3	3.1	5.8	3.9	3.4

$X_J = 6.18$, df = 3, $p<.01$

TABLE III-2: PERCENT OF TOTAL HOUSEHOLDS REPORTING RECEIPT OF CENSUS FORM BY OPENING BEHAVIOR AND LEVEL OF EXPOSURE TO CENSUS PUBLICITY

		Exposure to Census Publicity Through:			
Households in which census forms were reportedly:	Total	No Sources	One Sources	Two Sources	3+ Sources
Weighted N	67,866,000	7,750,000	15,341,000	23,769,000	21,007,000
%	100.0	100.0	100.0	100.0	100.0
Received and Opened	97.8	92.1	97.7	98.4	99.1
Received and Not Opened	2.2	7.9	2.3	1.6	0.9

$X_J = 4.04$, df = 3, $p<.01$

TABLE III-3: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND LEVEL OF EXPOSURE TO CENSUS PUBLICITY

		Exposure to Census Publicity Through:			
Households in which census forms were reportedly:	Total	No Sources	One Sources	Two Sources	3+ Sources
Weighted N	66,348,000	7,140,000	14,991,000	23,393,000	20,824,000
%	100.0	100.0	100.0	100.0	100.0
Opened and Started	95.9	89.4	95.8	96.6	97.3
Opened and Not Started	4.1	10.6	4.2	3.4	2.7

$X_J = 4.15$, df = 3, $p<.01$

TABLE III-4: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND LEVEL OF EXPOSURE TO CENSUS PUBLICITY

		Exposure to Census Publicity Through:			
Households in which census forms were reportedly:	Total	No Sources	One Sources	Two Sources	3+ Sources
Weighted N	63,619,000	6,384,000	14,368,000	22,606,000	20,261,000
%	100.0	100.0	100.0	100.0	100.0
Started and Finished	96.7	94.3	95.5	96.9	98.1
Started and Not Finished	3.3	5.7	4.5	3.1	1.9

$X_J = 2.00$, df = 3, $p<.05$

TABLE III-5: PERCENT OF TOTAL HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY FINISHED BY MAILING BEHAVIOR AND LEVEL OF EXPOSURE TO CENSUS PUBLICITY

		Exposure to Census Publicity Through:			
Households in which census forms were reportedly:	Total	No Sources	One Sources	Two Sources	3+ Sources
Weighted N	61,532,000	6,020,000	13,723,000	21,912,000	19,877,000
%	100.0	100.0	100.0	100.0	100.0
Finished and mailed	97.9	96.2	97.6	97.7	98.8
Finished and not mailed	2.1	3.8	2.4	2.3	1.2

X_J = .92, df = 3, n.s.

TABLE III-6: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND EXPECTATION OF RECEIVING A FORM IN THE MAIL

		Expecting to Receive a Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	62,557,000	58,278,000	4,279,000
%	100.0	100.0	100.0
Received	95.7	96.1	89.9
Not Received	4.3	3.9	10.1

X_J = 4.17, df = 1, $p<.01$

*Weighted counts exclude 9,115,000 cases for which expectation is unknown.

TABLE III-7: PERCENT OF TOTAL HOUSEHOLDS REPORTING RECEIPT OF CENSUS FORM BY OPENING BEHAVIOR AND EXPECTATION OF RECEIVING A FORM IN THE MAIL

		Expecting to Receive a Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	59,869,000	56,024,000	3,845,000
%	100.0	100.0	100.0
Received and opened	98.5	98.8	93.9
Received and not opened	1.5	1.2	6.1

$X_J = 3.07$, df = 1, $p<.01$

*Weighted counts exclude 7,997,000 cases for which expectation in unknown.

TABLE III-8: PERCENT OF HOUSEHOLDS IN WHICH CENSUS ENVELOPES WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND EXPECTATION OF RECEIVING A FORM IN THE MAIL

		Expecting to Receive a Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	58,961,000	55,351,000	3,611,000
%	100.0	100.0	100.0
Opened and started	96.6	97.3	86.2
Opened and not started	3.4	2.7	13.8

$X_J = 5.26$, df = 1, $p<.01$

*Weighted counts exclude 7,386,000 cases for which expectation is unknown.

TABLE III-9: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND EXPECTATION OF RECEIVING A FORM IN THE MAIL

		Expecting to Receive a Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	56,982,000	53,871,000	3,111,000
%	100.0	100.0	100.0
Started and Finished	97.0	97.3	91.1
Started and Not Finished	3.0	2.7	8.9

$X_J = 2.36$, df = 1, $p<.01$

*Weighted counts exclude 6,637,000 cases for which expectation is unknown.

TABLE III-10: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY FINISHED BY MAILING BEHAVIOR AND EXPECTATION OF RECEIVING A FORM IN THE MAIL

		Expecting to Receive a Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	55,273,000	52,439,000	2,834,000
%	100.0	100.0	100.0
Finished and Mailed	98.1	98.4	92.4
Finished and Not Mailed	1.9	1.6	7.6

$X_J = 5.92$, df = 1, $p<.01$

*Weighted counts exclude 6,258,000 cases for which expectation is unknown.

TABLE III-11: PERCENT OF TOTAL HOUSEHOLDS BY REPORTED RECEIPT OF CENSUS FORM AND AWARENESS OF PENALTY FOR NONRETURN OF FORM

		Aware of Penalty for Nonreturn of Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	59,608,000	40,661,000	18,946,000
%	100.0	100.0	100.0
Received	95.5	96.2	94.0
Not Received	4.5	3.8	6.0

$X_J = 2.88$, df = 1, $p<.01$

*Weighted counts exclude 12,065,000 cases for which awareness is unknown.

TABLE III-12: PERCENT OF HOUSEHOLDS REPORTING RECEIPT OF CENSUS FORM BY OPENING BEHAVIOR AND AWARENESS OF PENALTY FOR NONRETURN OF FORM

		Aware of Penalty for Nonreturn of Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	56,914,000	39,113,000	17,801,000
%	100.0	100.0	100.0
Received and opened	98.4	99.3	96.3
Received and not opened	1.6	0.7	3.7

$X_J = 3.94$, df = 1, $p<.01$

*Weighted counts exclude 10,952,000 cases for which awareness in unknown.

TABLE III-13: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY OPENED BY STARTING BEHAVIOR AND AWARENESS OF PENALTY FOR NONRETURN OF FORM

		Aware of Penalty for Nonreturn of Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	55,983,000	38,837,000	17,146,000
%	100.0	100.0	100.0
Opened and started	96.5	97.9	93.4
Opened and not started	3.5	2.1	6.6

$X_J = 8.12$, df = 1, $p<.01$

*Weighted counts exclude 10,364,000 cases for which awareness is unknown.

TABLE III-14: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY STARTED BY FINISHING BEHAVIOR AND AWARENESS OF PENALTY FOR NONRETURN OF FORM

		Aware of Penalty for Nonreturn of Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	54,047,000	38,028,000	16,018,000
%	100.0	100.0	100.0
Started and finished	96.9	97.6	95.2
Started and not finished	3.1	2.4	4.8

$X_J = 4.23$, df = 1, $p<.01$

*Weighted counts exclude 9,572,000 cases for which awareness is unknown.

TABLE III-15: PERCENT OF HOUSEHOLDS IN WHICH CENSUS FORMS WERE REPORTEDLY FINISHED BY MAILING BEHAVIOR AND AWARENESS OF PENALTY FOR NONRETURN OF FORM

		Aware of Penalty for Nonreturn of Form	
Households in which census forms were reportedly:	Total*	Yes	No
Weighted N	52,355,000	37,105,000	15,250,000
%	100.0	100.0	100.0
Finished and mailed	98.0	98.2	97.4
Finished and not mailed	2.0	1.8	2.6

$X_J = 1.50$, df = 1, $p<.05$

*Weighted counts exclude 9,176,000 cases for which awareness is unknown.