

STUDY SERIES
(*Survey Methodology* #2007-13)

**Results of Three Classroom Experiments
with Census of Population and Housing Questionnaire**

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U.S. DEPARTMENT OF COMMERCE
Social and Economic Statistics Administration
BUREAU OF THE CENSUS
Washington, D.C. 20233

September 11, 1972

MEMORANDUM FOR Thomas B. Jabine
Chief, Statistical Research Division

From: Donny Rothwell *DR*

Subject: Questionnaire Research Reports--Series A, Report 3

The attached report is the third in a proposed series describing formal experiments designed to obtain information for improvement of self-administered census questionnaires. For the recommendations which accompany it, however, results of informal tests have also been considered.

Like its predecessors the report is the result of group effort. Jerry Cooper made the arrangements for the test. Beverley Causey was responsible for all of the statistical analysis and for the programming. I made the selections from the data Mr. Causey provided and wrote the report. It also seems appropriate to credit James A. Bayton, professor of psychology at Howard University, as the consultant who proposed that the Census Bureau conduct classroom experimental research.

The three experiments on which the report is principally based required four hours of field work and very low budget. Data were available within a few weeks after each test was conducted. All delays in reporting can be attributed to report writing, table design, etc., and could be averted by a shift in my priorities or alternative Bureau staff assignments.



U.S. DEPARTMENT OF COMMERCE
Social and Economic Statistics Administration
BUREAU OF THE CENSUS
Washington, D.C. 20233

September 7, 1972

Statistical Research Division
Response Research Staff Report No. 72-14

Subject: Questionnaire Research Report--Series A, Report 3
Results of Three Classroom Experiments with Census of Population
Housing Questionnaires

Introduction

The first of the three experiments which are the subject of this report was described in detail in RRB Report No. 71-18. Two subsequent experiments were conducted with the identical forms and similar procedures. In addition, data from the National Edit Sample were tabulated in categories making comparison with experimental results possible.

The experiments were intended to be the first in a projected series having the objective of obtaining information for the improvement of self-administered questionnaires. Results have been sufficiently consistent from experiment to experiment, and between the experiments, a 1970 census study, and some observations of people filling the census-like forms, that further experimentation with the same questionnaires now seems unnecessary. Two alternative new formats for a census questionnaire are attached as exhibits 2 and 2a and are recommended for testing.

Procedures Employed for Experiments

Procedures employed for all three experiments were the same in these essential respects:

1. Mr. Cooper arranged to have people convene for one hour in classroom-like groups. At the start of each session he was introduced, and he then read a standard introduction (shown as attachment 1 to RRB 71-18).
2. Monitors* who were professional employees of the Census Bureau

*The initial experiment was conducted in the evening and the last one on a Saturday morning. Monitors volunteered their own time to participate in them and thus deserve additional appreciation for their work. The following people acted as monitors in all three experiments: Patricia Fuellhart and David Koons (SRD). The following people participated in both of the nonworking hours tests: Barbara Amos and Sheila Salesky (Hsg), Wilbert Williams (Fld), Kathryn Flynn (SMD). One time participants include the people whose names are listed as monitors for the first experiment and Anitra Rustemeyer (SRD) who served as a monitor in the last experiment.

distributed 16 variants of a standard census-like form in prearranged order. Then they read standard instructions (attachment 1a to RRB 71-18).

3. As each participant completed his form he reinserted it in the envelope in which it had been distributed. The monitor wrote time of completion and gave him a "What-Do-You-Think" questionnaire to fill and clip to the envelope (attachment 2 to RRB 71-18).
4. Results were double-coded, once by clerical coders and independently by a professional staff member. The project director check-coded the work of clerical coders, revised a few code categories to remove ambiguities, and reconciled differences between clerical and professional coders' work.
5. Data were tabulated and analyzed.

Some minor changes from the procedures described in past reports were made for the second and third experiments. The experiment involving use of pen and pencil (described in RRB 71-18) was dropped; participants worked in larger groups; and no PA system was needed nor was a recorded appeal for cooperation used in the introduction.

Questionnaire Variants Used for Experiments

The 16 questionnaire variants were distributed in accordance with a method which insured that nearly equal numbers of each kind of form would be filled. (A description of the method for accomplishing this appears in the Census Bureau's Technical Notes 5: Causey, B., Problems in Equalizing Numbers of Different Items Among Different Groups.)

The information requested on all the forms included: names, relationship, sex, race, ethnic origins, and age; three coverage questions to check on the completeness of the household roster; number of living quarters, kind of access, telephone, kitchen and bathing facilities, tenure, and value or rent.

Form 1 (see exhibit 1) is the basic form which would be used if a census were taken at the time the experiments were conducted. It is not the form used in the 1970 Census.^{1/} Variations on the basic form are as follows:

Variant 1 has selected instructions within the body of the form printed in red.

Variant 2 has printed additional instructions for population items in the left margins of the page on which these items are printed. The housing instructions are printed on page 2 and an instruction appears

^{1/}A description of how Form 1 was designed appears on page 2 of Response Research Branch Report No. 70-16.

above the housing items to "Fold down page 2 for instructions. . ." In both cases the wording of these instructions is the same as that on the yellow information sheet provided with other variants. (The yellow instruction sheet which accompanies this form has a filled example and a question and answer section, which are identical to all other instruction sheets.)

Variant 3 does not require respondents to do FOSDIC marking for age. (Space is provided for FOSDIC age marking by office enumerator.)

Variant 4 has three changes from form 1:

- (a) Coverage questions are printed under the population questions.
- (b) Questions about color or race and about ethnic origins are in separate columns and the ethnic origins question is differently worded.
- (c) Separate questions about piped water, flush toilet, and bathtub or shower are asked.

The variations were combined into the 16 forms which provide a complete factorial design for the study of the four variants and interaction effects. The combination of forms shown below also describe the four variants as shown in the headings of Tables 1, 2 and 4:

Kind of Form (actual designation of forms used is shown in parentheses)	Black vs. Red Print	Additional Instructions in Yellow booklet vs. On Form	FOSDIC vs. Non-FOSDIC Age Reporting	Standard vs. Alternative Format for Coverage, and two other Questions
1 (1)	B	Y	F	S
2 (2)	B	Y	F	A
3 (4)	B	Y	N	S
4 (6)	B	Y	N	A
5 (5)	B	O	F	S
6 (8)	B	O	F	A
7 (10)	B	O	N	S
8 (11)	B	O	N	A
9 (1c)	R	Y	F	S
10 (2c)	R	Y	F	A
11 (4c)	R	Y	N	S
12 (6c)	R	Y	N	A
13 (5c)	R	O	F	S
14 (8c)	R	O	F	A
15 (10c)	R	O	N	S
16 (11c)	R	O	N	A

Exhibits 1 and 1a, between them, illustrate all the variations described above.

Participants in the Experiments

Although the forms and procedures were essentially the same, the participants in the three experiments differed greatly as the following summary of some of their characteristics indicates:

Some Characteristics of Participants in the Experiments	All Experiments	Woodson Night High School (May 1971)	Groups Funded by United Planning Organization, the Community Action Agency of the Office of Economic Opportunity* (August 1971)	U.S. Army Reserve Center (November 1971)
Total Number of Participants	339 ^{1/}	103	102	134
Percent of participants:				
Age	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Under 20	14	22	23	1
20-39	56	36	58	70
40 or over	18	19	5	28
Not ascertained	12	23	14	1
Sex	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Male	50	22	13	99
Female	40	57	74	1
Not ascertained	10	21	13	0
Race or Color	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
White	36	0	1	90
Negro	62	100	94	7
Other	1	0	3	2
Not ascertained	1	0	2	1
Educational Level	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Less than 12 years	45	100**	49	0
12 years only	12		36	2
More than 12 years	39		6	94
Not ascertained	4		9	4

*American Learning Systems; Training, Research & Development, Inc.

*Participants were not asked to report their education because it was assumed they were all working toward High School degrees. This assumption may not be completely correct. According to the school principal, a small but unknown proportion of the women in the dressmaking class were already high school graduates.

✓ Three hundred and four of the 339 participants were randomly selected to obtain equal numbers of persons in each experimental treatment group. The remainder of this report describes the 304 forms filled by that group.

The relatively high proportions of persons in the "not ascertained" categories for age and sex are a by-product of the procedure employed for obtaining the information. Those people who signed their name on the back of the form were identified by the age and sex shown in the body of the form. Those who did not sign the back of the form could not be identified.

In the second and third experiments, monitors requested that participants write their educational level on the form as they turned it in.

Analysis of Forms

Each participant filled only one of the sixteen variants of the questionnaire. In order to expedite analysis, equal numbers of each kind of form were selected. On a random basis, therefore, 35 forms were excluded from the analysis. Twenty three of these were excluded from the first experiment because of difficulty of obtaining nearly equal numbers of forms from 16 classes ranging in size from 3 to 30 students per room. In the two subsequent experiments, however, groups were larger and more evenly divided. Hence, it was possible to achieve more nearly equal numbers of each kind of filled schedule. Analysis involving the use of all 339 rather than the selected 304 questionnaires has indicated that similar conclusions would be drawn.^{1/}

The forms collected were used for standard complete 4-way layout with each factor dichotomized, as described above. A complete analysis of variance was made for each of 45 data items or variables, many of which are shown in the stubs of Tables 1 and 2. These data items or variables include, for example, the number of minutes the subject took to fill the form; whether he correctly and completely FOSDIC marked the sex of each person in his household; whether he followed the skip instructions for rent and value correctly; whether he found the print on the form too small or large enough. Thus, the items analyzed describe how well the subject completed the form and some of his opinions about it.

Hypotheses about the possible effects of the variants on the results were tested. An example of one such simple hypothesis is: "There is an instruction to print names. If the instruction is printed in red, more people will print names."

The findings described in the body of this report were obtained as a result of analysis in which "main effect" differences--i.e., differences involving only one factor at a time-- were estimated for each of four factors; factors being color of instructions within the form, placement of additional instructions, etc. These "main effect" differences were compared with a "residual sum of squares" based on variations of the values of the items among the 16 variants of the questionnaire. Interactions involving joint effects

^{1/}This analysis and similar additional technical information is available in the Statistical Research Division for anyone interested in technical aspects of the analysis.

of two or more factors were also measured. Finally, "residual" correlation coefficients between pairs of variables were computed. The findings reported here do not constitute complete results of these analyses which are copious. They represent a selection among those results which have practical application for improving questionnaire design and which were observed to be significant at the 5 percent level by use of standard t-tests.

Description of National Edit Sample Study

In addition to the results of classroom experiments, this report includes some comparable data obtained from the 1970 Census, used merely to see whether the errors made on filling standard census questionnaires by the experimental subjects resemble those made by respondents in the census.

A number of caveats about the experimental method were described in RRB 71-18, on pages 10-13. The purpose of using Census data was to see whether there was any similarity between experimental and census results which might make it possible to loosen some of those otherwise necessary restrictions on interpretation of experimental results.

The Census data were collected and tabulated in the following manner:

1. A subsample of about 800 questionnaires was selected from a portion of the National Edit Sample. The portion included mailed-back forms from the centralized and decentralized office areas. It excluded, by definition, forms from the "conventional" census areas because mailed-back self enumeration was not employed in them.
2. The questionnaires sampled were reproduced as they arrived. Thus, they were in a form as nearly equivalent as possible to that of the questionnaires used in the experiments.
3. A much more detailed coding system was employed than that used for the experiments. For example, each response on each line representing a person in the population section of the census form was coded separately.
4. Data were grouped in a computer program to produce classifications equivalent to those used in coding the experimental questionnaires, which had been coded only in summary fashion for the population section of the form.

The essential similarity between the results based on the National Edit Sample and the classroom experiments is that both represent unedited work; that is, both describe forms exactly as completed by respondents. The difference is that the National Edit Sample respondents represent a sample of householders in the United States who received forms, were requested to and did mail them back. (Forms were mailed back from nearly 90 percent of occupied housing units in the mail census areas.) In comparison with the

National Edit Sample population, people in each experimental group were relatively homogeneous in demographic characteristics, were all residents of the Washington, D.C. area, and were given no option about filling or turning in the form.

Findings

A similar general level of performance, as measured by complete and correct FOSDIC marking of questions, was observed for questionnaires filled in classroom experiments and those obtained from the National Edit subsample. Similar differences in levels of performance for different items also characterized the results. Such similarities contribute some confidence that the following experimental results might apply in a general population:

1. A principal finding is that format, spacing and positioning of questions can have a strong effect on response rates for them--independent of typography, the general appearance of the form or specific question wording.

The best illustration of that finding is provided by the three coverage questions. Placement of coverage questions at the top of the housing section rather than at the bottom of the page of population questions increased the likelihood of having them answered (see Table 1). This finding is consistent with an a priori hypothesis.

As Table 2 shows, the finding is also consistent for each of the three experiments separately. Although the proportion who answered the coverage questions correctly ranged from three fifths in the first experiment to more than nine tenths in the third, the form which had coverage questions in the more visible position produced better response rates within each group.

The 1970 decennial census questionnaire was designed so that the coverage questions were at the bottom of the form. Results from the National Edit Sample study (described on page 6 of this report) indicate that about two thirds of the people who mailed back their census questionnaire answered and correctly FOSDIC marked the coverage questions (see Table 3). When the results of the three experiments are combined, 59 percent of those who were given a form similar to the census form in terms of placement of coverage questions, correctly filled these questions, but 90 percent or more of those who were given the form with the coverage questions in a more prominent position answered them. This illustrates a large potential for improved response rates.

2. A second finding is that carry over effects exist; more specifically, that the inclusion of a difficult or seemingly unreasonable item in

the questionnaire affects the completion rate of items which follow it. Observations made on an individual basis where one staff member watched one person trying to fill a census form (described in RRB 71-16 and 71-20) suggest two kinds of effects. Some are discouraged about continuing with a task which began to appear too hard for them. Others are antagonized and become less cooperative.

The illustration for the finding that a carry-over effect exists is the response to identically worded and designed questions about coverage and housing, following the questionnaire version which calls for FOSDIC age marking as compared with the version which does not. A consistently higher proportion of completely and correctly marked coverage and housing questions is shown in Table 1 for the version which does not require FOSDIC age marking. The differences are statistically significant for all the housing questions and approach being so for the coverage questions.

Experimental results indicate that the potential for improvement is provided principally by less well educated people, since the response rate to housing questions for the well educated approaches 100 percent anyway (see Table 2).

The National Edit Sample results in Table 3 show that the housing questions as a group were correctly marked by most people in the 1970 Census but indicate that there might be some small potential for improvement, if FOSDIC age marking were not required.

3. Even minimal format changes may have a marked effect on response rates.

The illustration for this generalization is less clear cut than it might otherwise be because wording change accompanied the format change. The initially recommended format for the questions about race or color and ethnicity has one heading, "Origin," over a double column separated by a dotted line. The alternative format has two completely separated columns and a question printed in the second column (see exhibits 1 versus 1a). The alternative permits the majority of respondents to reply "no" to a question about whether they are of Mexican, Puerto Rican or other Spanish descent, whereas the standard version requires that they mark themselves in the last category as "None of these."

Regardless of the format and wording, the question about ethnicity was among the less well answered, particularly by the predominantly Negro and less well educated participants. It was as if, having described their race as Negro or Black, they felt that further questions about ethnicity did not apply to them. Yet, for them, as well as for the predominantly white and well educated participants in the third experiment, the format and wording which clearly indicated a second question, was far more successful. For all experiments

combined, Table 1 shows that about twice as many people answered the variant as the standard question about ethnicity. Table 2 shows that the difference was greatest for the first experiment but remained large for all three experiments.

There was no comparable question about ethnicity on the 1970 basic census questionnaire.

4. Some early reports from Internal Revenue Service indicated that two color print might be effective. Moreover, new printing equipment makes it possible to use two color print for government forms without much more difficulty or expense. As exhibit 1a shows, red ink was substituted for black for nine instructions selected as critical ones. Accompanying hypotheses were prepared. The small number of cases made it impossible to test some hypotheses but for those which were tested, the use of red instead of black print as it was employed in the experiments had very little effect.

Table 1 shows that by one criterion--the correct listing of the head of household on the first line--the black instructions appeared better; and by another--the consistent marking of two related property description questions--the red instructions seemed better. With these exceptions, which might have occurred by chance, the remaining outcomes show no significant differences between forms with red or black printed instructions. For example, red printed instructions about FOSDIC age marking produced no larger number nor more consistent responses, nor did color of instructions affect reporting of kitchen facilities or tenure. Moreover, no generalized aura or carry over effects can be seen in Table 1 results.

As described in the seventh finding of this report, there was some difference between the way participants perceived the forms with red versus black printed instructions.

5. Alternative explanations had been prepared to explain the outcome if more or fewer people completed a form which had additional instructions printed on it rather than in an accompanying booklet. Had more completed such a form, the explanation would have been that closer-at-hand assistance is advantageous; had fewer completed it, the explanation and recommendation would have been to keep to a minimum the amount of "clutter" on the form. In fact, however, the transfer of instructions from a separate booklet enclosed with the questionnaire to the form itself produced no measurable effect on completeness.

Not one statistically significant difference between the forms with or without additional instructions was observed. Of the 25 items shown in Table 1, 12 had a few more replies on the standard form, 12 had a few more on the form which had booklet instructions printed on it, and one had identical number of replies on both kinds of forms. The only effect of the variation was in perception of the form, as described in the seventh finding.

6. An experiment using one summary question versus an expanded group of three detailed questions produced identical results for both versions. This, however, may be a function of the level of living rather than a questionnaire effect.

No difference was observed in response rate to the question about plumbing facilities when it was asked in summary form ("Do you have complete plumbing facilities?") or when three separate "plumbing facilities" questions were asked about hot piped water, flush toilet, and bathtub or shower. The combined question on plumbing facilities was printed on the form which had coverage and housing questions in the same column and the separate questions appeared on the version which had coverage questions at the bottom of the page of population questions. As Table 1 shows the variation in form did not affect response. Unfortunately, however, the experiments were not very useful for testing the effect on distribution of replies resulting from alternative format and wording because so few of those who answered the question marked any but the first category, "Yes, for this household only."

7. Experiments show that people find the census form easier to fill than they initially expect it will be. Yet, with one exception, described in paragraph (3) below, their initial perception of difficulty does not correspond to their performance.

In order to interpret the results shown in Table 4 and summarized above, the following explanation is provided:

- a. Participants rated the census form they filled in two ways-- how difficult it appeared when they opened the envelope and looked at it, and how difficult it turned out to be. Both of these ratings were made immediately after they filled the form.
- b. Ratings vary from 1 to 4; 1 represents very hard and 4 very easy, with two intermediate categories. Data in Table 4 show averages of ratings. Thus, the higher the number in Table 4, the easier, on the average, participants reported the forms appeared or were.

In every experimental group and for every version of the questionnaire, participants found the census form easier to fill than it appeared to be. On the average, the census form appeared at first sight to be between "somewhat hard" and "fairly easy" to fill. Reports about how it turned out averaged between "fairly easy" and "very easy" to fill.

Here are the results by type of form:

- (1) The form with all black print appeared easier to more people

than the form with a few red instructions, but there were no differences in reported ease as "it turned out." Such results suggest that, in a census, the response rate might be lower for the form which had red ink but that the completeness and quality of returned forms would be the same.

- (2) The version with the instructions in the book and fewer on the questionnaire was described as easier in appearance and, though not statistically significant, the differences in opinion were in the direction of easier filling for all three experiments. Yet, results described earlier show no difference between the forms in how well they were filled. The greater difficulty perceived did not contribute to more omissions or errors.
- (3) Participants who used the form which did not call for FOSDIC age reporting expected it to be easier to fill than those who used the one which required FOSDIC age reporting. The difference in perception persisted and the non FOSDIC-for-age form was found to be easier by more people than the FOSDIC-for-age form. Moreover, as shown previously, the easier to fill version was better filled. This is the exception to the finding that perceptions of difficulty did not correspond to ability to complete the form correctly.
- (4) Two major findings were about significant differences between variants of the form which had the coverage questions differently placed and a differently designed ethnic origins questions. Yet Table 4 shows that participants neither anticipated nor found differences in difficulty between the versions which had differently placed coverage questions or differently designed ethnic origins questions. Although this finding is consistent with common sense (why should difficulty be perceived in questions one never sees?), it serves as an illustration of the limitation on judging questionnaires according to people's opinions of them. While these opinions may critically affect mail back rates, they do not necessarily indicate what the quality of response will be.
- (5) Despite marked differences in performance between participants in the third and first two experiments, there was little difference between the groups in their evaluation of the questionnaires. College graduates were as likely as those with less than high school education to rate the questionnaires as difficult in appearance. They were, however, a little more likely to describe the completed task as having been relatively easy.

Although the major findings described here are consistent with those reported when the only data available were from the first experiment, there are some differences in results. Principally, there was a sharp reduction in the number of interaction effects when three experiments were combined.

Table 2 of RRB 71-18 showed a frequent effect of color of print for instructions within the body of the form combined with variants related to the positioning of additional detailed instructions on the form. The particular interactions described indicated that it would be better to make neither or both kinds of changes than to make one of them. When data from three experiments were combined, however, the number of such interactions which were significant at the 5 percent level declined from 16 to 5, and three of these affected the closely related coverage questions. Interactions among other variables remained at the low level initially described. The present outcome of the analyses for the combined experiments is consistent with common sense expectations. There was no plausible explanation for the initial results.

Another kind of data shown in Table 1 of RRB 71-18; but omitted from this report, are summaries showing levels of completeness of the form. Summaries are available but, in the context of the experiments, they provide no more information than is found in data for separate items.

Recommendations

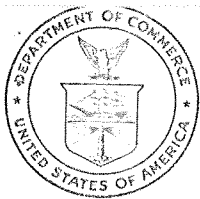
Previous reports in this and the B series, which described informal tests with the basic Census questionnaire, included recommendations for revision based on findings. In lieu of such written recommendations, exhibits 2 and 2a illustrate the kinds of changes in the census form which are recommended either for further experimentation or for pretesting.

The following comments are offered by way of explanation:

1. As described above, all revisions are based on findings. As such, they are conservative and do not represent any effort to develop an "ideal" questionnaire. Such an effort would probably result in far more radical revision.
2. The principal distinction between the two forms is in the organization and wording of the housing questions. Revision of these questions, however, required alternative placement of the coverage questions. One of the results of the experiments which is not within the scope of this report (because it does not deal with a variant of the questionnaire) is that 83 percent of the participants wrote their names and the date on page 4. This indicates greater visibility for questions printed on the back of the form than is provided in the space under the population questions. In addition, there seemed to be some advantage in combining the coverage questions with the replies based on them which have always been printed on the back. Consequently, on the 2a version which contains the new approach to housing items, all coverage questions appear on the back of the form. Although omitted from the design exhibited, it also will be necessary to add the telephone question to the back where the present rewording of the question would make its placement more logical for respondents.

3. Rationale for all revisions is provided in this and in Reports A1 and A2, B1 and B2. As examples, findings in this report support a decision to have FOSDIC age marking as an office or enumerator operation rather than request respondents to do the coding; the need for indicating a starting point or the desirability of a two or four fold form were made apparent in the informal tests and were the subject of monitor comment in the experiments.

4. In some respects, the exhibits only approximate what the recommendations would be. For example, during observation described in Report B1, it appeared as if the fine line italic print used for instructions was particularly difficult to read. A set of experiments comparing some other kind of print with the type used in the 1970 Census would be desirable. In that same report, there is some evidence that the double line for writing names may confuse some persons and a partially sketched alternative to that format is appended as exhibit 2b.



UNITED STATES CENSUS



a1.	a2.	a3.	a4.	a5.
If the address shown above has the wrong apartment identification, please write the correct apartment number or location here:				

How to Fill This Form

1. Use a black pencil to answer the questions. This form is read by an electronic computer. Black pencil is better to use than ballpoint or other pens.

Fill circles "O" like this: ●

The electronic computer reads every circle you fill. If you fill the wrong circle, erase the mark completely, then fill the right circle.

When you write an answer, print or write clearly.

2. See the filled-in example on the yellow sheet. This example shows how to fill circles and write in answers. If you are not sure of an answer, give the best answer you can.

If you have a problem, look in the instructions. All instructions are numbered the same as the questions on the form.

If you need more help, call the Census office. You can get the number of the local office from telephone "Information" or "Directory assistance."

3. Your answers are CONFIDENTIAL. The law (Title 13, United States Code) requires that you answer the questions to the best of your knowledge.

Your answers will be used only for statistical purposes and cannot, by law, be disclosed to any person outside the Census Bureau for any reason whatsoever.

The householder should make sure that the information is shown for everyone here.

If a boarder or roomer or anyone else prefers not to give the householder all his information to enter on the form, the householder should give at least his name, relationship, and sex in Questions 1 to 3, then mail back the form. A Census Taker will call to get the rest of the information directly from the person.

4. Check your answers. Then, mail back this form on Census Day, or as soon afterward as you can. Use the enclosed envelope; no stamp is needed.

Your cooperation in carefully filling out the form and mailing it back will help make the census successful. It will save the government the expense of calling on you for the information.

PLEASE OPEN UP FORM
AND START WITH PAGE 3

INSTRUCTIONS FOR QUESTIONS 10 THROUGH 18

Q. 10 - Living quarters are usually a house, apartment, flat, trailer, a group of rooms, or a single room which is occupied by a household that lives and eats separately from any other household in the building. Living quarters may also be vacant.

This address means the house or building number where your living quarters are located.

Q. 11 - Mark Yes and enter telephone number, even if telephone is in another apartment or building.

Q. 12 - Mark the second circle only if you must go through someone else's living quarters to get to your own.

Q. 13 - Mark one of the "Yes" circles even if the kitchen sink, stove, and refrigerator are not in the same room.

Also used by another household means that someone else who lives in the same building, but is not a member of your household, also uses the equipment. Mark this circle also if the occupants of living quarters now vacant would also use the equipment.

Q. 14a - Mark the "Yes" circle even if you do not have hot water at all times.

Q. 14b, c - Instructions for Question 13 give the meaning of also used by another household.

Q. 15 - Owned or being bought means that the living quarters are owned outright or are mortgaged. Also mark Owned or being bought if the living quarters are owned but the land is rented.

Mark Rented for cash rent if any money rent is paid. Rent may be paid by persons who are not members of your household.

Occupied without payment of cash rent includes for example, a parsonage, a house or apartment provided free of rent by the owner, or a house or apartment occupied by a janitor or caretaker in exchange for services.

Q. 16b - A commercial establishment is easily recognized from the outside; for example, a grocery store or barber shop. A medical office is a doctor's or dentist's office regularly visited by patients.

If your house is on a place of 10 acres or more and also contains a commercial establishment or medical office, mark Yes, 10 acres or more.

Q. 17 - Include the value of the house, the land it is on, and any other structures on the same property. If the house is owned but the land is rented, estimate the combined value of the house and the land.

Q. 18 - Report the rent agreed to or contracted for, even if the furnishings, utilities, or services are included.

If rent is not paid by the month, answer both parts of 18b. For example:

\$20 per week

\$1,500 per year, etc.

PLEASE TURN THIS FLAP IN
BEFORE FOLDING THE FORM

INSTRUCTIONS FOR QUESTIONS 1 THROUGH 9

Answer Questions 1 through 9 about the people in your household. A household may be:

- (a) One family
- (b) A person living alone
- (c) Two or more families who live and eat together
- (d) Any group of persons, related or unrelated, who share living arrangements

Q.1 - List in Question 1:

- Family members living here, including babies still in the hospital
- Relatives living here
- Lodgers or boarders living here
- Servants or hired hands living here
- Other persons living here
- College students who stay here while attending college, even if their parents live elsewhere
- Persons who usually live here but are temporarily away (including children in boarding school below the college level)
- Persons with a home elsewhere but who stay here most of the week

Do not list in Question 1:

- Any person away from here in the Armed Forces
- Any college student who stays somewhere else while attending college
- Any person who usually stays somewhere else most of the week
- Any person away from here in an institution such as a home for the aged or mental hospital
- Any person staying or visiting here who has a usual home elsewhere

NOTE: If everyone here is staying only temporarily and has a usual home elsewhere, please fill this circle and give their names on page 4 in the space for Question 9. Do not answer any other questions. Mail back the form on Census Day.

Q.2 - If two or more unrelated people live together and share living costs, mark the first one you list Head. Mark the rest Other nonrelative.

A stepchild or legally adopted child of the head should be marked Son or daughter.

	1. WHAT IS THE NAME OF EACH PERSON who was living here on Census Day or who was staying or visiting here and had no other home?	2. HOW IS EACH PERSON RELATED TO THE HEAD OF THIS HOUSEHOLD?
Line No.	<div style="display: flex; align-items: center;"> <div style="border-left: 1px dashed black; padding-left: 5px; margin-right: 5px;"> Print names in this order </div> <div style="font-size: 2em;">}</div> <div style="margin-left: 5px;"> Head of the household Spouse of head Unmarried children, oldest first Married children and their families Other relatives of the head Persons not related to the head </div> </div>	Fill one circle
①	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
②	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
③	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
④	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
⑤	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
⑥	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
⑦	Last name _____ First name _____ Middle initial _____	<input type="radio"/> Head <input type="radio"/> Wife or husband <input type="radio"/> Son or daughter <input type="radio"/> Other relative of head <input type="radio"/> Roomer, boarder <input type="radio"/> Patient or inmate <input type="radio"/> Other nonrelative
6. If you used all 7 lines - Are there any other persons in this household? <input type="radio"/> Yes → On page 4 give the name(s) of the others; we will call to get the information. <input type="radio"/> No		7. Did you leave anyone out of Question 1 not sure if he should be listed - still in the hospital, or a lodger? <input type="radio"/> Yes → On page 4 give the reason left out. <input type="radio"/> No

1. SEX <i>Fill one circle</i>	4a. ORIGIN <i>Fill one circle</i>	4b. Is this person of Mexican, Puerto Rican, or other Spanish descent?	5. DATE OF BIRTH (Month and year of birth and age last birthday) <i>If not known, give your best estimate.</i> <i>Print</i>	DO NOT MARK THIS COLUMN			
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>
<input type="radio"/> Male <input type="radio"/> Female	<input type="radio"/> White <input type="radio"/> Negro or Black <input type="radio"/> Indian (American) <input type="radio"/> Japanese <input type="radio"/> Chinese <input type="radio"/> Other <i>Specify</i> _____	<input type="radio"/> Yes <input type="radio"/> No ↓ Which of these? <input type="radio"/> Mexican <input type="radio"/> Puerto Rican <input type="radio"/> Other Spanish	Month _____ Year _____ Age _____	<input type="radio"/> Jan-Mar <input type="radio"/> 186- <input type="radio"/> 187- <input type="radio"/> 188- <input type="checkbox"/>	<input type="radio"/> Apr-Jun <input type="radio"/> 189- <input type="radio"/> 190- <input type="radio"/> 191- <input type="checkbox"/>	<input type="radio"/> Jul-Sep <input type="radio"/> 192- <input type="radio"/> 193- <input type="radio"/> 194- <input type="checkbox"/>	<input type="radio"/> Oct-Dec <input type="radio"/> 195- <input type="radio"/> 196- <input type="radio"/> 197- <input type="checkbox"/>

8. Did you list anyone in Question 1 who is away from home now -- for example, on a vacation or in a hospital?
 Yes → On page 4 give name(s) and reason person is away.
 No

9. Did anyone stay here on Census Day who is not already listed?
 Yes → On page 4 give name of each visitor for whom there is no one at his home address to report him to a Census Taker.
 No

10. Did you list anyone in Question 1 who is away from home now -- for example, on a vacation or in a hospital?
 Yes → On page 4 give name(s) and reason person is away.
 No

10. How many living quarters, occupied and vacant, are at this address?

- One
- 2 apartments or living quarters
- 3 apartments or living quarters
- 4 apartments or living quarters
- 5 apartments or living quarters
- 6 apartments or living quarters
- 7 apartments or living quarters
- 8 apartments or living quarters
- 9 apartments or living quarters
- 10 or more apartments or living quarters
- This is a mobile home or trailer

11. Is there a home telephone on which we can call you in case any of your answers are incomplete?

Yes → What is the number? _____ (Phone number)

No

12. Do you enter your living quarters —

- Directly from the outside or through a common or public hall?
- Through someone else's living quarters?

13. Do you have complete kitchen facilities? Complete kitchen facilities are a sink with piped water, a range or cook stove, and a refrigerator.

- Yes, for this household only
- Yes, but also used by another household
- No, lacking some or all kitchen facilities

14. Is there hot and cold piped water in this building?

- Yes, hot and cold piped water in this building
- No, only cold piped water in this building
- No piped water in this building

15. Do you have a flush toilet?

- Yes, for this household only
- Yes, but also used by another household
- No flush toilet

16. Do you have a bathtub or shower?

- Yes, for this household only
- Yes, but also used by another household
- No bathtub or shower

15. Are your living quarters —

- Owned or being bought by you or by someone else in this household? Do not include cooperatives and condominiums here
- A cooperative or condominium which is owned or being bought by you or by someone else in this household?
- Rented for cash rent?
- Occupied without payment of cash rent?

16a. Is this building a one-family house?

- Yes, a one-family house.
- No, a building for 2 or more families or a mobile home or trailer

b. If "Yes" — Is this house on a place of 10 acres or more, or is any part of this property used as a commercial establishment or medical office?

- Yes, 10 acres or more.
- Yes, commercial establishment or medical office
- No, none of the above

17. If you live in a one-family house which you own or are buying —

What is the value of this property; that is, how much do you think this property (house and lot) would sell for if it were for sale?

- Less than \$5,000
- \$5,000 to \$7,499
- \$7,500 to \$9,999
- \$10,000 to \$12,499
- \$12,500 to \$14,999
- \$15,000 to \$17,499
- \$17,500 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 or more

If this house is on a place of 10 acres or more, or if any part of this property is used as a commercial establishment or medical office, do not answer this question.

18. Answer this question if you pay rent for your living quarters.

a. If rent is paid by the month —

What is the monthly rent?

- Less than \$30
- \$30 to \$39
- \$40 to \$49
- \$50 to \$59
- \$60 to \$69
- \$70 to \$79
- \$80 to \$89
- \$90 to \$99
- \$100 to \$119
- \$120 to \$149
- \$150 to \$199
- \$200 to \$249
- \$250 to \$299
- \$300 or more

b. If rent is not paid by the month —

What is the rent, and what period of time does it cover?

\$ _____ .00 per _____ (Nearest dollar) (Week, half-month, year, etc.)

DO NOT MARK THIS COLUMN		
a4. Block number	a5. Serial number	
0	0	0
1	0	1
2	0	2
3	0	3
4	0	4
5	0	5
6	0	6
7	0	7
8	0	8
9	0	9
A. Type of unit or quarters		
Occupied		
<input type="radio"/> First form		
<input type="radio"/> Continuation		
Vacant		
<input type="radio"/> Regular		
<input type="radio"/> Usual residence elsewhere		
Group quarters		
<input type="radio"/> First form		
<input type="radio"/> Continuation		
B. Vacancy status		
Year round —		
<input type="radio"/> For rent		
<input type="radio"/> For sale only		
<input type="radio"/> Rented or sold, not occupied		
<input type="radio"/> Held for occasional use		
<input type="radio"/> Other vacant		
Seasonal		
<input type="radio"/> Migratory		

Make no mark in this margin

Make no mark in this margin

PLEASE MAKE SURE

YOU HAVE FILLED OUT

THIS FORM COMPLETELY



Check to be certain you have:

1. Filled out Questions 2 through 5 for every person listed in Question 1 on page 3.
2. Answered Questions 7 through 18.



Write here the name of the person who filled the form and the date.

Name _____ Date _____



Then fold the form the way it was sent to you. Mail it back in the envelope addressed to the U.S. Census Office. No stamp is required.

Thank you very much.

SPACE FOR ANSWERS TO QUESTIONS 6, 7, 8, AND 9

6. Name of any other person(s) in this household:

7. Name of person(s) left out and reason:

8. Name of person(s) away from home and reason away:

9. Name of visitor(s) for whom there is no one at his home address to report him to a Census Taker:

TABLE 1

SUMMARY OF RESULTS OF ANALYSIS BY QUESTIONNAIRE VARIANTS
(Numbers shown are counts of all forms)

POPULATION ITEMS	VARIANTS												Smallest difference between variants significant at 5% level
	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc.		Total Number of Replies	Difference			
	Black	Red	In booklet	On Form	FOSDIC	Non-FOSDIC	Standard	Variant					
									Difference	Difference	Difference	Difference	
NUMBER OF FORMS	152	152	152	152	152	152	152	152	304				
on which listed names printed, last name first and in pencil	128	122	128	122	125	125	125	125	250	0	12		
on which listed names printed	141	142	144	139	141	142	143	140	283	3	9		
on which head of household was listed on first line	127*	114*	119	122	114*	127*	121	120	241	1	13		
on which following questions were correctly checked for all household members listed:													
Relationship	133	132	134	131	132	133	132	133	265	1	11		
Sex or Color	138	145	143	140	140	143	142	141	283	1	9		
Religiosity	142	140	140	142	140	142	139	143	282	4	9		
Age & Year of Birth and Age	78	81	84	75	82	77	56**	103**	159	17	15		
Year on which non-FOSDIC reported age & date of birth were consistent	129	126	125	130	128	127	128	127	255	1	13		
	102	111	113	100	99*	114*	106	107	213	1	15		

* Difference significant at 5% level

SUMMARY OF RESULTS OF ANALYSIS BY QUESTIONNAIRE VARIANTS
(Numbers shown are counts of all forms)

POPULATION ITEMS ^{1/} (continued)	VARIANTS										Smallest difference between variants significant at 5% level
	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc. ^{2/}		Total Number of Replies	Difference	
	Black	Red	In-book-let	On Form	FOSDIC	Non-FOSDIC	Standard	Variant			
									Difference	Difference	
NUMBER OF FORMS SIGNED FOR FOSDIC AGE MARKING	76	76	76	76			76	76	152		
er correctly marked for:											
th of birth	65	67	64	68			64	68	132	4	8
r of birth	67	62	67	62			63	66	129	3	9
er marked consistently											
h hand-written entry for											
th of birth	68	67	66	69			65	70	135	5	7
r of birth	63	59	61	61			59	63	122	4	10

TABLE 1 (cont.)

SUMMARY OF RESULTS OF ANALYSIS BY QUESTIONNAIRE VARIANTS
(Numbers shown are counts of all forms)

HOUSING ITEMS ^{1/}	VARIANTS												Smallest difference between variant significant at 5% level			
	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc. ^{2/}		Total Number of Replies	Difference	Difference	Difference				
	Black	Red	In booklet	On form	FOSDIC	Non-FOSDIC	Stand-ard	Var-iant								
ALL NUMBER OF FORMS	152	152	152	152	152	152	152	152	152	152	152	152	304			
Number on which following questions were correctly marked:																
• of living quarters	143	135	137	141	4	133*	145*	12	141	137	137	4	278	10		
Telephone	125	126	124	127	3	117**	134**	17	133*	118*	118*	15	251	13		
Method of entry to unit	141	137	137	141	4	134*	144*	10	138	140	140	2	278	10		
Complete kitchen facilities	145	144	142	147	5	139**	150**	11	144	145	145	1	289	7		
Complete plumbing facilities	146	142	141	147	6	138**	150**	12	144	144	144	0	288	8		
Measure	139	142	138	143	5	137	144	7	141	140	140	1	281	9		
Number on which only appropriate questions about value or rent were marked	129	133	129	133	4	129	133	4	130	132	132	2	262	12		
Number which did not have redundant entries for value, rent, acreage, or type of property ^{3/}	119	112	119	112	7	114	117	3	121	110	110	11	231	15		
Number on which questions about kind of property were correctly & consistently marked	102*	116*	110	108	2	101*	117*	16	107	111	111	4	218	14		

Difference significant at 5% level.
Difference significant at 1% level.

SUMMARY OF RESULTS OF ANALYSIS BY QUESTIONNAIRE VARIANTS
(in percents)

POPULATION ITEMS	VARIANTS										Total Replies	
	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc.		Standard	Variant		
	Black	Red	In book-let	On Form	FOSDIC	Non FOSDIC						
FORMS	100	100	100	100	100	100	100	100	100	100	100	100
Percent on which names were printed, last name first and in pencil	84	80	84	80	82	82	82	82	82	82	82	82
Percent on which names were printed	93	93	95	91	93	93	94	94	92	92	93	93
Percent on which head of household was listed on first line	84*	75*	78	80	75	84	80	80	79	79	79	79
Percent on which following questions were correctly asked for all household members listed:												
Relationship	88	87	88	86	87	88	87	87	88	88	87	87
Sex or Color	91	95	94	92	92	94	93	93	93	93	93	93
Religion	93	92	92	93	92	93	91	91	94	94	93	93
Age	51	53	55	49	54	51	37**	37**	68**	68**	52	52
Month & Year of Birth	85	83	82	86	84	84	84	84	84	84	84	84
Percent on which non-FOSDIC reported age & date of birth were consistent	67	73	74	66	65*	75*	70	70	70	70	70	70

* Difference significant at 5% level.
** Difference significant at 1% level.

SUMMARY OF RESULTS OF ANALYSIS BY QUESTIONNAIRE VARIANTS
(in percents)

	VARIANTS										Total Replies
	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc.2/				
	Black	Red	In booklet	On Form	FOSDIC	Non FOSDIC	Standard	Variant			
ation items (cont.)	100	100	100	100	100	100	100	100	100	100	100
ent correctly marked											
h of birth ^{4/}	86	88	84	89			84	89			87
of birth ^{4/}	88	82	88	82			83	87			85
ent marked consistent with hand-written entry for:											
th of birth ^{4/}	89	88	87	91			86	92			89
ir of birth ^{4/}	83	78	80	80			78	83			80
PAGE ITEMS											
ent on which questions correctly marked for reasons:											
ely to be missed	76	76	79	72	73	78	92**	59**			76
r from home	74	76	77	73	73	77	91**	59**			75
ving here, not listed	74	76	78	71	71	78	90**	59**			75

ference significant at 5% level.
ference significant at 1% level.

SUMMARY OF RESULTS OF ANALYSIS BY QUESTIONNAIRE VARIANTS
(in percent)

	VARIANTS										Total Replies
	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc.2/		Standard	Variant	
	Black	Red	In booklet	On Form	FOSDIC	Non FOSDIC	FOSDIC	Standard			
									100	100	
Percent on which following questions were correctly marked:	100	100	100	100	100	100	100	100	100	100	100
of living quarters	94	89	90	93	88*	95*	93	90	91	91	91
Telephone	82	83	82	84	77**	88**	88*	78*	83	83	83
Method of entry to unit	93	90	90	93	88*	95*	91	92	91	91	91
Complete kitchen facilities	95	95	93	97	91**	99**	95	95	95	95	95
Cure	91	93	91	94	90	95	93	92	92	92	92
Percent on which only appropriate questions about value or rent were marked	85	88	85	88	85	88	86	87	86	86	86
Percent which did not have redundant entries	78	74	78	74	75	77	80	72	76	76	76
Percent on which questions about kind of property were correctly & consistently marked	67*	76*	72	71	66*	77*	70	73	72	72	72

*Difference significant at 5% level.
**Difference significant at 1% level.

Footnotes for Table 1 and 1a

- 1/ Results are summarized from codes which provide detailed information about whether an item which should be FOSDIC marked is; whether the appropriate number of circles are used; and, for the population questions, whether the information is available for all persons listed. The summary counts include forms which have FOSDIC entries (rather than write-in or underlined replies), have only the appropriate number of circles, and, in the case of population questions, have such entries for all persons listed.
- 2/ Standard has coverage questions printed above housing questions; questions about color or race in the same column as ethnic origins question; and a combined question about plumbing facilities. Variant has coverage questions printed under population questions; a separate and differently worded ethnic origins question; and three separate questions about piped water, flush toilet and bathroom or shower.
- 3/ This is the number of forms on which no inappropriate questions were answered. Examples of forms on which inappropriate questions were answered include those on which rent was reported by persons who marked that they were owner occupants or value reported by those who marked that they were renters. There were a few other redundancies--owners of 5 acres or more or commercial properties reporting value or rent are examples.
- 4/ The base for the percentages is 76 instead of 152.

RESULTS FOR SELECTED ITEMS^{1/} BY QUESTIONNAIRE VARIANTS SHOWN SEPARATELY FOR EACH OF THREE EXPERIMENTS AND FOR ALL VARIANTS AND EXPERIMENTS COMBINED (Numbers shown are percents)

VARIANTS

COVERAGE QUESTIONS	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc.2/		Total Replies
	Black	Red	In book-let	On Form	FOSDIC	Non-FOSDIC	Standard	Variant	
FORMS	100	100	100	100	100	100	100	100	100
ns likely to be missed									
1 3 experiments	76	76	79	72	73	78	92*	59*	76
First	60	60	60	60	55	65	85*	35*	60
Second	65	65	71	58	58	71	88*	42*	65
Third	94	94	97	91	95	92	100*	88*	94
ns away from home									
1 3 experiments	74	76	77	73	73	77	91*	59*	75
First	58	55	58	55	50	63	78*	35*	56
Second	63	69	67	65	63	69	92*	40*	66
Third	94	94	97	91	95	92	100*	88*	94
ns staying here, listed									
1 3 experiments	74	76	78	71	71	78	90*	59*	75
First	58	60	60	58	53	65	83*	35*	59
Second	60	65	69	56	54*	71*	83*	42*	63
Third	94	94	97	91	95	92	100*	88*	94

ns include all items whose results were identified in Table 1 with a star, indicating that statistically significant differences in those items were observed between any questionnaire variants.

RESULTS FOR SELECTED ITEMS^{1/} BY QUESTIONNAIRE VARIANTS SHOWN SEPARATELY FOR EACH OF THREE EXPERIMENTS AND FOR ALL VARIANTS AND EXPERIMENTS COMBINED (Numbers shown are percents)

VARIANTS

HOUSING QUESTIONS	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverage Questions, etc. 2/		Total Replies
	Black	Red	In book-let	On Form	FOSDIC	Non-FOSDIC	Standard	Variant	
ALL FORMS	100	100	100	100	100	100	100	100	100
Number of units in structure									
All 3 experiments	94	89	90	93	88*	95*	93	90	91
First	88	75	75	88	73*	90*	88	75	81
Second	94	85	90	90	83*	96*	88	92	90
Third	98	100	100	98	100	98	100	98	99
Telephone									
All 3 experiments	82	83	82	84	77*	88*	88	78	83
First	78	83	75	85	75	85	90*	70*	80
Second	67	69	69	67	56*	79*	77	58	68
Third	97	94	95	95	94	97	94	98	95
Method of entry									
All 3 experiments	93	90	90	93	88*	95*	91	92	91
First	85	85	80	90	78*	93*	83	88	85
Second	92	85	90	88	85	92	90	88	89
Third	98	97	97	98	97	98	97	98	98
Complete kitchen facilities									
All 3 experiments	95	95	93	97	91*	99*	95	95	95
First	90	93	88	95	83*	100*	90	93	91
Second	94	92	92	94	90	96	94	92	93
Third	100	98	98	100	98	100	98	100	99

These include all items whose results were identified in Table 1 with a star, indicating that statistically significant differences in those items were observed between variants.

TABLE 2 (cont.)

RESULTS FOR SELECTED ITEMS^{1/} BY QUESTIONNAIRE VARIANTS SHOWN SEPARATELY FOR EACH OF THREE EXPERIMENTS AND FOR ALL VARIANTS AND EXPERIMENTS COMBINED (Numbers shown are percents)

USING QUESTIONS (cont.)	VARIABLES										Total Replies	
	Color of Instructions within Form		Placement of Additional Instructions		Type of Reporting		Placement of Coverage Questions, etc. ^{2/}		Stand-ard	Vari-ant		
	Black	Red	In book-let	On Form	Field	Non-FOSDIC	Stand-ard	and				
FORMS	100	100	100	100	100	100	100	100	100	100		
plete plumbing facilities												
ll 3 experiments	96	93	93	97	91*	99*	95	95	95	95	95	95
First	90	93	88	95	83*	100*	90	93	90	93	90	91
Second	96	88	90	94	88	96	94	90	94	90	90	92
Third	100	98	98	100	98	100	98	100	98	100	100	99
d of property												
ll 3 experiments	67*	76*	72	71	66*	77*	70	73	70	73	73	72
First	50	58	60	48	45	63	53	55	53	55	55	54
Second	54	63	56	60	50	67	56	60	56	60	60	58
Third	88*	98*	92	94	92	94	92	94	92	94	94	93

These include all items whose results were identified in Table 1 with a star, indicating that statistically significant differences in those items were observed between any questionnaire variants.

PERCENTAGE OF FORMS ON WHICH SPECIFIED QUESTIONS WERE CORRECTLY POSITIVE

PERCENT OF FORMS ON WHICH SPECIFIED QUESTIONS WERE CORRECTLY POSITIVE

Description of Item	All 3 Classroom Experiments			Average of all versions
	National Edit Subsample	Census-like version	Alternate version	
NUMBER OF FORMS	765	152	152	304
PERCENT OF FORMS	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Population Items				
Relationship	88	86	88	87
Sex	94	91	95	93
Race or Color	96	94	<u>1</u>	93
PCSDIC markings for:				
Month of birth	88	682/	<u>3/</u>	<u>3/</u>
Year of birth	88	672/	<u>3/</u>	<u>3/</u>
Coverage Items				
Likely to be missed	65	59	90	76
Away from home	65	59	91	75
Staying here, not listed	66	59	90	75
Housing Items				
Number of living quarters	92	38	95	91
Telephone	97	77	88	92
Entry	97	88	95	91
Kitchen	98	91	99	93
Plumbing	98	91	99	93
Tenure	97	89	95	92
Kind of property	72	66	77	72

Footnotes for Table 2

- 1/ The percentages in this column are for whichever combination of features was judged to resemble most closely the census version of the question. That differed from item to item and does not represent a single census-like format. For example, the percentages shown for the three coverage items are for all versions which have those questions printed under the population items as they were in the 1970 Census. These versions include forms with red and black instructions; with additional instructions printed in the booklet or on the forms themselves; with and without FOSDIC age marking requested of respondents. Similarly, the percentages shown for the housing items are for all versions which did not require the respondent to do FOSDIC marking for age, regardless of other design features.
- 2/ The percentages in this column are for whichever combination of features provided the highest percent complete and correct response for the specified item. It is not, however, a theoretically "best" version of the questionnaire. Such a determination would require enough more forms to provide data about each of the 16 variants rather than about combinations of them.
- 3/ None of the variants produced a higher response rate than the census-like version.
- 4/ These percentages are based on 76 instead of 152 forms.
- 5/ The alternative version did not require respondent to FOSDIC mark age.

AVERAGE VALUES^{1/} OF REPLIES TO FOLLOWING TWO QUESTIONS: A. When you opened the envelope and looked at the Census form, did it look as if it would be: Very hard to fill? Somewhat hard? Fairly easy to fill? Very easy?, and B. How did it turn out? Would you say it turned out to be: Very hard to fill?...etc."

VARIANTS

INITIAL APPEARANCE OF DIFFICULTY	Color of Instructions within Form		Placement of Additional Instructions		Detail of Age Reporting		Placement of Coverages, Questions, etc. 2/		Total Replies
	Black	Red	In book-let	On Form	FOSDIC	Non-FOSDIC	Standard	Variant	
	3 experiments	2.93*	2.74*	2.97*	2.71*	2.74*	2.94*	2.90	
first	2.96	2.75	3.05*	2.66*	2.81	2.90	2.86	2.85	2.86
second	3.09*	2.66*	2.95	2.80	2.61*	3.14*	2.95	2.80	2.88
third	2.80	2.80	2.93*	2.66*	2.78	2.81	2.88	2.71	2.80
ACTUAL DIFFICULTY									
3 experiments	3.35	3.38	3.39	3.34	3.25*	3.48*	3.38	3.36	3.37
first	3.13	3.28	3.26	3.14	3.08	3.33	3.26	3.14	3.20
second	3.47	3.33	3.35	3.45	3.19*	3.61*	3.38	3.43	3.40
third	3.41	3.48	3.51	3.38	3.41	3.48	3.45	3.45	3.45

Values form a scale from 1.00 to 4.00 as follows:

1.00 Very hard
 2.00 Somewhat hard
 3.00 Fairly easy
 4.00 Very easy