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**Cognitive and Motivational Properties
of Three Proposed Decennial Census Forms**

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EXECUTIVE SUMMARY

Three questionnaires proposed for possible use in the 2000 Decennial Census were evaluated for their cognitive and motivational properties. Volunteers were asked to fill out each of the questionnaires and report their reactions. Our goals were to determine whether respondents understood the questions, whether questions were answered correctly, the ease with which people navigated through the sequence of instructions and questions, and their opinions on whether each of the forms should or should not be used in the 2000 Census.

The interviews and analysis were conducted jointly by researchers at Washington State University and the Bureau of the Census. A total of 55 interviews was conducted with people of various racial and ethnic backgrounds and different levels of education. They were paid a modest honorarium. Half were interviewed using think-aloud (or concurrent) interview methods, whereby respondents shared their reactions while filling out the test forms. The remainder were conducted using retrospective interview methods that required respondents to complete each questionnaire before sharing reactions. All respondents were asked a standard set of debriefing questions. Forms were administered in two different orders to control for order effects.

Each of the proposed forms contained a question about the number of people living in the household, and asked six questions proposed for the next Census, with space provided for answers for up to five people. One of the forms included two additional questions on the possibility of a second residence. Form A, designated the *green booklet* form, was printed on a single sheet of paper 17" x 11" and folded to form four pages. Form B, designated the *gold booklet*, was printed in a similar form. Form C, designated the *gold vertical* form, was printed on two sheets of paper, 11-1/4" x 10-1/2", folded and stapled to form an eight-page booklet.

The design of Form A was based on the survey research literature and represented an extension of design concepts developed at the Census Bureau. Forms B and C were developed by an outside contractor, based upon marketing concepts and innovative graphical design procedures.

Major Findings and Recommendations

- All three forms have qualities perceived as positive by respondents. Form A (green booklet) was recommended for use in the next census by 45 percent of the respondents, Form B (gold booklet) by 22 percent, and Form C (gold vertical) by 33 percent. Thus, none of the forms was singled out for overwhelming acceptance or rejection.

However, a number of differences existed in how the forms were perceived. For example, Form C was more likely than Form A to be perceived as junk mail (57% vs. 22%), whereas Form A was more likely to be perceived as mail from the government (80% vs. 26%).

- A conclusion that emerges clearly from our interviews is that any marketing strategy that is used must be designed carefully *not* to undermine the authority and official look of the census form. Particularly on the envelope, color and graphics must be

used with great caution. The plain, white mailing envelope combined with the government seal and bold mandatory message on the front of package A conveyed effectively the official nature of the census to most respondents in our study.

- The use of icons and associated text to communicate the uses and benefits of the census does not receive strong support in our test. However, a better evaluation of their effectiveness would require that they be used simultaneously in a media campaign and mailout test.
- We found nonresponse to the "household count" to be unacceptably high, especially on Form A (15% vs. 6-7% on Forms B and C). A possible solution on Form A would be to shorten the text and to expand the green box around this item into the Person 1 space by eliminating the white space between them. Another solution applicable to all of the forms, which we strongly urge be tested, is to make this question the last question in the Person 1 question series, following the housing question.
- If the household roster is eliminated as it has been in these forms, then its function of communicating the central purpose of the census needs to be effectively communicated in other ways.
- The word "Test" appears in various places on the three mailing packages. Some people did not like the idea of being "tested;" others found it intriguing. In future census tests, we strongly urge that "test" be featured far less prominently or not at all, and that it be used consistently across packages, so as not to confound comparisons.
- Most respondents read the cover letters and found them to be an important source of information. Therefore, we recommend that the letter remain an integral part of the mailing package and careful consideration be given to its content.

- Respondents are likely to view the page with the mailing label as the beginning of the questionnaire, so we recommend putting the mailing label on the page where we want respondents to start.
- Respondents seemed to benefit from the columnar format of Form C and from being able to see numerous person spaces at a glance on booklets A and B. Therefore, we strongly recommend testing a booklet format with columnar person spaces.
- If used properly, color on the questionnaire is effective as a navigational guide. A green space framed with a black line set against a white background is superior to a pale yellow unframed space. The white spaces within a colored field worked well as visual cues to denote answer spaces.
- We recommend that these results as well as the National Content Survey serve as the basis for the redesign and testing of one or more questionnaires that attempt to address the problems identified in this research.

Cognitive and Motivational Properties of Three Proposed Decennial Census Forms

Introduction

Work on this study began in the Spring of 1995 when it was suggested that the forms being considered for use in the 2000 Census were not as respondent-friendly as desired. At that time the simplest forms in use contained a household roster (listing of names of everyone living in the household according to a somewhat lengthy definition), followed by several roster clarification instructions, and a request for information about up to seven people living in the household. This form consisted of a minimum of 8, 8-1/2" x 11" pages, or two sheets of paper stapled to form a booklet.

It was argued that these forms were too difficult for people to understand and complete accurately. Thus, it was requested that three forms be designed with the explicit objective of making the forms as brief and easy to fill out as possible for a national census, without losing response accuracy.

We first describe the development of the three mailing packages, beginning with A (designated the *green booklet*), since it was the first to be developed and a number of its features were incorporated in B (designated the *gold booklet*) and C (designated the *gold vertical*). The development of Form A followed precepts from the published mail survey response rate literature, and it was based on the combined results of several past experiments within the Census Bureau, which we describe here. The development of Forms B and C were based upon a marketing approach to improve response. (Reduced copies of portions of each of the three packages are shown in Figures 1 - 3 at the end of this report, and their common and varying design features are summarized in Table 1 on page 13.)

Form A (Green Booklet)

One of the most significant design features of Form A was the prominent, bold message on the front of the envelope saying: "U.S. Census Form Enclosed. YOUR RESPONSE IS REQUIRED BY LAW." The envelope itself was plain white. This design feature was based on several considerations. A meta-analysis of many past surveys by Heberlein and Baumgartner (1978) revealed that the sponsorship of surveys influences response rate. Mail surveys sponsored by government obtain higher response rates than surveys sponsored by marketing research firms. A possible reason for this finding is offered by Cialdini (1984) who identifies appeals to "authority" as being one of six major types of psychological influences on behavior (the others being reciprocation, commitment and consistency, social proof, liking, and scarcity). Government surveys may convey a sense of authority, especially if that information is conveyed to potential respondents. For the same reason, the official Department of Commerce seal was used on Form A's envelope and questionnaire.

One of the difficulties of getting response to the census form is that the envelope might not get opened, especially since the envelope is sent to an address only. Research conducted after the past two censuses (Kulka et al., 1992; DeMaio, 1983) showed that many nonrespondents to the census either did not remember that a census form came in the mail or simply did not open the envelope. This problem has perhaps been partly solved by results of previous research (Dillman, Clark, and Sinclair, 1995) which showed that an advance notification letter would improve response rate by 4-6 percentage points and a reminder card 6-8 percentage points, compared to simply mailing the census form once.

Past research has also shown that the more people know about the census and its uses, the more likely they are to cooperate with the census. Public knowledge about census uses is mixed; for example, about two thirds knew in 1980 and in 1990 that it was used for apportionment, but well over half also thought it was used to locate people who live in the country illegally (Bates, Fay, and Moore, 1991).

The effectiveness of alternative strategies for improving census cooperation, one emphasizing that response is mandatory, and the other emphasizing the benefits and uses of the census, was evaluated in a national test. Two envelopes were tested, one containing the mandatory message above, and another containing a benefits message, "U.S. Census Form Enclosed: IT PAYS TO BE COUNTED." Inside each envelope was a matching insert, which either explained why response was mandatory and communicated the penalties for not responding, or enumerated several benefits of responding to the Census. The benefits message had no significant effect on response whereas the complete mandatory message (envelope plus insert) increased response by about 10 percentage points from 68 percent to 78 percent (Dillman, Singer, Clark and Treat, 1994). An envelope containing only the message on the outside, and not the insert, did almost as well, producing a 76 percent response rate, which was not significantly different (from the envelope plus insert). We concluded from this experiment that making the envelope appear that it was a mailing from government and appealing to the authority of the law as a reason for responding would effectively improve the mailback response rate. This research leaves open the question of whether a more persuasive message about the benefits of the census might also improve participation.

Another feature of Form A was that its cover page was designed to involve the respondent immediately in the task of filling it out, starting with Step 1, the count of household residents, and Step 2, information about Person 1. Form A's cover page contained relatively little explanatory material, and the layout was structured so that respondents could understand the task at a glance. This design is based on the belief that questionnaires are most likely to be completed if the respondent begins to do so right away. Indirect evidence for this belief comes from an analysis by Heberlein and Baumgartner (1978), which shows that the higher the response to an initial mailing, the higher the response to subsequent mailings, and the fact that returns to mailings of virtually all questionnaires start very quickly, and on a day-by-day basis decline fairly quickly, unless subsequent mailings are used. Also, in the last census, nearly 97 percent of the mail returns were sent back within the first week. Thus, it is generally considered a desirable mail questionnaire design objective to get people to respond to a questionnaire just as soon as they open the envelope.

A 1992 test of a respondent-friendly individual-space questionnaire (with a space or box for each individual in the household) versus a traditional matrix questionnaire format (with questions appearing along the left of the page and people's names across the top) had shown that the individual-space method improved response by 3.4 percentage points in high response areas of the nation and 7.5 percentage points in low response areas (Dillman, Sinclair and Clark, 1993). Part of the improvement was thought to result from the switch in basic format, and part from the improved use of graphics, i.e., use of blue background answer fields to identify each person's answer space (Jenkins and Dillman, in press).

In later tests, white spaces (versus black-outlined boxes) for respondent answers were introduced with no apparent effect on response rate. Several sets of cognitive/motivational interviews on different forms using this technique have since suggested that these white spaces are very effective in helping respondents navigate through questionnaires in the desired manner (Dillman and Allen 1995a, 1995b).

Traditionally, the census has asked respondents to provide a roster of individuals in a household and then rewrite their names when providing information about each individual. This was thought to improve the accuracy of data, although there has been little or no research to evaluate the effectiveness of a separate roster list (research on this subject is planned in connection with future census tests). However, inconsistencies between the roster and answers for questions about each person necessitate follow-up for reconciling the differences. In the absence of evidence that the use of rosters improved the accuracy of household responses, it was decided that Form A could be simplified by removing the roster.

The color of Form A was based upon considerations explored in testing of alternative formats for imaging conducted in early 1995. Three colors--brown, orange and green--were tested in cognitive/motivational interviews. Respondents in these interviews favored green by a slight margin (Dillman and Allen, 1995 and Jenkins and Bates, 1995). A 1995 nationwide test of blue, the color that had been used for previous census tests, versus green questionnaires revealed no differences in responses (Scott and Barrett, 1996). Furthermore,

past research on mail surveys has generally shown no effect on response rates of color of questionnaire, with the exception of an article by Fox et al. (1988) which suggested that green questionnaires may outperform plain white questionnaires. Based upon these results, and the modest preferences found in the above research, green was chosen as the background color for Form A.

In the above-mentioned cognitive/motivational interviews, people were observed completing a prototype questionnaire. This questionnaire had the address label on the back cover, and just below it the final question asked respondents to provide their name and telephone information. Many respondents looked at the address label and immediately started filling out this last question. In a few cases respondents failed to complete the form because they started on this page first. Based upon these observations, it was deemed more convenient, and less likely to create confusion, if the address label was located on the front page. Thus, the address label was moved to page one on Form A.

Moving the address to the front page made it possible for Form A to have a completely linear flow. Specifically, it was possible to pull the folded and inserted questionnaire from the envelope so that page one (rather than the back page) was immediately visible to respondents. Then, the subsequent answering process was reduced to five sequential steps, with the first two steps on the first page, the second step on the two middle pages, and steps 3-5 on the back page. It was reasoned that answering the census form could be promoted as consisting of five simple steps:

- Step 1 How many people in the household?
- Step 2 Provide answers to six questions about each person
- Step 3 List names of any additional people
- Step 4 Provide name and telephone of the respondent
- Step 5 Mail it back

The design of Form A was influenced by one other major consideration. In a 1992 test (Dillman, Sinclair and Clark, 1993), it was found that shortening the Census form from an eight-page booklet, to both sides of a legal size (8-1/2" x 14") sheet, resulted in a 4.6 percentage point higher response rate. Thus, it was reasoned that an additional increment of response might be achieved by returning to one sheet of paper, so Form A was designed this way. However, the same experiment showed that a postcard census form asking only name and date of birth for each person living in the household achieved essentially the same response rate. This finding suggested that a further shortening of the census form to only one or two questions might not be effective.

Form A represented an extension of the main findings from several census research studies conducted between 1991 and 1995, which found that only 6 of 13 variables tested in 27 treatment panels significantly improved response rates; they included respondent-friendly questionnaire design utilizing the individual-space format (5-7%), a prenotice letter (5-7%), a reminder postcard (4-8%), replacement questionnaire (6-11%), a mandatory appeal (9-11%) and shortening the questionnaire from eight pages to four pages (4-5%) (Dillman, Clark, and Treat, 1994). More generally, the design of Form A is based upon survey methodology concepts drawn from past research on how to improve survey response.

Forms B (Gold Booklet) and C (Gold Vertical)

Several of the major design features incorporated in Form A were also included or adapted in Forms B and C, including: 1) the display of a mandatory message saying, "Your response is required by law," 2) an individual space format labeled as "Person 1," "Person 2," etc., for providing information about each household member; 3) colored background fields with white spaces for providing answers; and 4) no roster. However, the design of these two forms (by Two Twelve Associates in New York City) used innovative graphical designs and a marketing approach found successful in the private sector. Their goals were to use the questionnaire design to improve mail response by incorporating the benefits of participating in the census into the forms, and to design a format and graphic style that looked easy,

simple, and engaging and that graphically communicated the identity of the Federal government.

Form B's mailing package was colorful and generously illustrated with "friendly facts" intended to show the purpose and benefits of the census graphically. The questionnaire was a booklet identical in size to Form A with a bright gold front, including a graphical representation of the Capitol as well as two items to be filled out (the name of the person completing the form and the number of people living in the household) and an instruction on filling out the remaining pages. Inside, half-page spaces were provided for each of four people, with light yellow used as the background color. Page four asked for information about Person 5 on the top half of the page. The bottom half of the page, printed upside down, contained introductory information to the census form printed in black against a bright gold background field. It also contained the mailing label. (See Fig. 1.)

Form B's envelope was printed with black letters on white, except for a yellow circle with "Count me in" in reverse printing. This slogan was intended to be friendly and people-oriented, and to carry through a theme which would also be used in advertising. Benefits to the community were mentioned on Form B envelope. The envelope contained the return address "U.S. Census 2000" in prominent black letters. The word "TEST" in a black rectangle was printed prominently on the envelope. Also prominent was the mailing label printed on the bright gold background of the questionnaire which showed through the open window of the envelope and contrasted with the white envelope. The inside flap of the envelope contained cartoon illustrations of census uses, with accompanying text. The back of the envelope was bright gold, repeating the illustration of the Capitol and the "U. S. Census 2000."

Form C was designed as a narrow, vertically oriented eight-page booklet with a futuristic "U. S. Census 2000" logo and more sophisticated, crisp illustrations intended to communicate a more "high tech" feel. The questionnaire cover was bright gold, and contained blue, white, and black icons plus explanatory material about why it is important to

be counted in the census. A blue, "Count me in" button was prominently displayed, as was "Test." Inside, page 2 contained two questions--who is filling out the form, and how many people live in the household--and an instruction for continuing on page 3. Each of the next five pages contained questions about the persons who lived in the household, again using light yellow as the background color, with one person per page. Colored triangles were used as navigational aids to guide respondents through the form. The final page, which was also the back cover, instructed the respondent to list the names of up to three additional people who may live in the household. The mailing label was also printed on this back page.

Form C's envelope was printed in bright gold, and was slightly larger than the questionnaire. Printed in bright blue were a due date and prominent circle containing the information "your response is required by law" in white reverse print. The back was white and repeated the logo, "Count me in" slogan, and "Test."

Among the important aspects of Two Twelve's approach was an attempt to find phrases that respondents could understand and which would motivate response, e.g., the "Count Me In" slogan and distinctive "U.S. Census 2000" logo for reference to the 2000 decennial census. Much attention was focused on the envelope to make it appear attractive and unique among unsolicited mail. The goal here was to establish a campaign identity on the envelope that contrasted with junk mail. For example, the use of bright gold color was selected in part because it is rarely used by the commercial direct-mail firms that send marketing information to consumers. The three-color form (blue, gold and black) was also used to attract attention; in the past census forms had been limited to two colors.

Icons and a graphical image of the Capitol were used to heighten interest in the questionnaire and to help convey benefits messages in language that people could understand. The aim was to personalize and illustrate the benefits of the census. Graphical images were also used to define a prescribed navigational path through the questionnaire, so that questions would be answered in a prescribed order.

Table 1. Summary of Design Features for Three Census Short Forms

Common Design Features	FORMS A - C		
Mandatory message	All mailing packages say "Your response is required by law"		
Format	Individual person space format		
Answer space format	Colored background fields with white answer spaces		
Roster	No roster list; R is asked for a count of persons		
No. of person spaces	Five		
Varying Design Features	FORM A Green booklet	FORM B Gold booklet	FORM C Gold vertical
Size	8 1/2" x 11"	8 1/2" x 11"	5 5/8" x 10 1/2"
Number of pages	4	4	8
Front page content	Household count, Person 1 box	Contact person, Household count, Form-filling instruction	Icons and benefits messages
Questionnaire color	Green	Gold and yellow	Gold and yellow, with blue features
Cover letter used	Yes	Yes	No
Location of address label	Front of questionnaire	Back of questionnaire	Back of questionnaire
Continuation roster, for persons beyond 5	Yes	No	Yes
Envelope color	White	White, with gold features	Gold, with blue features
Display of mandatory message	Front of envelope in bold black box	Back of envelope in a black strip	Front of envelope in a blue circle
Due date	None	Questionnaire back	Front of envelope
Location of "Test" message	Front of questionnaire	Front of envelope, questionnaire	Back of envelope, questionnaire
Graphical features	Official seal on envelope, q'aire	"Count me in" logo, Icons and text showing benefits, Drawing of Capitol on q'aire, envelope	Official seal, "Count me in" logo, Icons and text showing benefits

The Test Methods

In this research our goal was to evaluate the cognitive and motivational qualities of the forms in order to identify any problems people experienced in filling out each of the forms, and the reasons. By watching and listening as people completed the forms, we hoped to learn how different design features of each form were influencing people as they completed them.

Concurrent and retrospective interview methods

Two types of interviewing techniques were used. One type was the concurrent method whereby people were asked to think-aloud. That is, they were asked to talk out loud to the interviewer while opening, completing and preparing the completed questionnaire for return to the Census Bureau by placing it into the return envelope. The interviewers began by explaining to respondents that they were going to be evaluating three mailing packages that might be used in the 2000 census. It was stressed that we wanted to know what respondents were thinking and feeling about the entire mailing package, including what they liked and disliked. Following the introduction, we asked respondents to answer two practice questions-how many windows were in their home and how long it took to get to where the interview session was held. These questions were typed on colored paper and placed in an envelope with a window. The interviewer prompted the respondents to think aloud as they opened the envelope and answered the practice questions.

The second interviewing technique was the retrospective interview. Respondents were asked to open, complete, and prepare the completed questionnaire for mailing without talking to the interviewer. The interviewer watched the completion process on a video monitor or in person to identify hesitations, errors or what appeared to be problems. Then the interviewer debriefed each respondent, asking a predetermined set of questions, in addition to extemporaneous questions aimed at gaining an understanding of why problems had been experienced.

At the end of each interview, we also asked respondent about their preferences among the forms, and whether features of them would encourage them to respond in the census. To be sure that the same questions were answered in both the concurrent and retrospective interviews, we asked a standard set of "debriefing" questions after all three of the census forms had been completed.

The concurrent and retrospective methods may have complementary strengths. The concurrent method allows the interviewer to learn what respondents are thinking (to the extent they will reveal it) as they attempt to figure out what to do. The retrospective method allows the interviewer to see what mistakes respondents make on their own, while concentrating solely on the response task without potential interruption of thought processes by the interviewer who is prompting them.

Detailed protocols (available on request) for each of these methods guided the interviewing process, but the interviewers did not actually read them, taking into account that some questions on the script had already been answered by respondents. Thus, these guides were followed somewhat differently in various interviews.

Selection of Respondents and Implementation

At both Washington State University and at the Census Bureau an attempt was made to recruit volunteers across a range of ages and educational levels, and of various ethnic and racial backgrounds. After the interviews began, the Census Bureau sponsor requested that the sample be expanded to increase the number of minority respondents. In response to the request, 15 additional interviews were conducted at Washington State.

At Washington State, respondents were recruited by staff of the Social and Economic Sciences Research Center, working through several private organizations and public agencies, using local knowledge of people in Spokane and the Pullman, Washington/Moscow, Idaho areas. Special efforts were made to identify individuals whose tribal affiliation would not fit

into the number of available spaces, who had long names or more members of the household (up to 9) than the number of spaces allowed for, and people who had limited English skills because it was a second language or due to low literacy or dyslexic tendencies.

All 35 WSU interviews were conducted by Don Dillman in the facilities of the Washington Higher Education Television System in Spokane or Pullman, Washington. The movement of respondents' hands as they completed the questionnaires was taped using overhead cameras at the same time that other cameras taped face and body movement features. These images were combined onto one screen thus making it possible to see both facial and hand features when reviewing the videotapes.

At the Census Bureau, respondents were recruited by flyers placed in local grocery stores and GED classes, and through informal contacts. Individuals of different racial and educational backgrounds were selected for this study and brought into the cognitive laboratory facilities of the Center for Survey Methods Research at the Census Bureau in Suitland Maryland. Interviews were conducted by Cleo Jenkins (12), Terry DeMaio (4), and Betsy Martin (4). They were conducted in private rooms, and were videotaped and audiotaped with the respondent's permission (none refused).

Respondents' ages ranged from 16 to 80 years old. The races of those interviewed, based on their census form reports, are given in Table 2.

The purpose of the testing was generally explained to the respondent, who was asked to complete a consent form. The interviewer then began the session with appropriate explanations for the concurrent or retrospective method and handed the appropriate questionnaire to respondents. In the concurrent interviews the interviewer encouraged the respondent to think aloud and asked probing questions as necessary throughout the interview. In the retrospective interviews the interviewer remained silent while the respondent filled out each form, then followed up with questions as each form was completed. Debriefing questions were asked after respondents had completed all 3 questionnaires, in both

Table 2. Racial composition of sample

Race	Washington State	Bureau of the Census	Total
White	17	5	22
Black	2	9	11
Hispanic	5	3	8
American Indian	5	0	5
Asian	1	1	2
Pacific Islander	5	1	6
Other	0	1	1
Total	35	20	55

retrospective and concurrent interviews. Respondents were paid \$25-\$30 after completing the interview.

At both locations, equal numbers of concurrent and retrospective interviews were conducted. We did not fully randomize the order in which the three forms were administered. Since Forms A and C were considered to be the most divergent from each other, we decided to always begin with one of these forms. Form B was always evaluated in the middle because of its similarity in color to Form C and in its booklet format to Form A. The two questionnaire orders (ABC and CBA), and the concurrent or retrospective method, were preassigned and balanced across interviewers.

Analysis Procedures and Limitations

The large (by cognitive interview standards) number of interviews, the broad scope of research objectives (i.e., the fact that we were attempting to evaluate all the pieces of the mailing package), and the testing of three forms with many different design features resulted

in a sizeable analysis task. Therefore, in addition to interviewer impressions gained from the interviews and debriefing questions asked following the interviews, we reviewed the census forms and the videotapes and systematically coded the same pieces of information from all of the interviews. The specific information included respondent demographic characteristics, respondents' behaviors during the interview (e.g., did the respondent read the envelope, the cover letter and questionnaire?), their evaluation of the mailing package as a whole (e.g., did it look like it came from the Government?), perception of certain information (e.g., did the respondent notice the mandatory message?), responses to particular items (e.g., how many persons were reported in the household count item?), and overall preferences (e.g., which mailing package did the respondent recommend be used in the census?).

Systematically collecting comparable information about these specific pieces of information allowed us to make quantitative comparisons among the three forms. In the analysis that follows, we incorporate both quantitative and qualitative assessments of the three forms. Interviews conducted at Washington State and at the Bureau of the Census are combined in our analysis. This decision was made after examining the data for consistency in the trends across the two locations.

Several limitations must be taken into account in interpreting the results of this research. First, the respondents were recruited through a process that depends in part on self-selection. Therefore, the results cannot be generalized to any larger population. Nevertheless, the results provide important information about problems that are likely to affect relatively large numbers of people in an actual census context.

Second, while we tested three forms, the small number of cases prevented us from having respondents complete questionnaires in all possible sequence combinations of these forms. The two questionnaire orders that we randomly assigned to respondents were selected because they allowed us to control for the largest differences in the format of the forms. It is likely that some respondents learned from the first form and were therefore less likely to make mistakes on subsequent questionnaires. Conversely, order effects could result in worse

performance on later questionnaires if respondents become trained on some aspect of completing a form and the next questionnaire they filled out differed in the design of that aspect (e.g., columns vs. person spaces). We have not fully analyzed the data to control for these effects of questionnaire order. However, we believe that the disadvantages of this procedure were more than outweighed by the advantages of obtaining valuable comparative information.

Third, there are missing data both for the debriefing questions, and for the observational items coded by observing videotapes. The concurrent method, in which the respondents verbalized everything they thought about as they completed the form, was more conducive than the retrospective method for eliciting information about what the respondent noticed and did not notice. In addition, logistical problems resulted in some interviews not being videotaped, and the coding was done from the audiotapes. Also, the interviewers were not all perfectly faithful to the interview protocols, and there is missing data for some items. The instances of missing data are not spread equally across all pieces of information. This, combined with the possibility that people we don't have data for may differ from the people we do have data for, constitutes another limitation of these data.

Finally, people's stated preferences, and what they say they would do in an interview, may differ from what they actually do when an unannounced envelope containing a questionnaire comes in the mail. Information about actual response behavior will be obtained from the National Content Survey now in the field.

Results

Comparative Judgments

Four debriefing questions were asked to elicit respondents' overall reactions to the questionnaires.

First, respondents were asked, "If only one of these mailing packages could be used in the next census, which one would you recommend that we use?" This question was posed after all three census forms had been completed and all three were simultaneously displayed on the table. It was emphasized to each respondent that we were interested in all aspects of the mailing package, i.e., the particular combination of envelope, questionnaire and cover letter, if there was one. As shown in Table 3, nearly half of the people who responded to this question preferred Form A, almost a third selected Form C, and a fifth opted for Form B.

Table 3. Percentage of respondents choosing each form in response to debriefing questions

Debriefing Questions	Form Type			
	A Green booklet	B Gold booklet	C Gold vertical	(N)
a. Mailing package recommended	45%	22	32	(49)
b. Mailing package NOT recommended	34%	24	42	(41)
c. Envelope likely to open	42%	23	35	(48)
d. Questionnaire likely to start	69%	11	20	(45)
e. Which is longer	7%	13	81	(31)

When asked which package they would not recommend, 42 percent said they would not recommend Form C, 34 percent chose Form A, and 24 percent selected Form B. Thus, there was far from universal support for one mailing package over another. Each received some support and objections. Curiously, Forms A and C, which received the most support, also received the most objections. That is, respondents who recommended we use Form A in the next census tended to recommend that we not use Form C, and vice versa.

Persons who chose Form A often commented on its official qualities, and the fact that it was mandatory. Some simply liked the green color, and ease of getting started. At the same time, some pointed to the mandatory message on the envelope as a reason they did not like it and would not recommend its use.

Form C was picked frequently because of its bright color and prominent size. Some saw it as a departure from government blandness, and indicated they would not expect something like that from the Government. Some who recommended against its use disliked the color, but the most often mentioned reason was that it looked like junk mail and not something that would come from the Government.

Form B received the least support, but also received the fewest objections. Many respondents felt the entire packaging reminded them of junk mail. Those who liked it mentioned the return address that clearly indicated it was from the Census Bureau. The complex packaging and back side of the envelope seemed to do little to create a favorable impression.

Respondents were also asked, "Now please think just about the envelope. If these three envelopes arrived in the mail, which one do you think you are most likely to open?" Although the envelope seemed to figure prominently in people's responses to the first question about recommended mailing package, this next question was asked to get an explicit evaluation of the envelope.

Consistent with their overall recommendations, 42 percent chose Envelope A, 35 percent selected Envelope C, and 23 percent said Envelope B. These answers tended to support answers to the earlier question, with Envelope A coming out slightly ahead. The reasons were also similar. Knowledge that return of the questionnaire was mandatory was important to many people who chose this envelope. And the size and bright color seemed important to those who chose Envelope C.

Respondents were also asked, "If you had each of these questionnaires in front of you, which one of them are you most likely to begin filling out right away?" Respondents were far more likely to indicate that they would start Form A right away than either of the other choices. Whereas 69 percent who made a choice picked Form A, 20 percent chose Form C, and 11 percent chose Form B. In support of choosing Form A, respondents frequently mentioned that the step instructions looked clear and easy to do, and what they had to do was simply there in front of them, without looking difficult. The official look of the form, and the bold mandatory message, also communicated a sense of urgency about this form. With regard to Form C, some respondents mentioned that it looked more like a brochure, and didn't give the appearance of being a questionnaire, so there was nothing that might encourage them to get started.

In addition, respondents were asked, "Do any of the forms look longer or shorter to complete than the others?" This question was asked because it has been amply demonstrated in past census research that length has a negative influence on response rate. Two-thirds of the respondents answered yes to this question, and when they were asked which one was longer, most (80 percent) mentioned Form C. The reasons for this choice were that it had more pages because the questions for each person comprised an entire page, and because there were two additional questions. Although this form was perceived as being a little longer, we did not get the impression that this difference in length would cause differences in response to the forms.

In sum, interviews with a small, purposive sample of respondents find somewhat more support exists for Form A based on a survey methodology approach than for either of the forms based upon a marketing approach. Slightly more people recommended that mailing package. In addition, Form C, which is second most preferred, is perceived as being slightly longer and less likely to be immediately filled out.

At the same time, we did not sense strong sentiment against the structure or appearance of any of the forms. Overall, none of them were reported by respondents as being extremely confusing. There was also no strong sentiment that any of the forms should not be used in the next census.

In the sections that follow, we approach the evaluation of these forms from three perspectives. The first is what the form needs to communicate to respondents. The second is how it navigates respondents through the form. The third is whether the respondents understand the terminology contained in the questions.

Communicating Purpose and Motive

The census mailing package must effectively communicate to the public its purpose and sponsorship, and what the recipient is being asked to do. It also is a vehicle for delivering messages intended to persuade recipients to cooperate with the census. As discussed above, past research has shown that the more people know about the census and its uses, the more likely they are to cooperate with it. Additionally, for a substantial portion of the public, the form itself is the first knowledge or contact they have about the census.

Some of the key messages which must be communicated are--

1. The inquiry is official and is being made by the Government (Bureau of the Census),

2. The purpose of the inquiry is to conduct a CENSUS, or a count of every person in the United States,
3. The respondent is being asked to count and provide data for every person living in the respondent's household on a certain date,
4. Response to the inquiry is required by law,
5. The confidentiality of answers to the census is protected by law,
6. The census information being collected will benefit the respondent's community,
7. The respondent should fill out the questionnaire and mail it back by the date due.
8. Filling out the census questionnaire will take about 10 minutes.

Some of the information communicated to respondents is optional, and intended to motivate them to cooperate with the census; some is required by regulation (for example, the amount of time it will take to fill out the questionnaire, and the promise of confidentiality). Some of these messages are more important and basic than others; for example, respondents who do not grasp the basic purpose of the inquiry (message #2) are unlikely to understand what they are being asked to do (message #3) or make sense of messages about the community benefits of the census (message #6).

In this section, we address the extent to which respondents noticed and favorably evaluated the messages which the forms attempted to communicate. We did not collect information pertinent to all of the messages listed above. In particular, we did not explicitly address the extent to which respondents understood the basic purpose of the inquiry, assuming that it would be readily understood by all respondents. In retrospect, we believe that some respondents did not understand that it was a census and that they were being asked to list all

persons living in their household. This section also addresses the use of color and how it affected respondents' perceptions of the meaning of the inquiry.

Communicating the official nature of the inquiry

Respondents were not passive recipients of what was presented in the mailing packages, but rather actively looked for and interpreted information in order to understand the inquiry. Some respondents stated that when they receive something in the mail, they first look at the envelope's return address to see who it is from. We observed that about one fifth of our subjects noticed the return address for each of the envelopes (although, in most cases, we could not tell whether they had noticed the return address or not). Thus, one way respondents knew a mailing package came from the Government was because the return address said "Bureau of the Census" or "U. S. Census 2000" (the latter, in large clear letters on the envelope for B, attracted more notice and more favorable comment than the other return address designs).

In addition to evaluating who sent the package, respondents compared and evaluated features of the packages in the light of other materials they receive in the mail, or other forms they are familiar with. Package A was compared by respondents to a job application, an SAT form, a school-type test, a tax form, and a jury duty summons, while B was compared to a sales flier for magazines or a survey and C reminded respondents of publishers clearing house sweepstakes, or an informational brochure. Our interviews indicate that the envelope for package A was evaluated as looking more "official" and less like junk mail, than either of the other envelopes. Table 4 shows that 16 and 26 percent of our respondents judged the B and C envelopes, respectively, as looking like "mail from the Government," compared to 80 percent who believed that A looked like mail from the Government. (A total of 16 percent thought all of the forms looked like Government mail, while 4 percent thought none did.) Table 4 shows that 57 percent of respondents thought C looked like junk mail, compared to 33 percent who mentioned B and 22 percent who thought A resembled junk mail. A total of 14 percent thought none of the forms looked like junk mail.

Table 4. Perceptions of mailing packages as junk mail and as official mail

Percent who mention...	Do any of the envelopes look like...	
	Junk mail?	Mail from the Government?
None of them	14%	4%
One or more envelopes mentioned ¹ :	86	96
A (Green booklet)	22	80
B (Gold booklet)	33	16
C (Gold vertical)	57	26
N	51	50

¹ Respondents could mention more than one envelope so percentages total more than 100.

Looking official was positive in most respondents' minds because it got their attention, told them the package was important and urgent, and that they should respond to it. (Not all respondents felt this way: one said, "I see the 'Census Bureau.' I don't want nothing to do with that, so it'll just go in the trash.") Looking like junk mail was negative because they would think it was unimportant and throw it out.

Respondents' evaluations of what looked official were influenced by their expectations. A number of features affected perceptions of the mailing packages as official-looking, including the absence of color on the envelope, the official seal, the black block letters, the mandatory message, and perceived differences in the quality of the paper or the printing. One respondent opined, "Maybe the government's white or brown envelopes are their trademark," and another said Form A looked more official "because it's a white envelope with black writing and it looks more like a business envelope, like it may be more important than the

other. The other [C] looks too loud and reminds you of junk mail...." Another evaluated B as less official because "you think of the government as being tightwads or something so that the less you see is more official, more businesslike." The "Count me in" and mandatory message logos on B and C detracted from an official look for some respondents, since they "looked like a little decal," and resembled stickers that were attached to junk mail they had received. In contrast, the Department of Commerce seal was seen by many as looking official and important. The amount of writing and crispness of the printing, influenced respondents' perceptions in some cases, for example, the respondent who evaluated B as more official because it was less cluttered. Finally, the mandatory message on envelope A seemed important and official and communicated a sense of urgency.

Although the modal response was to evaluate package A as official, and to judge the C package as looking like junk mail, many respondents did not give these modal responses. We reasoned that through experience people may learn to discriminate official mail and junk mail by attending to certain distinguishing features. If so, then persons with less experience at receiving and sorting mail, or who have less experience with U. S. marketing practices, may not have learned these discriminating features. Consistent with this expectation, we did find that younger people (less than 30) were less likely than older ones to evaluate the B and/or C packages as looking like junk mail (36% of younger people compared to 76% of older ones thought B/C looked like junk mail; $X^2=7.4$, $df=2$, $p < .03$). We also find that women are significantly more likely than men to evaluate package A as the only one that looked like it came from the Government (81 vs. 46 percent; $X^2=7.6$, $df=3$, $p < .06$). However, we found no significant differences by race, education, or native English speaking ability.

These results are based on a small, purposively selected sample and cannot be generalized. However, they suggest the possibility that different characteristics of mailing packages may be interpreted differently by different segments of the population, and thus may have a differential impact on response to the package. (To take one example, bright color on the envelope was taken by many respondents as indicative of junk mail, while others liked it, and

found it eye-catching.) This raises the possibility that different mailing packages may be better suited for different segments of the population. (For example, package C may elicit better response from young persons, who in our small sample were less likely to think it looked like junk mail, while the more official-looking A may elicit better response from older persons.)

The hypothesis that mail recipients learn to attend to certain features of a mailing package in order to discriminate junk mail from other mail also suggests that, as the practices of mass marketers change, so will respondents' interpretations of the characteristics of mailing packages. This implies that the design features which are advantageous in one environment may change over time, or may be different in another environment, because design features are evaluated in comparison to practices of marketers and other mass mailers. This implies that the results of research (such as our study) may not apply in a few years time, as the mail environment changes. For example, some mass marketers attempt to simulate official-appearing government mailing packages. Of course, there are features of the mailing package that cannot be emulated by imposters, such as the government return address, and the message that response is required by law. Nonetheless, marketers' simulation of official mail can undercut the advantages of an official-looking envelope, if people learn that "official-looking" means junk. (Indeed, one respondent thought envelope A looked like junk mail trying to look official, and almost a quarter of our respondents thought envelope A looked like junk mail.)

For some respondents, the graphic representation of the Capitol on the B questionnaire and envelope communicated that the package was from the Government, although not in a very compelling way. (As one respondent interpreted it, "Just please do this for the U. S. government, but it doesn't mean anything important.") Even though only 58 percent of respondents correctly identified the Capitol, it resembled some sort of Government building to many more of them. However, the dominant reaction was that it resembled a religious building, such as a mosque, the Taj Mahal, or a Greek Orthodox church. These associations

did not seem appropriate for the census, and negative comments on this graphic outweighed positive ones.

It's mandatory

Although an identically worded "Your response is required by law," appears on all three envelopes, respondents reacted in dramatically different ways to the presentation of the information. Table 5.a shows that over two-thirds saw the mandatory message on both A and C packages, compared to only 20 percent on B. This difference is due to the placement of the message on the front left of the envelope for the first two packages, and on the bottom back of the envelope for the third.¹

About a third of respondents commented positively that the strong, forceful presentation of the mandatory message on the A envelope got their attention and communicated the importance and urgency of the request (see Table 5.c). In contrast, the presentation of the mandatory message in a blue button on the C envelope or as a black strip on the back of B's envelope did not seem important or significant, and did not grab respondents' attention, or reminded them junk mail. (As one respondent said, "I mean I would notice that [C message], but it don't stick out as much as this one [A] right here. Probably wouldn't pay it no attention. This one [A] catches your eye. You'd be going through the mail and you'd go, 'Damn. Open this now or else!'")

Close to a quarter of respondents commented negatively on the bold mandatory message on the A envelope, as shown in Table 5.b. Some respondents were threatened or antagonized by it, for example: "Sounds like you gotta do something. It's almost forcing you...it say 'require'...You aren't required to do nothin'. Can't anybody make you do nothin' that you

¹The poor result for the gold booklet here may be partly an artifact of our test. The mandatory message was designed to be noticed when the respondent zipped open the form; however, in the test the forms were not sealed shut so respondents' attention wasn't focussed on this part of the form.

Table 5. Response to mandatory messages on three mailing packages

Percent who...	Mailing package		
	A Green booklet	B Gold booklet	C Gold vertical
a. Noticed mandatory message?			
Yes	72%	20%	68%
No	18	80	22
Total	100	100	100
N	50	49	50
b. Commented on message?			
Favorable comment	31%	11%	13%
Unfavorable comment	24	18	31
Both favorable and unfavorable	4	--	2
Neutral comment	14	11	22
No comment	27	58	33
Total	100	100	100
N	55	54	55
c. Effect of message on response?			
More likely to respond	69%	35%	47%
Less likely to respond	11	4	6
Makes no difference	20	62	47
Total	100	100	100
N	45	26	32

don't want to do....That's like an order. Do not like to be bossed around. It's like do this now or else. That would go straight to the trash." Another called it "glaring" and said

"Some people will take offense--'I'm not going to do anything' this little envelope tells me to do."

Despite their mixed positive and negative reactions to the message on the A package, respondents took it more seriously: 69 percent said it would make them more likely to respond to the census, compared to 47 percent for the message in the C package and 35 percent for B. Even respondents who did not like the mandatory message on A claimed they would be more likely to cooperate with the census because of it.

The benefits of the census

All three mailing packages attempted to communicate information about the uses and benefits of the census, either in letters to respondents² (the A and C packages), or by means of icons (and text) depicting the uses of the census for Congressional apportionment, in education, health care, and distribution of highway funds (Forms B and C). B and C also included a button containing the slogan "Count Me In."

Icons. The icons were noticed by about 75 percent of respondents, regardless of their placement on the inside of the envelope (for B) or on the front of the questionnaire (for C). At least 27 percent read some or all of the text associated with the icons on B. Forty-five and 33 percent of respondents for B and C, respectively, said the icons would encourage them to respond to the census, with most of the rest saying the icons wouldn't make any difference. Respondents' preferences were evenly divided between the two icon designs.

In this study, the icons were not compelling in the same way that the mandatory message was (as one respondent said, "This is not going to make me respond any quicker.... The only

²Both letters said, "Census results help your community. The money that governments spend for schools, employment services, housing assistance, roads, services for children and the elderly, and for many other purposes often is based on census results."

thing that is going to make me get to it any quicker is 'your response is required by law.'") Respondents did not necessarily read the accompanying text carefully (several said they would read it only after completing the form) and a number of respondents said the icons were not necessary.

Nevertheless, the pictures drew respondents' attention and communicated a positive sense of importance of the census because "you can almost see what's happening--you can see the hospital, see the road...." One respondent commented that they reinforce the meaning of the census, that you don't have to read every word but can look at them and "get the idea." Another commented that if a person is in a hurry, it still shows everything the census is used for. They were seen by one respondent as a way of personalizing the form which "made it seem like the individual's important"; another commented that the icons "make you aware about how the census could help anyone filling this out." Several respondents learned about uses of the census they weren't aware of, such as to distribute highway funds. The icons also contributed to positive evaluations of mailing packages B and C, and to perceptions of them as possibly interesting or "fun" or having a nice feel. One person said they reminded her of the icons on the computer, which was a positive association.

Not all respondents understood the meaning of the icons. For example, one respondent asked, "Is the Census Bureau offering these types of programs or just asking about these types of programs?" He only understood the purpose of the census after he read the letter. His confusion illustrates the earlier point that respondents are unlikely to understand secondary messages if they do not understand the fundamental intent of the inquiry.

While attractive, the icons only modestly affected respondents' perceptions of the forms. Additionally, their location on the front of questionnaire C made people think that form looked like a brochure and not a questionnaire that should be filled out right away. (This issue is discussed more below.) It is possible that, in a more benign location, the icons could have positive value as a device for reinforcing and supporting messages about census

uses communicated other ways (such as in the letter, or through advertisements). Through repetition, they might have a beneficial impact that is greater than was apparent in this test.

Count me in. This message, which appeared inside a blue or a gold button, also tended to be seen as positive by respondents, although it did not elicit a strongly enthusiastic response. The slogan appeared more effective on B than on C. Its more prominent placement next to the return address on the B envelope led more people to notice it (36 percent, compared to 18 percent on C). About 42 and 27 percent of respondents commented favorably on the slogan in B and C respectively. (However, a number of respondents commented negatively on the blurry printing in B.)

People responded in a mildly positive way to the message, interpreting it to mean, for example, "They're part of that community--it's not just for the numbers." One respondent compared it favorably to the mandatory message on A because, "It's like you want to be included, instead of saying 'you have to do it or else.'"

Others had neutral or even negative reactions, for instance: "'Count me in' didn't really turn me on that much," "I noticed it--it's pretty cheesy, and bandwagonish. I didn't know I was joining a team." Several expressed a preference for the official seal.

It's a test

In some cases, respondents misinterpret messages which are part of the mailing package. An example is their misinterpretation of the word "TEST" on the mailing packages. Some respondents thought they were being tested. It is important to be aware of such unintentional messages in order to avoid miscommunication.

Our observations indicate that between 9 to 20 percent of respondents noticed "Test" on the mailing packages; again, in most cases we could not determine if they had noticed or not. (It was more likely to be noticed when it appeared on the envelope, as it did for the B and C

packages.) Between 11 and 27 percent commented on it, with unfavorable comments outweighing positive ones for all forms. Respondents reacted negatively to the idea that they were being tested, for instance, "It said test. I don't think I would probably send it back.... You know people get frightened of tests. I'm not taking a test. How dare they send me a test....I'm not gonna have the government test me or my knowledge skills or anything." Others thought "test" indicated the inquiry was not important: "'Test' for what? Maybe they are just doing some testing so maybe I'll just set it aside and not open it right away." Others responded with curiosity, and said they would open it because it said "test": "I would open it up to see what kind of test is going on."

Of course, "TEST" will not appear on the mailing package in the actual census, so respondents' reactions are in some sense irrelevant. However, it is important to be aware of the unintended interpretations which may influence respondents' response to the package. In addition, the message very likely affected response rates in the National Content Survey currently in the field. Our observations indicate that some people would be more likely to open the package, and some less likely, because of the presence of TEST on Envelopes B and C. We cannot say for sure, but the net effect, if there was one, was more likely to have been to depress rather than increase response for these two forms. TEST did not appear on the envelopes for any of the other mailing packages tested, but did appear on the questionnaires.

Date Due

Between 15 percent (for B) and a third (for C) noticed the due date on the envelope or the questionnaire, and a number commented that they look for this information when sorting the mail (a few respondents commented on the absence of a due date on the A package).

Other messages

Although we did not address these messages in our interviews, it is worth noting that with some consistency respondents picked up on certain other items of information provided in the mailing packages. Some of these messages may deserve more emphasis than they currently receive.

Who counts. Several respondents (especially foreign-born) picked up on the statement in the letter that the census is to count "both citizen and noncitizen," and made comments such as, "so that includes me," or comments approving of a sentiment they thought was being expressed, such as "citizen or noncitizen--that's good, everybody should like each other." The message that the census is comprehensive and universal is essential to understanding the nature of the inquiry, and it might also be usefully developed as a motivational appeal to immigrants and other persons who are in some way marginal and at risk of being undercounted.

Pencil or pen? More than one respondent looked for information on the A questionnaire instructing them at the start how to fill it out--in pencil or pen. This seems to be information that some people expect to find in a form.

Color

Color affected respondents' interpretations of and feelings about the mailing packages, and it also affected readability. The interviews support several conclusions.

First, color on the envelope elicited decidedly mixed reactions. Some respondents found it inconsistent with the official nature of the inquiry, and it contributed to the perception of the C envelope as "junk mail." ("I don't know if I would fill it out right away. It almost looks like publishers' clearing house--like a piece of junk mail. For it to be as official as I feel it should be, I don't think it should be this colorful.") Others, however, liked the bright color

because it was eye-catching and pleasing. It did not detract from their sense of how mail from the Government should look.

Second, respondents generally seemed to prefer color on the questionnaire, and there were none who expressed the view that color was inconsistent with it being the official census. After Form A was completed, respondents were shown the same form printed with the same light yellow background color used in Forms B and C, and they were asked which they preferred. Most respondents preferred green (73 percent preferred green, 19 percent preferred yellow, and 8 percent said it made no difference).

The basis for these preferences was the effect of the colors on mental or emotional arousal, and perhaps more important, the perception that yellow was harder to read because it offered less contrast with the white background. As one respondent explained, "The brighter color (yellow) seems to attract more. Yellow would make you stay awake, make you focus more. You have to concentrate because the yellow blends in with the white." However, the lighter green was "more calming" and she preferred it because the color was not as distracting. Another preferred the green because it "seems to be bolder--easier to read the questions because it's more visible, there's more contrast and it jumps out. The yellow is brighter and makes you more alert. The green calms you down a little more." Similarly, another respondent noted that the yellow color "has my eyes going bloomp, bloomp. The color bothers my eyes. The printing is clearer on the green form." Those who preferred yellow said it was more attention-getting, easier on the eyes, or gave other reasons.

Navigational Structure

This section discusses how respondents handled the mailing packages. It discusses behaviors that we tend to take for granted, yet, know little about. For instance, do respondents read the accompanying cover letters? Where on the questionnaire do they tend to begin? How do they navigate through the questionnaire itself? This section demonstrates just what a

challenge it is to effectively guide respondents through every piece of information on a questionnaire. There were pieces of information, sometimes whole pages, that were overlooked on each of the questionnaire designs.

As will become evident, our audience is diverse, with different backgrounds, different likes and dislikes, different ways of perceiving and reacting to information. Respondents sometimes had entirely opposite reactions to the same information. Understanding and taking into account these many conflicting forces is important to our being able to design a mailing package that can be filled out by the majority of respondents with the least amount of effort, while simultaneously providing them with the greatest amount of information.

Cover letters

Packages A and B both contained a cover letter; C did not. Generally respondents took the cover letter and questionnaire out of the envelope, opened up the questionnaire so that the label was facing them and set the questionnaire aside. Then they read the cover letter. Table 6.a shows that a little over three-fourths of the respondents read at least some portion of each cover letter. Although we did not specifically probe them about this piece of mail, the fact that so many respondents read the cover letter suggests that they viewed it as important, and when done at least one respondent volunteered, "It's talking about important information." However, there were a few respondents who preferred the all-in-one format of C.

Getting started on the questionnaires

After reading the cover letters, respondents generally began to read whatever most attracted their attention on the page of the questionnaire with the mailing label attached. This worked out to Form A's advantage, for the mailing label was attached to its cover page and to Forms B's and C's disadvantage because their mailing labels were attached to their back pages.

Table 6. Percentage of respondents making the following form-filling errors by form type.

Percent who...	Mailing Package		
	A	B	C
a. Read some amount of cover letter	76%	78%	NA
b. Began by looking at back page	4	73	36
c. Overlooked cover page	4	6	11
d. Left household-count question blank	15	7	6
e. Left contact-person question blank	6	11	2
f. Did not read form-filling instruction	NA	11	36
g. Filled out form in columnar way	16	29	NA
h. Did not read "note" in last person space	20	NA	NA
i. Left self off form	6	4	9
j. Made comment suggesting did not realize form was about entire household	6	4	9
k. Repeated names of household members	11	15	7
l. Did not stuff return envelope correctly	18	25	22

From a purely navigational perspective, Form B presented respondents with the greatest difficulty getting started. Because the mailing label was affixed to its back page, and because the mailing label area looked as though it could reasonably be interpreted as the cover page, and because the "Person 5" space looked as though it might reasonably be interpreted as "Person 1," nearly three-fourths of the respondents spent some time looking at the back page before turning to the front page (see Table 6.b). Some respondents were so confused that they erroneously turned the questionnaire around and began to report themselves in "Person

5." Other respondents began instead to search for "Person 1," which consequently caused them to completely overlook the cover page and the very important "household-count" question. This question asked respondents to report the number of people living or staying at their residence and it provides some instructions for doing so. We have more to say about this question a little later on.

Even if respondents did figure Form B out, still it bothered them. One respondent expressed it this way: "It's crappy. It's confusing. If you are going to have me reading this way, don't turn it upside down." Another said, "When I opened it this way you have to turn it and open it this way, so I didn't like that...it is a little frustrating."

Probably because the back of Form C didn't resemble a cover page as closely as B, fewer respondents (36%) began by looking at the back page of C. And then because the mailing label was attached to the cover and not the back of Form A, still fewer, only 4 percent, began by looking at the back of A.

Cover pages

Both Forms A and B present questions on the cover page, while Form C presents motivational icons and messages. It turns out that respondents paid less attention to the cover page with the motivational icons and messages than to the others. Table 6.c shows that nearly twice as many respondents (11%) ignored Form C's cover page than Forms A (4%) and B (6%), respectively. Perhaps respondents glanced at the cover page long enough to judge it not necessary for carrying out their task, but too quickly and subtly for the coders to detect. Form C's cover page had no questions, but only icons and benefits messages. That, and its shape and size, made some respondents say it looked like an informational brochure, or a "little book," or history, and that it was not something they would start right away.

Household-count and contact-person questions and the form-filling instruction

The location of the "household-count" question had an effect on whether respondents answered it. As mentioned earlier, this question asks respondents to report the number of people living or staying at their residence. Although respondents correctly began on the cover page of Form A, they also had a greater tendency to overlook the "household-count" question on this questionnaire. Table 6.d. shows that approximately 15 percent of the respondents left the "household-count" question blank on Form A compared to 7 percent on Form B and 6 percent on Form C. On Form A, the "household-count" question is located immediately to the left of the mailing label on the cover page. On Form B, it is the second question on the cover page and on Form C, it is the second question on page 2.

For the most part, respondents didn't overlook the "household-count" question on Form A because they had completely overlooked the cover page; rather, they seemed to erroneously view the information in the upper left-hand corner next to the mailing label either as optional or as not relevant to their task. We believe the large amount of text in the Step 1 box contributed to this problem. Some respondents interpreted it not as a question, but as a paragraph of instructions, which they disregarded. In contrast, respondents who overlooked this question when it was on the cover page of Form B (7%) tended to be the same respondents who overlooked the cover page in the first place (6%). However, contrary to what one might have hoped, the household-count question was hardly any safer when it was placed inside the questionnaire in respondents' reading paths, as it was in Form C. Still, 6 percent of the respondents left it blank in this position.

More in keeping with expectations, Table 6.e shows that fewer respondents overlooked the contact person question when it was on the second page of Form C (2%) than when it was on the back page of Form A (6%) and the cover page of Form B (11%).

It is interesting to note that although the form-filling instruction is located on the same page as the household-count and contact-person questions on Form C, it performed a lot less well.

This instruction tells respondents to "answer the questions that start on the next page for each person living here on" the reference date. As mentioned, only 2 and 6 percent overlooked the household-count and contact-person questions respectively, but 36 percent overlooked the form-filling instruction on Form C (see Table 6.f). We watched as time and again respondents placed their left hand over this instruction, as they filled in Person 1 with their right hand.

Navigating through the person spaces

There were both advantages and disadvantages to the vertical layout of Form C and the horizontal layout of Forms A and B. Each person space, or person page, of Form C is made up of two vertical columns of questions that run the length of an oblong page. To answer these questions correctly, respondents must move vertically down until they reach the bottom of the page, at which time they need to return to the top of the same page to move down the second column of questions.

In contrast, Forms A and B are standard letter size, with two person spaces per page. Each person space is about half the size of the full page. To answer the first set of person space questions correctly, respondents must stop moving down the page about halfway down the page and return to the top of the page to answer the second answer column (in the case of Form B) or third (in the case of Form A).

We didn't witness many instances of respondents incorrectly filling out the columnar format of Form C. However, respondents had trouble navigating correctly through the person spaces on Forms A and B, with B faring less well than A. Table 6.g shows that nearly 30 percent of the respondents attempted to fill out B in a columnar fashion compared to 16 percent with A. Respondents tended to comment upon this. For instance, referring to B, one respondent said, "I didn't like the flow of it. It goes across. I didn't like the way it went across that way." Another said, "I don't like having to go over to this side. I would prefer to go down. It is a conscious change to go over." In contrast, respondents made the

following kind of comment about A: "The format is easier. The flow in answering the questions is easier."

One might hypothesize that a conditioning effect was likely to occur here, that is, respondents would be more likely to answer B in a columnar fashion after having answered Form C, which was columnar, than Form A, which was horizontal. This did not happen: respondents were just as likely to attempt to answer B in a columnar format after having filled out Form A (14%) as after having filled out Form C (14%). In contrast, respondents were more likely to attempt to fill out Form A in a columnar fashion when it was the first in the series (14%) as opposed to last (4%).

These results suggest that some respondents expected both Forms A and B to be columnar. However, respondents also had a stronger tendency to erroneously perceive the person spaces on Form B as columnar than the person spaces on A. In the following comment, a respondent describes this tendency:

It [Form B] didn't flow down...This back and forth, I didn't like, so there is a break in the flow. I should have had the same problem with this one [Form A], but it stood out on that one [Form A]. Maybe because I like this color better [the green]. It really is easier on the eyes.

In keeping with what we might predict based upon the visual perception literature, this respondent seemed to be saying that the contrast between the person spaces and the white background is more visible on the green questionnaire (Form A) than the yellow (Form B).

Another important reason given by a few respondents was that the black line framing each person space on Form A, but absent on Form B, made the person spaces more distinguishable on Form A. For instance, one respondent said, "[The A Form] separates each person out more easily than the [the B Form] maybe 'cause has everything in one box."

And a third reason that was mentioned by a few respondents was that they had already been exposed to and learned from the first person space on the cover page of Form A, where it was all but impossible to view the person space as columnar. In contrast, the first person space on Form B could be viewed as running together with the second person space.

One unique feature of Form A is the black "Step" banners. Another unique feature is the notes at the end of each person space telling respondents to skip to Step 4 on page 4 if no other persons live at the residence or to go on to the next person if more do. Some respondents saw these features as effective navigational guides and instructions. For instance, one respondent said, "I like this one [Form A] best because everything was laid out beautifully for me...The steps were easy and concise." Another who had read the notes said, "Even though it [Form A] was across, it gave you in detail where to go next and what to do, which I liked. Directions were given better than the other two [Forms B and C]."

On the other hand, Table 6.k shows that a fair percentage of respondents (20 percent) did not read the notes at their most critical juncture: at the end of the last person space filled out on Form A. Since they had finished reporting all of the people in their households, some of these respondents simply figured they were done and began to stuff the questionnaire. As a result, 6 percent of the respondents never gave their name and phone number in Step 4 on Form A. Others continued to skim through the questionnaire until, by a process of elimination, they came upon Step 4.

A final but opposite problem that needs to be taken into consideration was that some respondents who did read the notes either found them distracting or had trouble understanding them. Approximately 13 percent spontaneously commented on them. For instance, one respondent said, "Only thing was--says go to Step 4--so I had to look ahead to Step 4 before I went on to complete the second person." Another respondent with six children read the note at the end of Person 5 "Please turn the page to complete the Census form, " and said, "I don't understand that." Despite her comment, she turned the page anyway and read Step 3, although she then went on to make a mistake. She was supposed to

list the sixth person in the household in Step 3. However, she wrote in the names of all six people down the list instead. This respondent erroneously interpreted Step 3 to mean "If more than five people were living or staying at this residence on Saturday, November 4, 1995, please list ALL of their names below." This is an especially reasonable interpretation if respondents do not notice the "Person 6," "Person 7," etc.

Listing names

Although respondents were more likely to navigate through the person spaces in a correct, columnar fashion on Form C, they were less likely to list their household members from person space to person space correctly. Table 6.i and 6.j. show that respondents were more likely (9%) to leave themselves off Form C, to question whether to include themselves, or to make some sort of comment suggesting that they didn't realize the questionnaire was about the entire household. Smaller percentages made these kinds of mistakes on Forms A (6%) and B (4%).

Two opposing sets of forces seem to be occurring. On the one hand, respondents were better able to navigate through each individual person space on Form C because of the limited view it afforded them. However, it was precisely this limited view that inhibited their ability to perceive, and therefore, understand the overall task in front of them: that they were to repeatedly answer the same set of questions about different household members. In contrast, the laying out of the four person spaces on the two inside pages of Form B lent itself well to efficiently and effectively conveying this task to respondents.

One kind of listing mistake that didn't follow the above pattern was respondents' repeating the same name from one person space to another. Of all of the listing mistakes, respondents tended to make this one the most. Approximately 15 percent made this mistake on Form B compared to 11 percent for Form A and 7 percent for Form C (see Table 6.j). One respondent reported making this mistake on Forms A and B but not C because she was left-handed. On Forms A and B, the "Person" banners are on the left-hand side of the page. On

Form C, they are located in the upper right-hand corners of each page. Presumably, this respondent's left hand covered up the "Person" banners on Forms A and B as she wrote.

Not surprisingly, order had an effect on the listing mistakes (i, j, and k in Table 6) in that respondents were more likely to make a mistake listing their household members on the first questionnaire they completed in the series than the last. This simply confirms the old adage: practice makes perfect.

Skip Instruction

The "Go to next person" skip instruction in question 7 on Form C illustrated below presented serious problems for respondents.

7. Does this person have another residence?
 Yes No - *Go to next person.*

Over a quarter of the respondents overlooked the skip instruction altogether, while another 30 percent read it and misunderstood it (30%). As a result of these errors, many respondents erroneously answered question 8 (time spent at other residence). As generally happens in a situation like this, respondents cleverly found ways to re-interpret question 8 so that it applied to their situations. Overlooking or misunderstanding the skip instruction lead to inconsistent data between questions 7 and 8, and more importantly, it lead to respondents needlessly writing in addresses in question 8, sometimes as many as four times.

This result is consistent with previous research (Gower 1989; Jenkins 1992). Jenkins and Ciochetto (1993) conclude that respondents overlook skip instructions of the sort found on Form C because of their convoluted reading structures. Respondents read the "no" answer category and move to the left to mark the white answer box. Their natural inclination at this point is to go to the next question rather than back to the right to read the skip instruction.

Experimental data presented by Turner et al. (1992) confirms that respondents only see information to the right of an answer category if it is in some way made salient.

Jenkins and Dillman (1993) present three alternative skip instruction formats--the salient skip instruction, the intermediate skip instruction, and the natural reading sequence skip instruction. However, Zuckerberg and Hess (1996) tested the natural reading sequence skip instruction in cognitive interviews, and found that respondents tended to erroneously overlook it. Additional research to design and test effective skip instructions is needed.

Returning the questionnaire

A large number of respondents did not put the questionnaire back in the return envelope correctly. The three mailing packages differed in how they instructed respondents to stuff the return envelopes. On Package B, the instruction was located beneath the flap of the return envelope. On Package C, it was on the back of the return envelope, and on Package A it was part of Step 5 on the back page. Table 6.1. shows that around a fifth of respondents stuffed the return envelope incorrectly (18% on A, 25% on B, and 22% on C). The results suggest that the instruction was less noticeable on the envelopes, especially when it was located beneath the flap of Package B's return envelope, and more attended to when it was part of the questionnaire.

Although the instructions were in different locations and were worded slightly differently, all of them told respondents to return the questionnaire so that the bar code showed through the window of the return envelope. However, a couple of respondents didn't know what a "bar code" was. For example, one respondent said, "The bar code?" and after what seemed like an agonizing amount of time during which he tried to figure it out, he said, "I have a question, can you tell me what's a bar code? I'm thinking the bar code is like the address, or wherever it's going to, or the name, or..." The respondent kept unsuccessfully trying to

get the address to show through the window, until eventually the interviewer told him not to worry about it, and changed the topic.

Issues about Questions

The previous sections have discussed general aspects of perception and navigation through the census form. In this section we discuss behaviors related to specific questions, and problems respondents experienced while answering them.

Coverage. Complete coverage of all household members is the goal of the census. In censuses past, this objective may have been communicated to respondents by asking them to provide a roster of everyone who lived at the address on Census Day or who stayed there on Census Day and had no other home. An extended list of residence rules of who to include and exclude from the roster was provided.

The roster concept was not incorporated into any of these forms. In place of the roster there was a household count item, which varied in content across the forms. It now appears that the wording of the question itself and the brief residence rules may have fallen short of communicating to respondents the basic purpose of the census, that is, that they were being asked to list all members of their household.

One implication of the lack of a roster is that the references to Person 1, Person 2, etc., are ambiguous. In the traditional design, these identifiers refer to lines on the household roster listing, and the persons whose names the respondent has listed there. However, without a roster, respondents must figure out who Person 1, Person 2, etc., are meant to refer to. The connection between these identifiers and individual persons living in the household must be inferred rather than being explicit as it was on the traditional form. Some respondents puzzle out the connection, such as the respondent completing Form A who paused when he turned to page 2. When probed about this pause, he said, "Well, I'm trying to figure out who

Person 2 is. I guess it would be my mother." Others do not figure out the connection at all, for instance, those who entered the name of the landlord as Person 1, not understanding that persons listed on the form should be household members.

This ambiguity may also explain the uncertainty noted previously about who should be included on the census form. We noted earlier that 9 percent of respondents to Form C expressed uncertainty about the basic concept of the census: either they left themselves off the form, asked whether they should include themselves on the form, or made some sort of comment suggesting that they did not realize the questionnaire was about the entire household. Smaller percentages of respondents made these mistakes on Form A (6 percent) and Form B (4 percent).

The wording of the residence rules differed between Forms B and C, on the one hand, and Form A, on the other. Forms B and C provided examples in paragraph format of who to include and who not to include. They made no mention of people "staying" at the residence or having no permanent residence. Form A, in contrast, referred to people "living or staying here" and presented the information in more of a bullet format with bold print for emphasis. It specifically mentioned "anyone staying temporarily who has no permanent place to live."

Several instances occurred in which respondents had problems interpreting these rules. This is consistent with experiences in past censuses, and in roster research currently underway at the Census Bureau. No one form seemed to be better than others at clarifying the intent of the residence rules, based on the problems that were observed. None of them instructed respondents to include themselves, and likely contributed to respondents leaving themselves off the form; see Table 6.

One respondent found Form A more helpful than the others in clarifying a situation that she had encountered, although it was not occurring at the time of the interview. During the previous summer her two nieces had stayed with her. She questioned whether she should count them if she had been interviewed at that time. She noted that the instructions on Form

A were more straightforward than the others because they said "anyone who's living there" and "even temporary." This would make her more likely to include the nieces. However, because of the additional terminology "who has no permanent place to live," she decided she should not include them.

In another case, Form B was most helpful. One respondent included a son who lived away at college, although "he does come home a great deal." When she completed Form B, she noticed the "away at college" instruction and realized that she should not have included him as a household member. (However, she included him on all three forms to be consistent.)

And in a third case, Form C provided more guidance, albeit in a circular way. The respondent completed the questionnaire for herself and her two children who lived with her. When she saw the other residence question on Form C (which she completed first), she questioned whether she should include her other son, who stays with her only in the summer. Her initial thought was to include him as well. But when she looked back at the wording of step B ("How many people were living here on November 4, 1995?") she decided he should not be included.

Each form contained spaces to report five household members. In addition, forms A and C contained spaces on a continuation roster that collected names of additional persons, for households that contain more than 5 persons. Form B did not obtain any information about these large households. Only 8 respondents had households larger than 5 persons, so the results here are far from definitive. But the Form B (without the continuation roster) seemed to give respondents a false sense of completeness in reporting household members. A couple of respondents with 6 household members erroneously thought they had reported all of them on Form B. On the surface this result seems counterintuitive, since Form B was the only form with no space to report more than 5 people. But upon reflection the explanation appears to lay with the old saying: out of sight, out of mind.

While the continuation rosters on Forms A and C obtain names, they do not obtain any other information about additional household members. This fact was noted by one respondent to Form C, who said "But there's not space for date of birth or age, so you wouldn't know how many middle-agers are taking care of parents, or stuff like that. She [her mother] is just a name." In contrast, she didn't say anything about Form B when she had completed it. It was only at the end of the interview when she was thinking back on all three questionnaires that she said, "Now the second one I filled out [Form B] didn't have any reference to additional people. It didn't really click until just now, but if that was the census it would have been incomplete because they would have missed a person." And then there was another respondent who never did recognize this fact. When asked which mailing package she would recommend we use in the next census, she said Form B because "I named all of my children." In truth, the form only allowed her to report four of her five children.

Households that contain more than five persons would be recontacted to get information about additional household members. Instruction C on Forms B and C contains the following sentence: "If more than 5 persons were living here, Census staff may contact you for more information." Form A instructs respondents, at the end of Step 3 on the back page, that they may be contacted later for information about additional persons.

Probably because it didn't apply to most respondents, they did not comment on this statement one way or the other. However, a few respondents did read it and react negatively. While they constitute a small number of respondents overall (from 1.8% to 3.6%), they are a much larger percentage (from 12% to 25%) of respondents who had large households. For instance, referring to the instruction on Form A, one respondent said, "That's kind of pissy because that means they don't count." Then, after reading the instruction on Form B, she said, "I would not be thrilled about that because I would think there would be a good deal of households that have more than 5 people, especially when you consider blended and divorced families... ." A couple of other respondents noted that may be contacted is not the same as will be contacted, and viewed this instruction in negatively. This tentative wording was required by the design of the mailout test in which these forms were used and for which

coverage followup was not conducted. It may also be a problem for the 2000 census, if all households will not receive coverage follow-up.

Name of Person 1. Several respondents uncovered a major problem when trying to decide who to list as Person 1. The question on Forms B and C reads: "What is the name of the person who owns or rents this house or apartment?" This wording assumes that there is an owner or a renter but not both. In addition, there is no obvious requirement that the person listed as person 1 must live in the household. As a result, several respondents reported the owner of the building in which they rented an apartment in the space for Person 1, and then were extremely confused about how to continue. The question in Form A could also be subject to the same flaw. This is a problem that clearly needs to be remedied.

The wording of the instruction about who to list in Person 1 in Form A was much more awkward than the wording on Forms B and C, and this was noted by some respondents. Specifically, the wording "starting with a (or the) person in whose name ..." was cumbersome and confusing to respondents.

Person's name. The initial question for each person asked for last name, first name, and middle initial, with different layouts for each form. Format differences appear to have affected the completeness of names, particularly reporting of middle initials. Fifty-three percent of all respondents to Form C left the middle initial blank, at least temporarily, for some household members. The corresponding percentages for Forms A and B are 29 and 31 percent, respectively. The reason for the problem on Form C is that the space for middle initial extends over into the second column, and thus is overlooked (see Fig. 3). This error was also common on Forms A and B, but less so, probably because the middle initial write in space was less visually separated from the write-in spaces for the rest of the name entry.

Relationship. The format of the relationship item differed across the forms. In Form B, the response categories were listed in two columns, one for relatives and one for nonrelatives, with a write-in space for other relatives at the bottom. In Forms A and C, the response

categories were listed in a single column with relatives first, the write-in space for other relatives next, and categories for nonrelatives at the bottom.

These alternative formats provide very different visual cues for respondents. We observed cases on Forms A and C where the respondent interpreted the write-in boxes as a separator between two questions, and gave two answers. In one case, the respondent reported his mother's boyfriend as "other relative" with "friend" as a write-in and also as "unmarried partner" under nonrelative. As frequently happens, the respondent tried to make sense of the situation as best he could, given his misinterpretation of the task at hand. In cases such as this, edit rules are difficult to apply properly because the respondent's context for providing the information is unknown. While the layout of individual items is sometimes affected by space constraints, it is important to at least consider the potential implications of formatting on data quality.

Other problems were also observed that were relevant for all three forms. One respondent was confused about how to report her fiance; she looked for male categories, didn't find the right one, and entered "other relative" with "fiance" as a write-in. In another case, the respondent who was Person 3 answered the relationship item by comparing other household members to himself rather than to Person 1, his father. Thus, a son was reported as brother and a wife was reported as mother. These problems are not unique to these forms; they have been observed in past censuses as well.

Race and Hispanic origin. The race and Hispanic origin questions sparked a large number of respondent comments or problems. Forty-four percent of respondents had some kind of issue about these items. The vast majority of the issues were negative.

The problems spanned a wide variety of topics, and the gist of them are summarized below:

- a) concern about lack of representation of Hispanic origins in the race question;

- b) concern about inconsistency between treatment of Asian categories (specific nationalities included in race question) and Hispanic categories (not included in race question);
- c) negative sentiment about collecting race data at all;
- d) comment about abbreviations (i.e., don't abbreviate African-American and Mexican-American);
- e) how to report children when parents are of different races;
- f) concern about available choices for Hispanic origin (no place to record both Puerto Rican and Dominican origin, recording "Spanish/Latino" as other Hispanic write-in, confusion about what could be reported in other Hispanic write-in because all other options are covered previously);
- g) concern about terminology in Hispanic origin item ("what's the difference between Spanish, Hispanic, and Latino," "what is Latino," some thought Latino is Italian);
- h) lack of knowledge of race to report (one respondent didn't know his father's race, and reported him as black because the respondent considers himself to be black, even though he said that his father's father was white and his father's mother was at least partly Indian);
- i) inconsistent interpretation of the race concept across forms (one respondent began by reporting another household member as white, but switched to reporting him as "other, multicultural" in completing later forms because she felt it important to emphasize that America is a melting pot that is not full of white people).

Sex. In all three forms, a question about the sex of the person follows the person's name. A supplemental instruction follows the question, telling respondents to "mark one box (X)". While the purpose of the instruction is to get respondents used to checking boxes, it makes the form seem less serious than would otherwise be the case. Some respondents interpreted the instruction as telling them to mark only one box, and they questioned the need for the instruction for this item.

Cash rent. The wording of some response categories, specifically cash rent, and occupied without payment of cash rent, in Form A was confusing to some respondents. One

respondent saw "rented for cash rent" and said "we don't have to pay our rent in cash. We can pay in other ways." This presents a potential problem in that people who pay by check may report incorrectly, as occupied without payment of cash rent.

Miscellaneous Misunderstandings. Thirty-six percent of respondents misunderstood one or more words or phrases on the form. This is a high rate, and reflects the difficulties many respondents with language or literacy difficulties had reading the form. Many of the problem words have been noted elsewhere; for the sake of completeness we report the others here: a) the words "hospice" and "permanent" in Step 1 on Form A; b) "natural-born" in the relationship item on all three forms; c) "mortgage" in the tenure item on all three forms; d) the word "clarify" in Step 4 on Form A; e) "bar code" in Step 5 on Form A.

Conclusions

Summary

In this report we analyzed 55 cognitive/motivational interviews in which three draft census forms being considered for use in the 2000 Census were tested. Form A (green booklet) represented an extension of visual design concepts developed over the last several years at the Census Bureau and closely followed concepts from the published mail survey research literature. Forms B (gold booklet) and C (vertical gold) used some of the same features, e.g. individual person spaces, colored background fields, and white spaces to record answers. In addition these latter forms used additional innovative graphical design techniques, and a marketing approach found successful in the private sector, which included, for example, a slogan, icons, and colorful envelopes that were coordinated with the enclosed census form.

Half of the interviews were conducted using a concurrent, think-aloud method, and the remainder used a retrospective interview method. Thirty-five interviews were conducted in Washington State and 20 were conducted at the Census Bureau in Suitland, Maryland.

Respondents were volunteers with 22 identifying themselves as white and the remaining 33 as minorities of various descents.

We conclude that all three of these Census forms have qualities perceived as positive by respondents. In response to the question of which mailing package (envelope and form) they would recommend for use in the next census, Form A was chosen by 45 percent, Form B by 22 percent and Form C by 33 percent. In contrast, 42 percent of the respondents recommended *not* using Form C, 24 percent recommended not using Form B and 34 percent recommended not using Form A. Thus, none of the forms was singled out for overwhelming rejection or acceptance.

Consistent with these recommendations respondents were a little more likely to say they would open the envelope containing Form A (42% to 23% for Form B and 35 for Form C). However, bigger differences emerged for other questions. When asked which of the forms they were most likely to begin filling out first, 69 percent chose Form A compared to 20 percent for Form C. Eighty percent described Form A as looking like mail from the government, vs. 26 percent for form C. At the same time, 86 percent of respondents felt one or more of the forms looked like junk mail; 57 percent of them mentioned Form C, compared to 22 percent who chose Form A as looking like junk mail.

Each of the forms exhibited certain design deficiencies, e.g., poorly worded questions such as Step 1 on Form A and Question 1 on Forms B and C. The latter instructs respondents to print the person who owned or rented the residence and occasionally led to the listing of landlords. These difficulties, many of which can be corrected fairly easily, and some of which are more challenging to resolve, have been discussed throughout this report.

In the remainder of this report we emphasize the major research findings and issues that we feel should receive serious consideration in the design of future census mailing packages. We note that the results of this investigation must remain tentative, because they are based on a relatively small, though heterogenous, group of respondents who volunteered for the one

hour test interviews. Thus, it is important that our findings and recommendations be related to the results of the 1996 National Content survey in which these three forms, and 10 longer forms done in a style consistent with Form A were tested with a national probability sample of 160,000 U.S. households. That test provides the opportunity to evaluate response rates and measurement error consequences for each of the forms. Those results, together with results from our test interviews, provide a more comprehensive basis for evaluating each of the forms examined in this report.

Concluding recommendations

Use of a Marketing Strategy: A conclusion that emerges clearly from our interviews is that *any marketing strategy that is used must be designed carefully not to undermine the authority and official look of the census form.* Our interviews offer fairly clear ideas about concepts which may be worth further development and testing and others which should be eliminated. For example, color and graphics must be used with great caution on the envelope. Bright, loud color on the envelope, the use of colored buttons containing the slogan or the mandatory message, and the graphical representation of the Capitol reminded many respondents of junk mail, and these features appear to undermine the authority, seriousness, and urgency of the census mailing package for Form C, in particular, but also Form B. (The representation of the Capitol reminded many respondents of a religious building, which seemed inappropriate.)

In this area as in others, our findings seem to support the conclusion that "Less is more" in the design of a mailing package to be sent out by the Government. Some respondents commented that the Government should not spend money on colorful, slick packaging. The current widespread concern about Government spending may contribute to many respondents' perceptions that plain is better, when it comes to the design of the census mailing package.

The envelopes: The mailing envelope is important in shaping people's expectations for what it contains. Respondents tended to understand and to respond positively to what they considered to be *official government mail* and negatively to what they perceived as *junk mail*.

The plain, white mailing envelope combined with the government seal and bold mandatory message on the front of package A effectively conveyed the official nature of the census to most respondents in our study. Conversely, respondents tended to perceive envelopes B and C as much less serious. This finding is consistent with results of a previous census test which showed that a similar envelope with mandatory message (and enclosed insert explaining why response was mandatory) significantly improved response over a mailing package that did not contain that message. At the same time we want to stress that respondents were not uniform in their perceptions of the envelopes. Some liked the eye-catching color of Forms B and C and did not associate them with junk mail; this was particularly true of some younger respondents in our sample.

Icons: The use of icons and associated text to communicate the uses and benefits of the census does not receive strong support in our test. However, a more complete evaluation of their effectiveness would seem to require that they be simultaneously used in a media campaign and in a mailout test, so that the benefits of repeated exposure to them through the media would reinforce and amplify their possible impact on the mailing package. They were noticed by most respondents, were attractive, may have communicated new information in a way that did not require a lot of reading, and only a few people felt they detracted from an official look. One of the difficulties of effectively using icons and slogans in the census context is the fact that the census only occurs every ten years, so there is not an opportunity for repeated exposure that would make them as effective for marketing census forms, as could likely be achieved with other uses. Nonetheless, further testing and exploration may be warranted.

However, in this test the icons on Form C were used as a substitute for starting questions on page 1. This use does not seem advisable, inasmuch as they contributed to the perception that the form looked more like a brochure than a questionnaire, thereby leading respondents to say they were less likely to start filling it out immediately.

The mandatory message. Of all the features exhibited by these test census forms, the mandatory message appeared to be the most powerful determinant of respondents' reactions, and perhaps whether they respond. Although all three mailing packages contained the same wording of this message, and two of the three were even located in the same position on the front of the envelope, their visual display prompted different reactions from respondents. Respondents often reported that the undeniably visible and authoritative mandatory message printed in bold, black letters on the front of A's envelope, more than any other message, would encourage them to respond to the census. In contrast, respondents often said that B's and C's messages would not affect them. The consistency of these reactions with past research which showed a dramatic increase in response rates underscores their importance. This leads us to recommend that future mailing packages should prominently display a message like that used on the Form A envelope.

The word "test" on envelopes and forms. The word test was prominently displayed on the envelope of Form B, which respondents said they were least likely to open. It also appeared in dark letters on the back of the Form C envelope and the front cover of that questionnaire. It appeared less prominently, in a muted color on the cover of Form A. We know this design feature affected some people's thoughts about the various forms--some people did not like the idea of being "tested" and some others found it intriguing. And, we cannot disentangle its effects from those of other characteristics of the mailing packages. In future census tests we strongly recommend that "test" be featured far less prominently or not at all on the envelopes and questionnaires, and that it be used consistently across forms that are being compared so that it does not confound the comparisons, as it may have in this test.

Cover letters. Most respondents in our laboratory interviews read the cover letters and found them to be an important source of information about the purpose of the census, confidentiality, the mandatory nature of the census, and the fact that it includes noncitizens as well as citizens. Therefore, the cover letter should remain an integral part of the mailing package and careful consideration should be given to its content. We also recommend

research to determine if the cover letter receives as much attention in an actual census test as respondents gave it in the artificial setting of our cognitive/motivational interviews.

Less is More. The question of how best to communicate the basic information respondents need to know about the census is tricky. On the one hand, redundancy can be helpful. To illustrate, one respondent did not notice the mandatory message on any of the envelopes, even the bold box on Form A. She only learned the census was mandatory from reading the cover letter, at which point she stopped and said, "So. I have to do this." On the other hand, in the face of the failure to communicate key information about the census, the great temptation for the questionnaire designer is to add more text, to make it bolder--in effect, talk louder and longer to the respondent to get the point across. We strongly recommend against this strategy because our interviews suggest it is self-defeating, and increases the level of visual noise so that respondents absorb less, not more. Important messages are more likely to be attended to if they do not have to compete with less important messages or extraneous visual features of the form. Hence, we recommend that additional efforts reduce and prune both the amount and complexity of text in the forms so that what is most important stands out. In this as in other areas, "less is more," and contrast needs to be used carefully to focus the attention of respondents on what is most important. A good example of this is the mandatory message on the Form A's envelope. Its presentation could be graphically improved by reducing the font size of the competing information to the postmaster on not forwarding the envelope ("DO NOT FORWARD Return to sender if undeliverable address").

A Clearly Defined Navigational Path. It is very important to establish a clear navigational path through the mailing package. Toward this end, we need to recognize the extent to which the mailing label plays a role in the way respondents take the questionnaire out of the envelope. Since respondents are likely to view the page with the mailing label as the beginning of the questionnaire, we should put the mailing label on the page where we want respondents to start. Of the three questionnaires, Form A was most successful in getting

respondents to start on the right page because its mailing label was attached to the cover page.

Testing a columnar vs. horizontal format. Respondents seemed to benefit from the columnar format of Form C *and* being able to see numerous person spaces at a glance on booklets A and B. Respondents made fewer errors navigating within the columnar person spaces on Form C because the columns ran the entire length of the page. On the other hand, presenting numerous person spaces on a page led to fewer listing errors in Forms A and B. Therefore, we strongly recommend testing a combined version of the two forms. We propose testing a booklet format with columnar person spaces.

This should not be interpreted as a recommendation to go back to the row/matrix format of previous censuses, whereby questions were written on the left hand side of the page, and questions for each person were placed in the column. Previous focus groups (Dillman and Reynold, 1990) and two experimental tests have suggested that such a format is considerably more difficult for respondents than is the individual space format used in these test forms.

Demarcation of individual person spaces. Regardless of their orientation, our research demonstrates the importance of distinguishing the person spaces with as much clarity as possible. If used properly, color is effective as a navigational guide. The results suggest that a green space framed with a black line set against a white background is superior to a pale yellow unframed space. Green was superior to yellow because it provided better contrast between the background and the white answer spaces, and the black frame helped to distinguish one person space from another. The white answer spaces were effective visual cues to respondents. Respondents quickly learn to associate the colored spaces with questions about individual members of their household and the white answer spaces with writing in answers to individual questions.

Should the "household count" question be placed first on the Census Form? We found nonresponse to this question to be unacceptably high, especially on Form A (15% vs. 6-7%

on Forms B and C). The tendency to skip this item in Form A is another illustration of the principle that "less is more." The item probably contained too much text. For example, a person whose first language was not English read the phrase about it being important to count everyone in the United States once and thought he was being asked how many people lived in the United States. Also, some people skipped this question altogether. Their eyes seemed to be attracted to the white space where they were asked to write in their name. Shortening the text (along the lines of the wording of the "household count" question in Form B or C) should improve the performance of this item. In addition we believe that item nonresponse would be lessened if the green box around this question were expanded into the Person 1 space by eliminating the white space between them.

An additional possible solution to this problem, *which we strongly urge be tested*, would be to incorporate this question into the series of questions in the Person 1 space. A logical position for it would be right after the housing question. Putting the question in this position might help to alleviate the problem some respondents had in understanding that we are asking about all the people in the household. Also, it would make a nice transition here. Respondents want to get started right away, and their inclination is to report themselves first in the Person 1 box. Perhaps we should let them do this. Then, once we ask them to tell us how many members they have in the household, including themselves, at the end of the Person 1 question series, they are more likely to "switch gears" and realize that the remaining person spaces are for remaining members of the household.

Are the simplification of the forms and the elimination of the roster leading people to misunderstand the concept of the census? These forms are the shortest Census forms tested in cognitive/motivational interviews, and one of the major steps taken to reduce their length and complexity was the elimination of the household roster and its associated instructions and rules. These are also the first forms tested by the authors in which some people seemed not to get the concept of the census, i.e. understand they were to fill out information for all of the people living in their household. This was reflected by some people starting to list their name a second time in the Person 2 space, or having to go back to the front to see what to

do. We have not observed this difficulty in other forms that contained rosters with which to start the answering process.

The process of compiling a household roster communicated what the census was about in a way that has been lost or attenuated in these new, rosterless forms. If the roster is to be eliminated, then its function of communicating the central purpose and task of the census needs to be effectively communicated in other ways. Certain changes in wording could help address the problem. For example, instead of saying "print name here" at the beginning of the Person 2 space, which worked quite well when previous forms with rosters were tested, we could change the wording to "print the name of any other person living in this household" or something similar. Also rearranging information, such as putting the "household count" question at the end of the Person 1 question series, may help. In any event, this important finding should not be overlooked in considering what constitutes the optimal census form from the standpoint of achieving high response rates and accuracy. Results from the 1996 National Content Survey should help provide answers to these questions.

Towards the 2000 Census

These 55 cognitive/motivational interviews provide much information that should be useful in designing future census questionnaires. The substantial contrast between the forms designed from a marketing perspective and those which extended concepts previously developed at the Census Bureau provided an opportunity to obtain reactions to very different approaches to design. The comparisons between the two different design approaches have yielded new and valuable information that we could not have obtained from testing either alone.

We have learned that although some people prefer bright colors and react positively to icons, solid evidence is lacking on whether they will improve peoples' responses to the Census.

We have also learned that an official look and a mandatory response seem very important for improving response. In addition, good graphical design, including the use of colored background fields and white spaces for answers, is helpful in guiding respondents through the

census questionnaires. It is also evident that the brevity of all of the forms presents additional challenges to conveying the concept of what is being requested in the census, i.e., a household count.

Additional information on the response effects of each of the forms for high and low response areas of the nation will be provided by results from the 1996 National Content Survey (NCS). In this test, nationally representative samples of 6,000 U.S. households have each received one of the test forms. The NCS will provide information that the current study cannot and vice versa. The NCS will produce nationally reliable estimates of the magnitudes of actual response effects, but little information with regard to why. In contrast, the current study provides in-depth information about *why* people react as they do and should help explain the reasons any response differences in the NCS exist.

It is critical that the results from these two studies be combined for use in another round of design and testing. The joint use of laboratory and field testing, as has been done for these questionnaires should move us forward towards the best possible procedures for the 2000 Census. We also advocate that the next round of design and testing attempt to synthesize the most promising features from both the marketing and survey methodology approaches into an integrated design. From a marketing perspective, this design might provide visual interest and communicate the messages graphically. From a survey methodology perspective and based upon previous Census tests, this design would motivate respondents to open the envelope and begin filling out the questionnaire immediately. In the final analysis, the integrated design needs to effectively communicate the official look of and serious purpose of the decennial census questionnaire.

Acknowledgement

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ATTACHMENT to *Cognitive and Motivational Properties of Three Proposed Decennial Census Forms*.

FORM A: QUESTIONNAIRE



U.S. Census 2000

The official count of people living in the United States of America.

Step 1 How many people were living or staying at this residence on Saturday, November 4, 1995? To make sure each person in the United States is counted only once it is very important to:

Include everyone who lives here whether related to you or not, and anyone staying temporarily who has no permanent place to live,

But not include anyone away at college, away in the Armed Forces, in a nursing home, hospice, mental hospital, correctional facility, or other institutions.

Number of people living or staying here on Saturday, November 4, 1995

Step 2 Please answer the questions below for each of the people counted in Step 1, starting with a (or the) person in whose name this house or apartment is owned or rented. (If there is no such person start with any adult living or staying here.)

Person 1

Print name below.

Last Name

First Name

MI

1. What is this person's sex? Mark ONE box.

- Male
 Female

2. What is this person's date of birth and what is this person's age? Print numbers in boxes.

Month Day Year of birth Age on November 4, 1995

3. Note: It is important to answer both Questions 4 and 5.

4. Is this person of Spanish/Hispanic origin?

- No, not Spanish/Hispanic
 Yes, Mexican, Mexican-Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, other Spanish/Hispanic - Print group ↘

5. What is this person's race? Mark ONE box for the race that the person considers himself/herself to be.

- White
 Black, African-Am., or Negro
 Indian (Amer.) - Print of enrolled or principal tribe.



- Eskimo Samoan
 Aleut Guamanian
 Chinese Other Asian or Pacific Islander - Print race ↘
 Filipino
 Hawaiian
 Korean
 Vietnamese Some other race - Print race ↘
 Japanese
 Asian Indian

6. Is this house or apartment -

- Owned by this person or someone in this household with a mortgage or loan?
 Owned by this person or someone in this household free and clear (without a mortgage)?
 Rented for cash rent?
 Occupied without payment of cash rent?

7. Note: If person 1 lives alone, skip to Step 4 on page 4. Otherwise, go to Person 2.

Person 2

Print name below.

Last Name

First Name

MI

1. What is this person's sex?

Mark ONE box.

- Male
 Female

2. What is this person's date of birth and what is this person's age?

Print numbers in boxes

Month Day Year of birth

Age on November 4, 1995

3. How is this person related to Person 1?

If a RELATIVE of person 1:

- Husband/wife
 Natural-born or adopted son/daughter
 Stepson/stepdaughter
 Brother/sister
 Father/mother
 Grandchild
 Other relative – Print exact relationship ↴

If NOT RELATED to person 1:

- Roomer, boarder, or foster child
 Housemate, roommate
 Unmarried partner
 Other nonrelative

It is important to answer both Questions 4 and 5.

4. Is this person of Spanish/Hispanic origin?

- No, not Spanish/Hispanic
 Yes, Mexican, Mexican-Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, other Spanish/Hispanic – Print group ↴

5. What is this person's race? – Mark ONE box for the race that the person considers himself/herself to be.

- White
 Black, African-Am., or Negro
 Indian (Amer.) – Print name of enrolled or principal tribe.

- Eskimo
 Aleut
 Chinese
 Filipino
 Hawaiian
 Korean
 Vietnamese
 Japanese
 Asian Indian

Samoan

Guamanian

Other Asian or Pacific Islander – Print race ↴

Some other race – Print race ↴

6. **Note:** If only 2 persons live here, skip to Step 4 on page 4. Otherwise, go to Person 3.

Person 3

Print name below.

Last Name

First Name

MI

1. What is this person's sex?

Mark ONE box.

- Male
 Female

2. What is this person's date of birth and what is this person's age?

Print numbers in boxes

Month Day Year of birth

Age on November 4, 1995

3. How is this person related to Person 1?

If a RELATIVE of person 1:

- Husband/wife
 Natural-born or adopted son/daughter
 Stepson/stepdaughter
 Brother/sister
 Father/mother
 Grandchild
 Other relative – Print exact relationship ↴

If NOT RELATED to person 1:

- Roomer, boarder, or foster child
 Housemate, roommate
 Unmarried partner
 Other nonrelative

It is important to answer both Questions 4 and 5.

4. Is this person of Spanish/Hispanic origin?

- No, not Spanish/Hispanic
 Yes, Mexican, Mexican-Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, other Spanish/Hispanic – Print group ↴

5. What is this person's race? – Mark ONE box for the race that the person considers himself/herself to be.

- White
 Black, African-Am., or Negro
 Indian (Amer.) – Print name of enrolled or principal tribe.

- Eskimo
 Aleut
 Chinese
 Filipino
 Hawaiian
 Korean
 Vietnamese
 Japanese
 Asian Indian

Samoan

Guamanian

Other Asian or Pacific Islander – Print race ↴

Some other race – Print race ↴

6. **Note:** If only 3 persons live here, skip to Step 4 on page 4. Otherwise, go to Person 4.

Step 3

If more than five people were living or staying at this residence on Saturday November 4, 1995, please list their name(s) here. ↴

	Last Name	First Name	MI
Person 6			
Person 7			
Person 8			
Person 9			
Person 10			
Person 11			
Person 12			

If more than 12 people were living or staying here please mark this box →
 You may be contacted later for information about these people.

Step 4

Please print your name and telephone number in case we need to contact you to understand or clarify an answer.

Last Name	First Name	MI
Area code	Telephone number	
Mark <input checked="" type="checkbox"/> ONE box. → <input type="checkbox"/> Day <input type="checkbox"/> Evening <input type="checkbox"/> Either		

Step 5

Finally please return your completed Census form in the postage-paid return envelope so the bar code shows through the window. If the envelope has become lost please mail this completed Census form to the -

**U.S. Census 2000 Test
 Bureau of the Census
 1201 East 10th Street
 PO Box 5000
 Jeffersonville, IN 47199-5002**

The Census Bureau estimates that, for the average household, this form will take about 9 minutes to complete, including the time for reviewing the instructions and answers. Comments about the estimate should be directed to the Associate Director for Administration, Attn: Paperwork Reduction Project 0607-0808, Room 3104, Federal Building 3, Bureau of the Census, Washington, DC 20233-2000. Please DO NOT RETURN your questionnaire to the above address. Use the enclosed, preaddressed envelope to return your completed questionnaire.

***Thank you very much
 for your help with the U.S. Census 2000 Test.***

FORM B: QUESTIONNAIRE AND ENVELOPE

U.S. Census 2000

TEST



GETTING STARTED

Every 10 years, the U.S. Census Bureau counts every person in the United States. This is the official Census form for counting persons in your household. Your response is required by law.

The federal funding provided to your community depends on the size and make-up of your community, so your participation is very important. Please take a few minutes to fill out this form and **return it by November 4, or as soon afterward as possible.** Title 13 of the U.S. Code guarantees that your answers remain confidential.

Use a black pen or black pencil to fill in your answers. Be sure to review steps **A**, **B**, and **C** and fill in the answers before starting on the questions inside.

Due: **November 4, 1995**
or as soon afterward as possible. Return in the postage paid envelope.

A

Print the name and telephone number of the person who is completing this form. So we can contact you if we don't understand an answer.

Last Name

First Name

Telephone:

Area Code + Number

When can we reach you? Please mark one box:

Day Evening Both

B

How many people were living here on November 4, 1995? *Make sure you include family members, housemates, foster children, boarders, and live-in employees. Do not include people away at college, away in the armed forces, in a nursing home or another institution, or staying at another residence most of the week while working.*

Number of People

C

Now answer the questions that start on the next page for each person living here on November 4, 1995. If more than 5 persons were living here, Census staff may contact you for more information.

PERSON 1

1 What is the name of the person who owns or rents this house or apartment? *Print name below.*

Last Name

First Name

MI

2 What is this person's sex? *Mark one box (X).*

Male Female

3 What are this person's date of birth and age? *Print numbers in boxes.*

Month

Day

Year of Birth

Age on November 4, 1995

It is important to answer both Questions 4 and 5.

4 Is this person Spanish/Hispanic/Latino? *Mark one box (X).*

- No, not Spanish/Hispanic/Latino
- Yes, Mexican, Mexican-Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino *Print one group.*

5 What is this person's race? *Mark one box (X) for the race that the person considers himself/herself to be.*

- White Black, African Am., or Negro
- Indian (Amer.) *Print name of enrolled or principal tribe.*

- Eskimo Hawaiian Asian Indian
- Aleut Korean Samoan
- Chinese Vietnamese Guamanian
- Filipino Japanese
- Other Asian or Pacific Islander *Print one group.*

- Some other race *Print race.*

6 Is this house or apartment:

- Owned by someone in this household with a mortgage or loan?
- Owned by someone in this household free and clear (without a mortgage)?
- Rented?
- Occupied without payment of rent?

PERSON 2

1 What is this person's name? *Print name below.*

Last Name

First Name

MI

2 What is this person's sex? *Mark one box (X).*

Male Female

3 What are this person's date of birth and age? *Print numbers in boxes.*

Month

Day

Year of Birth

Age on November 4, 1995

It is important to answer both Questions 4 and 5.

4 Is this person Spanish/Hispanic/Latino? *Mark one box (X).*

- No, not Spanish/Hispanic/Latino
- Yes, Mexican, Mexican-Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino *Print one group.*

5 What is this person's race? *Mark one box (X) for the race that the person considers himself/herself to be.*

- White Black, African Am., or Negro
- Indian (Amer.) *Print name of enrolled or principal tribe.*

- Eskimo Hawaiian Asian Indian
- Aleut Korean Samoan
- Chinese Vietnamese Guamanian
- Filipino Japanese
- Other Asian or Pacific Islander *Print one group.*

- Some other race *Print race.*

6 How is this person related to Person 1? *Mark one box (X).*

Relative:

- Husband/wife
- Natural-born or adopted son/daughter
- Stepson/stepdaughter
- Brother/sister
- Father/mother
- Grandchild
- Other relative *Print relationship.*

Nonrelative:

- Roomer, boarder, foster child
- Housemate, roommate
- Unmarried partner
- Other nonrelative

PERSON 5

1 What is this person's name? *Print name below.*

Last Name

| | | | | | | | | | | | | | | | | | | | | |

First Name

MI

| | | | | | | | | | | | | | | | | | | | | |

2 What is this person's sex? *Mark one box (X).*

Male Female

3 What are this person's date of birth and age? *Print numbers in boxes.*

Month

Day

Year of Birth

Age on November 4, 1995

| | | | | | | | | | | | | | | | | | | | | |

It is important to answer both Questions 4 and 5.

4 Is this person Spanish/Hispanic/Latino? *Mark one box (X).*

- No, not Spanish/Hispanic/Latino
- Yes, Mexican, Mexican-Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino *Print one group.*

| | | | | | | | | | | | | | | | | | | | | |

5 What is this person's race? *Mark one box (X) for the race that the person considers himself/herself to be.*

- White Black, African Am., or Negro
- Indian (Amer.) *Print name of enrolled or principal tribe.*
- Eskimo Hawaiian Asian Indian
- Aleut Korean Samoan
- Chinese Vietnamese Guamanian
- Filipino Japanese
- Other Asian or Pacific Islander *Print one group.*

| | | | | | | | | | | | | | | | | | | | | |

Some other race *Print race.*

| | | | | | | | | | | | | | | | | | | | | |

6 How is this person related to Person 1? *Mark one box (X).*

- | | |
|--|--|
| Relative: | Nonrelative: |
| <input type="checkbox"/> Husband/wife | <input type="checkbox"/> Roomer, boarder, foster child |
| <input type="checkbox"/> Natural-born or adopted son/daughter | <input type="checkbox"/> Housemate, roommate |
| <input type="checkbox"/> Stepson/stepdaughter | <input type="checkbox"/> Unmarried partner |
| <input type="checkbox"/> Brother/sister | <input type="checkbox"/> Other nonrelative |
| <input type="checkbox"/> Father/mother | |
| <input type="checkbox"/> Grandchild | |
| <input type="checkbox"/> Other relative <i>Print relationship.</i> | |

| | | | | | | | | | | | | | | | | | | | | |

Form DS-1F
12/31/96
OMB No. 0607-0812
Approval Expires 12/31/96

This is your official census form. Your response is required by law. Please fill it out and return in postage paid envelope by November 4, 1995 or as soon afterward as possible.

U.S. Census 2000
TEST

U.S.
Census
2000

Count
me
in!

DS-6C (1-96)
Official Business
Penalty for Private Use, \$300

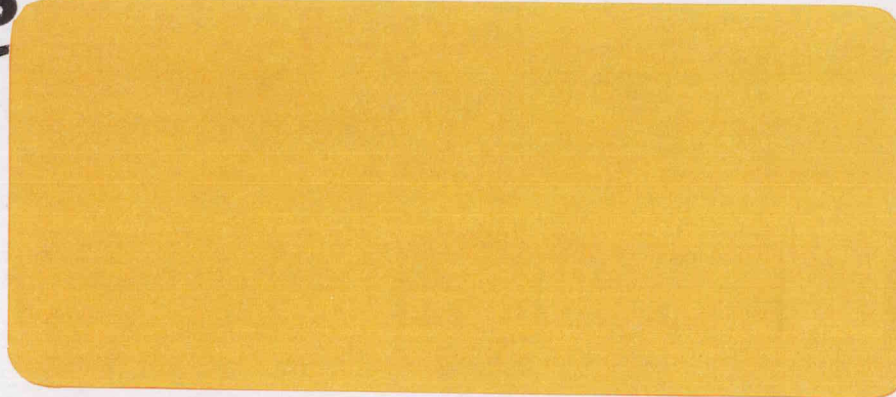
Do not forward. Return to sender if
undeliverable as addressed.

AN EQUAL OPPORTUNITY EMPLOYER.

PRESORTED
FIRST-CLASS MAIL
POSTAGE
& FEES PAID
Bureau of the Census
Permit No. G-58

U.S. Department of Commerce
Bureau of the Census
Jeffersonville, IN 47132-0001

TEST

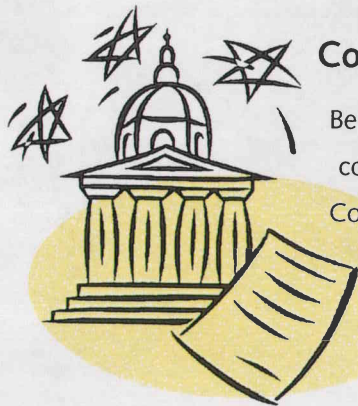




U.S. **TEST**
Census
2000

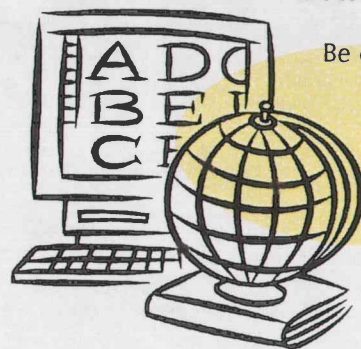
open
here

U.S. CENSUS FORM ENCLOSED. **YOUR RESPONSE IS REQUIRED BY LAW.**



Community Power

Be counted and be sure your community is represented in Congress. The Census determines the number of representatives your state sends to the U.S. Congress.



Community Progress

Be counted and be sure community projects are done right. Plans for schools, education programs, and daycare services are based on the Census.

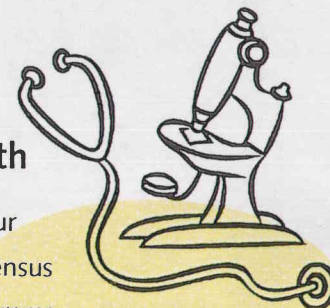
Community Growth

Be counted and be sure your community gets what it deserves. The Census is used to distribute funds for highways and other important projects.



Community Health

Be counted and be sure your community stays healthy. The Census benefits health care programs, hospitals, and services for the elderly.



Census 2000 • Your community counts on you

U.S.
Census
2000

U.S. Department of Commerce
Bureau of the Census
Washington, DC 20233-2000

FORM C: QUESTIONNAIRE AND
ENVELOPE

Count
me
in!

TEST

2000 U.S. CENSUS



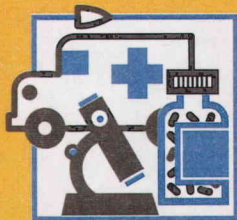
Be counted and be sure community projects are done right. Plans for schools, **educational programs**, and daycare services are based on the Census.



Be counted and be sure your community is **represented in Congress**. The Census determines the number of representatives your state sends to the U.S. Congress.



Be counted and be sure your community gets its fair share. The Census is used to **distribute funds** for highway and other important projects.



Be counted and be sure your community stays healthy. The Census benefits **health care programs**, hospitals, and services for the elderly.

GETTING STARTED

Every 10 years, the U.S. Census Bureau counts every person in the United States. This is the official Census form for counting persons in your household. Your response is required by law.

The federal funding provided to your community depends on the size and make-up of your community, so your participation is very important. Please take a few minutes to fill out this form and **return it by November 4, or as soon afterward as possible.** Title 13 of the U.S. Code guarantees that your answers remain confidential.

▶ Read all the steps and *fill in all the answers.* Use a black pen or black pencil.

A

Print the name and telephone number of the person who is completing this form. So we can contact you if we don't understand an answer.

Last Name

First Name

Telephone:

Area Code + Number

When can we reach you? Please mark one box:

Day Evening Both

C

Now answer the questions that start on the next page for each person living here on November 4, 1995. (If more than 5 persons were living here, Census staff may contact you for more information.)

B

How many people were living here on November 4, 1995? Make sure you include family members, housemates, foster children, boarders, and live-in employees. Do not include people away at college, away in the armed forces, in a nursing home or another institution, or staying at another residence most of the week while working.

Number of People

PERSON

1

1 What is the name of the person who owns or rents this house or apartment? *Print name below.*

Last Name

First Name

MI

2 What is this person's sex? *Mark one box (X).*

Male Female

3 What are this person's date of birth and age? *Print numbers in boxes.*

Month

Day

Year of Birth

Age on November 4, 1995

4 Fill in both Questions 4 and 5. Is this person Spanish/Hispanic/Latino? *Mark one box (X).*

- No, not Spanish/Hispanic/Latino
 Yes, Mexican, Mexican-Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, other Spanish/Hispanic/Latino
Print one group.

5 What is this person's race? *Mark one box (X) for the race that the person considers himself/herself to be.*

- White
 Black, African Am., or Negro
 Indian (Amer.) *Print name of enrolled or principal tribe.*
 Eskimo Vietnamese
 Aleut Japanese
 Chinese Asian Indian
 Filipino Samoan
 Hawaiian Guamanian
 Korean
 Other Asian or Pacific Islander
Print one group.

Some other race *Print race.*

6 Is this house or apartment:

- Owned by someone in this household with a mortgage or loan?
 Owned by someone in this household free and clear (without a mortgage)?
 Rented?
 Occupied without payment of rent?

7 Does this person have another residence?

- Yes No - *Go to next person.*

8 How much time does this person spend at the other residence?

- Half of the time or less than half of the time
 More than half of the time
If more than half the time, enter the address below.

House/Building Number

Street Name

Apartment Number

City

State

Zip Code *Include + 4 if known.*

PERSONS

6,7,8

If more than 5 people live in your household, please list others below.

6 Last Name

First Name

MI

7 Last Name

First Name

MI

8 Last Name

First Name

MI

Due: **November 4, 1995** or as soon afterward as possible. Use the postage paid envelope.

The Census Bureau estimates that this form will take about 10 minutes to complete. Comments about the estimate should be directed to the Associate Director for Administration, Bureau of the Census, Washington, DC 20233-2000, Attn. 0607-0812. Please do not return your questionnaire to the above address. Use the enclosed, preaddressed envelope to return your completed questionnaire. Thank you very much for your help.



Bureau of the Census

Jeffersonville, IN 47132-0001

DS-68 (1-96)

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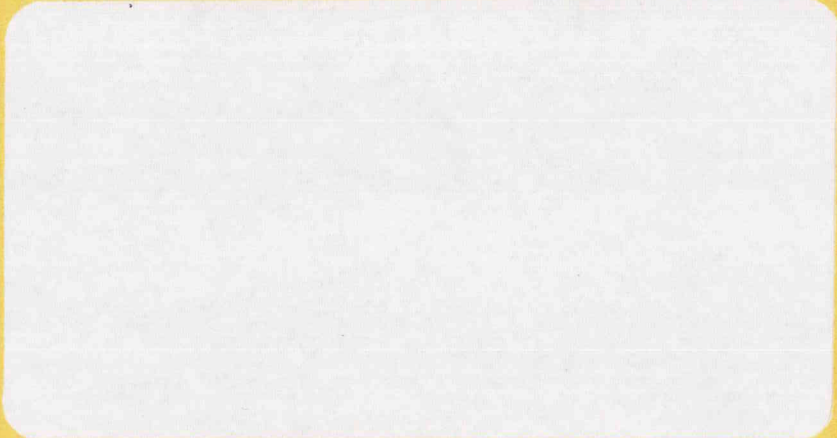
Return to sender if undeliverable as addressed.

▶ Due: March 9, 1996
or as soon afterward
as possible.

Use the postage paid envelope
to return your form.

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**Your
response is
required by
law.**



TEST

Count
me
in!

2000
U.S. CENSUS