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Comparing Navigation in Two Formats for Demographic Items in the American Community Survey

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Executive Summary

Background:

Recent changes in content have required reformatting of the first page and the demographic items in the American Community Survey (ACS.) The primary purpose of this research is to assess the functioning of some of these format changes in two versions of the questionnaire. One questionnaire version collects demographic data about rostered individuals in a column and row grid. (This is called the Matrix format.) The other version collects demographic information for each person in a single, decennial-style column. (This is referred to as the Sequential format.) In both formats, the instructions to respondents about who should be listed in the questionnaire have been moved to the first page. In the Sequential format, demographic information is collected on three pages, with Person 5 and the continuation roster on the third demographic page. In the Matrix format, all demographic information, including the continuation roster, is collected in two pages.

In addition, the Matrix format has recently been altered to accommodate key-from-image requirements. An initial set of changes resulted in altered patterns of nonresponse in the key-from-image format. Some format features were introduced to alleviate this item nonresponse. These changes included alternating dark and light green bands across the Matrix rows, extending the green background into the margin, and lightening the effect of the dark lines around each key from image page.

Aims of the Research:

The purpose of the current research is to evaluate the functioning of these changes in format. The main issues involved navigation through the questionnaire, including the following:

- Can respondents find and use the instructions on the first page?
- Can respondents navigate through major sections of the questionnaire that is, the instructions, the demographic questions, the continuation roster, and the housing section?
- In the Matrix format, do changes in the key from image presentation improve navigation from page 2 to page 3, and thus alleviate item nonresponse?

Methods:

To examine these questions, 19 cognitive interviews were carried out in the Washington, D.C. metropolitan area. Since these interviews were mainly focused on navigation, probing was conducted entirely retrospectively. That is, respondents filled out the questionnaire on their own until they reached the housing section, before probing began. Efforts were made to include respondents with high school educations or less. This group of respondents, however, includes few respondents with large households. This limits our ability to assess respondent navigation to the continuation roster.

Findings:

Moving the instructions to the first page appeared to be non-problematic. Respondents find the instructions in the text box, and provide all of the information requested. They appear to find all of the arrows which serve as visual cues to important sections of the instructions. Navigation to the continuation roster appeared non-problematic for this group of respondents. However respondents encountered some difficulties interpreting and applying the residence instructions. These include:

- Over-generalization of the 2 month rule to cases where the person has no usual residence elsewhere. That is, respondents do not include persons with no usual residence if they have been staying less than two months, as the rules instruct them.
- Discrepancies between the household count and the number of persons on the roster. This probably results from respondents believing that entering their names on the first page is all that they are required to provide about themselves.
- Respondents did not understand the instruction about providing housing information if the unit was technically vacant. However, their reading frequently did not extend as far as this final instruction.

Respondents use mixed strategies to navigate within the Matrix format, using both vertical, horizontal and combinations of the two. There is almost no evidence of mixed strategies causing respondents to miss or misplace information in the demographic grid. We conclude that mixed strategies are not problematic in themselves. However, respondents do report some problems in understanding the grid layout at first glance, and say it initially looked very difficult.

One navigation error was common in the Matrix format, however. About half of our respondents in this format did not supply age even after they had provided date of birth. The cause was the placement of the instruction to mark babies of less than 1 year as age 0, which had been placed just above the age box. This made respondents think that recording age was only required for babies.

Navigation within the Sequential format is completely non-problematic for respondents. No navigation errors occur. Respondents report that it is easy and natural to travel vertically down the column to record information for household members.

Background

This paper reports on cognitive research undertaken to evaluate navigation in two formats for the collection of basic demographic data in the American Community Survey (ACS). These items are identical to the content of the decennial short form, and occur at the beginning of the ACS booklet. Two formats have been developed for the presentation of these items. These are described below. Facsimiles are presented in Appendices. The front page of the form (which did not differ between the formats) is included as Appendix A. The Matrix format appears in Appendix B and the Sequential format appears in Appendix C.

The first format was called the "Matrix." It presents the items in a grid format, with the person names collected in the column on the left, and questions placed across the top of the page. Only the answer categories appear in the grid spaces below each question. The continuation roster occurs at the bottom of the page. This format is very similar to what is currently used in the ACS, however, the questions have been somewhat rearranged. In addition, roster instructions were provided on the demographic page, in a column on the left. In the formats tested during this research, the roster instructions have been placed on the first page of the questionnaire. In addition, changes were introduced into the Matrix to allow imaging of the forms prior to keying. These "key-from- image" changes required the placing of black lines around the content of each page in the Matrix. A prior field test indicated that the key-from-image formats created more item nonresponse on the second page of the grid. For this research, some changes were introduced to alleviate these problems. These changes included alternating dark and light green bands across the Matrix rows, extending the green background in to the margin, and lightening the effect of the dark lines around each key from image page.

The second format, called the "Sequential" format, is designed to be visually similar to the presentation of the demographic items in the decennial short form. It presents the names of each person at the top of a column, and presents questions for each individual in the column beneath the name. This format repeats the questions and answer categories for each person. The Sequential format requires more space than the Matrix format, and thus requires an extra page to accommodate Person 5 and the Continuation Roster. In the Matrix format, there is enough space to present the Continuation Roster at the bottom of the grid. In both the Sequential and Matrix formats, the residence instructions have been moved to the first page of the questionnaire (replacing a motivational message from the Director of the Census Bureau.)

¹The grid format currently used orders the questions as sex, age, relationship, while the experimental form tested here orders the questions as relationship, sex, age. In addition, the current form has a marital status question which has been moved to the detailed person section.

Research Questions:

These changes in the presentation of the data prompted an examination of navigation issues in the two formats. The specific research questions included both macro- and micro-navigation through the questionnaires, and respondent understanding of the roster instructions.

<u>Assessing Macro-navigation: Transitions between Page 1 Instructions and Demographics</u>, Finding the Continuation Roster, and Transition to Housing Section

Since changes in content have necessitated placing the roster instructions on the first page of the questionnaire booklet, it is important to evaluate whether respondents find and use these instructions, and in particular if they carry this information forward in filling out the form. In addition, finding the continuation roster was considered potentially problematic in the Sequential format. It now occurs on the 4th page, which might be overlooked or skipped. Since most households are smaller than 5 persons, the existence of this extra page also raised questions about the ease of the respondents' transitions out of the demographic section of the questionnaire into the subsequent section on Housing.

Assessing Micro-navigation: Navigation within the Matrix and Sequential formats.

Micro-navigation is concerned with how respondents locate and move between specific items in the demographic sections. Evidence of difficulty in micro-navigation might be respondents not finding items, omitting whole or partial answers, and misplacing data for particular individuals. A general comparison of the ease of micro-navigation in the Matrix and Sequential formats was of interest. Previous research (Gerber and Landreth, 2005) had compared earlier versions of the Matrix and Sequential formats, prior to the changes made to accommodate key from image requirements. The current test extends the comparison of two alternate formats for the demographic grids.

Recent format changes include key-from-image adjustments to the presentation of the demographic grid. In a recent test, (Tersine, 2007) a pattern of increased non-response was noticed for items on the second page of the demographic grid (Page 3). The Matrix format tested here included some design elements intended to alleviate this problem, such as alternating tones of lighter and darker green across the Person Rows, continuing the green ground into the margins between pages, and the inclusion of some small arrows in the margin between pages 2 and 3.

Respondent Comprehension of Page 1 Instructions

A third research goal was to examine respondent understanding of the instructions provided for them on Page 1. A series of four arrows guide respondents through this introductory material. At the first arrow, respondents are instructed to provide the date on which the form was filled out. The second arrow instructs them to enter the name and telephone number of the person filling out the form. A series of three bullets follow the third arrow, which convey ACS residence rules, and ask for a household count number. One previously encountered difficulty was that some respondents did not include themselves in the household count number or in the subsequent person pages. Some changes in wording were introduced into the current forms to remind respondents to include themselves in the demographic data section. The fourth arrow instructs

respondents on how to complete the rest of the form. The first sentence at this arrow essentially tells the respondent to continue with the form. The second sentence may be particularly important for households where no one is living or staying for more than the required two months. In this case, the household is considered vacant by ACS rules, and the respondent is instructed to fill out only the housing section and to return the form.

An additional change was made to Page 1 at the start of the research. Some material which had been placed vertically above the instructions (a statement about the nature of the ACS) and below the instructions (a help box) were moved to the left hand side of the questionnaire. These changes were made to accommodate new printing procedures. We also wanted to discover if the new horizontal layout made it more difficult for respondents to find and process the instructions.

In summary, the issues examined in this research include the following:

- Finding and using the residence instructions;
- Conceptual carry-over of this information to the creation of the roster on the inside pages,
- Ability of respondents to find and use the third page of demographic items and the continuation roster in the Sequential format, and
- Ability of respondents to find the Housing section when an additional page is introduced in the Sequential format.

Methods

Because the navigation issues with which we were concerned involved only the beginning of the form, a shortened version of the form was produced that included only the first page, demographics and housing section. This enabled us to track respondents' transitions through the beginning sections of the forms.

Our cognitive protocol consisted of two phases. First, the respondent was instructed to fill out the questionnaire uninterrupted by us. During this period we noted the transitions made between elements of the questionnaire. We also observed manifestations of reading behavior (hand movements or comments made by the respondents) and noted the navigation through the demographic pages (the order in which information was supplied.) Any difficulties or questions that the respondent expressed were noted.

During the second phase of the interview, we probed respondents in two major areas: we asked them to recall what elements of the questionnaire they had looked at, and how much they could recall having read. It should be noted that neither the observations we were able to make of the respondents' reading behavior, or their subsequent recall of it, provide a very exact or detailed account of what the respondents looked at. Thus, we have not attempted to present a fine grained analysis of the respondents' reading behavior. Instead, we present a more general impression of what we believe the respondents noted or did not note.

We believe that, despite its deficiencies, retrospective probing produces a better estimate of reading behavior than a concurrent read aloud method. In a concurrent read aloud, the respondent is asked to read questionnaire items aloud while simultaneously filling out the form and answering probes. This procedure encourages more reading, and more linear or sequential processing, than a natural reading would. It would also interrupt respondents during important transitions, which was an important focus of this research. Therefore, concurrent read aloud methods were not appropriate for this research. In the retrospective method adopted here, we found that respondents often were able to recall what they had read. While they may have exaggerated somewhat how much they attended to, they were not hesitant to tell us that they had skipped or omitted parts of the instructions. We also followed other cues, such as comments made during the initial reading, and the respondents "tracking" of what they were looking at with pencils or fingers.

During the second phase of interviewing, we also asked about respondents' interpretation of instructions. These probes included paraphrases of instructions and interpretations of particular words or phrases of interest to us. We also asked respondents more about difficulties we witnessed or comments they had made.

After probing was finished, we presented the respondents with a series of vignettes, designed to further test their understanding of the residence rules. These vignettes were short sentences describing the living situation of an individual or family. We presented them in random order on cards, and asked respondents whether a person or family such as the one described should be listed on the form. Respondents were told that they could look back at any part of the form in order to arrive at an answer (but we did not specifically point out the residence instructions to them in this context.) Because of time issues in the interviews, the entire set of vignettes was not always administered, and in some cases was left out entirely. We have used them primarily to support our understanding of the way that respondents understand, retain, and reason from the residence instructions. A list of the vignettes, the method used, and respondent answers to the vignettes are presented in Appendix D. Discussion of the vignettes has been integrated into the text, where relevant.

The interviews generally took from 45 minutes to an hour. Nineteen interviews were completed, 9 using the Matrix format, and 10 using the Sequential format. (Two other interviews were attempted but the respondents were not able to complete the sessions.²) All of the respondents were recruited locally, in the Washington DC metropolitan area. Fifteen were African American, 3 were White, and 1 reported as White and Filipino. They ranged in age from 20 to73. Eleven respondents were 20-49, and 8 were 50 and above. (Of these latter, 4 were over 60.) We were especially interested in respondents who might have difficulty in interpreting the rules because of reading difficulties. Of our respondents, 6 had High School or less (including 3 with General Education Diplomas); 6 had "some college"; 5 had BA or more, and 2 were unknown.

² One had forgotten his glasses and the other was apparently hallucinating.

Household sizes reported in the household count question varied from one to six persons. In the sequential format, 5 respondents reported 2 household members in the household count question, 2 respondents reported 3 people, and 3 respondents reported 4 people. In the Matrix format, two respondents reported one person³, 2 reported 3 persons, 1 respondent reported 5 persons, and 1 respondent reported 6 persons. Thus, only one respondent was obliged to use the continuation roster, which presents a limitation to this data. (It should be noted here that the number of persons for whom demographic data was recorded did not always agree with the number in the household count box, as described later.)

Findings: Macro-Navigation

This research did not discover any major problems with macro-navigation in either the Matrix or Sequential format. That is to say, in both formats, all respondents were successful in making transitions between the major sections of the questionnaire which were included in this test. All of the respondents began with Page 1, located the critical information included in the green text box, and found and supplied a number in the Household Count box. (This number was not always accurate, as discussed below.) When they had finished with Page 1, all turned the page to discover and complete the demographic items for their households. All made the transition to the housing section.

It is a little more difficult to be certain that all of the respondents found the Continuation Roster, in both formats. However, this did not appear to be a common problem, judging from respondent remarks and our observations of their progress through the questionnaires.

Only one respondent was required to use the continuation roster at the bottom of the Matrix format, and she was able to use the appropriate space to provide data for a grandchild. Other respondents made comments that indicated they had observed the roster at the bottom of the Matrix format. For example, several commented that they noticed there were spaces for twelve persons. One respondent said that he had noted the continuation roster during his initial observation of the structure of the page, since there are numbers down the side, as well as across the top and the bottom.

The continuation roster appears next to Person 5 on page 3 of the Sequential format. None of the respondents who used the Sequential format were required to use the continuation roster. However, they scanned page 3, and this was fairly obvious to observe. They often remarked on the different format of the last column; on the total number of people ("Wow, twelve people, well I guess some people might have that many"); or commented on the different amount of information required for Persons 6 - 12 ("How come you don't want everything for them?") It was our assessment that discovering the Continuation Roster was fairly easy and natural as

³ Both of these respondents lived in multi-person, non-family households but chose to report only themselves.

respondents examined the form for additional questions they were required to answer. Thus, we are fairly confident that the continuation roster can be found and accessed in the Sequential format. The additional demographic page does not appear to be problematic for macronavigation in the Sequential format.

All of our respondents found and made the transition to the Housing Section, in both formats. Our procedure was to wait until the respondent was already engaged in reading the first Housing questions, and preparing to answer them, before we interrupted them for the probing. (We did not allow them to answer housing questions, since navigation in that section was not the goal of this research.)

Findings: Micro-Navigation - Page 1

The critical navigation issues for this part of the form were respondents' use of the green text box on the right of Page 1. In addition to finding actual questions on this page, respondents must also locate and read important instructions. Generally, respondents are accustomed to numbering or alphabetical steps as cues to navigation in other questionnaire contexts. However, these were not used on Page 1 because of the potential for confusion with the numbering system within the demographic pages. One question in our research was whether the reverse print arrows, used here as a navigation cue, would provide respondents with strong enough cues so that they found and processed the information at each one.

All of these respondents found the green text box, and provided answers in the appropriate spaces. We observed no item nonresponse on Page 1. When respondents were asked how they new where to start, most told us that the green text box or the large "Start Here" in reverse print drew their attention. A few also mentioned that they saw "the white spaces," that is, fill in boxes, and therefore knew they had tasks to accomplish on that side of the page.

The arrows were effective cues to bring respondents' attention to the various tasks on the first page. We observed that respondents spent at least some time on the text at each of the arrows. This does not, however, imply that they read all of the text at each arrow, with consequences for their understanding of the instructions. (This will be detailed in the next section.) There is only one statement in the Green Text box that does not follow an arrow. This is the sentence below "Start Here" which says:

PLEASE COMPLETE THIS FORM AND RETURN IT AS SOON AS POSSIBLE AFTER RECEIVING IT IN THE MAIL.

Respondents frequently said that they did not see this instruction, despite the dark print and capital letters. This may be because of its position between the very visible "Start Here" and the first write-in box, for Date. It also lacks an arrow, and is therefore out of the navigation flow of

the green text box. If it is considered to be an important element of the instructions, it should be formatted with its own arrow. However, it is not clear whether the instruction is really necessary, as respondents know that they are supposed to fill out the form.

Findings – Micro-Navigation in the Matrix Format

General Layout of the Matrix

When they turn from Page 1, respondents using the Matrix format are faced with an initial problem in figuring out the nature of the task that faces them. Some, (especially respondents who have little experience with grid layouts) find the matrix somewhat difficult to understand. They therefore often take a moment to look the page over before they begin filling in answers. While this sounds like a good thing, it is probably an evidence of initial confusion experienced by respondents when first encountering the grid.

When they remark on this confusion, they sometimes say that it was "difficult to figure out what's going on" in the page. A few reported that this was because they are faced with a series of prominent, potentially conflicting, number cues in a variety of places. That is, numbers run across the top (indicating question numbers,) down the side (indicating Person numbers) and across the bottom (indicating Person numbers in the continuation roster.) Others say that they had to look at the content of the questions to realize that material was repeated across the rows before they comprehended the nature of the task.

While respondents are able to figure out the nature of the grid, this initial inspection does appear to contribute to an impression that the grid is difficult. Their initial impression was that each box represented a new and different question, which would create a very dense and challenging page. Until they realize that the questions in the grid repeat for each person, the grid pages may appear somewhat overwhelming, especially to less skilled readers.

Connection between Pages 2 and 3

One of the original questions motivating this research were results from a test of the key-from-image forms, in which high item nonresponse on the second page of the matrix format was encountered. Our hypothesis about this problem was that the key from image pages had created an impression that each page of the matrix was a separate entity. Respondents may not have understood that both pages were integral parts of the same task. As a result, they may have been unsure to which names the questions on page 3 referred.

Revisions were made to alleviate these problem, and the current research served to assess how well these changes had worked. These changes included means of carrying the eye across pages two and three: alternating tones of lighter and darker green across the Person Rows on pages 2 and 3 to create a horizontal flow, continuing the green ground into the margins between pages,

and the inclusion of some small directional arrows in the margin between pages 2 and 3. Since we believed that the heavy black lines around each page in the original key from image format may have contributed to the impression that each page was a separate element, the visual impression of these lines (needed for optical recognition) were reduced as much as possible.

In fact, these changes appear to have worked well. Respondents had no difficulty in finding and responding to the second page in the Matrix, and we did not see higher item nonresponse on this page.

Respondents may not be consciously aware of the visual elements that helped to move their eyes horizontally across the double page. However, they occasionally mentioned elements that had helped them to understand the horizontal structure of the page. In particular, the question numbers across the top are mentioned as helping to draw the eye across the top of pages 2 and 3, and indicating that both pages are part of a single, overall structure. For this reason, we recommend making these numbers as large as possible, given space constraints.

No respondent spontaneously mentioned the small arrows in the margin between page 2 and 3. When asked, most said that they had not noticed them at all, and only one said that he had been helped by seeing them.

Recommendation: Our recommendation is that this feature be removed. *This recommendation was accepted for the 2008 ACS.*

Patterns of Navigation and Navigation Errors in the Matrix Format:

In the matrix format, a respondent may adopt many paths or strategies for filling out the data. They may move either vertically through the columns or horizontally through the rows, or create a variety of mixed strategies. Any strategy of moving through the matrix may be problematic if it results in respondents forgetting to fill in information in a particular cell, or recording information intended for one person in a space designated for another. Therefore, we assessed the general strategy of moving through the matrix.

We observed a variety of strategies for moving through the matrix. These included:

- -Vertical navigation: filling the columns (topic based) for all rostered persons
- -Horizontal navigation: filling the name and demographics for that person across each row (person based.)
- -Mixed navigation: using both horizontal and vertical navigation in different parts of the matrix.

Mixed navigation appeared to be the most common strategy among these respondents. One pattern was noticeable: filling the demographics on Page 2 horizontally and the demographics on Page 3 vertically. The likely explanation for this is that the characteristics recorded on Page 2 (relationship, sex, and age) vary for each individual in the household. The characteristics on Page 3, Hispanic origin and race, may more easily be seen as family or household characteristics. (This

familial character of the questions was clear from remarks respondents made as they filled Page 3: "We're all African American," for example.)

We do not see these mixed strategies as problematic in themselves. If all of the information can be recorded correctly, it does not seem necessary to create a single navigational flow within the matrix. In fact, there is little evidence of data that have been misplaced. Only in two instances, respondents recorded answers in the wrong boxes. One respondent attempted to supply missing relationship data by writing "wife" into the wrong box. In another case, a respondent marked "mother" where he should have marked "son" and vice versa. In this case, it is difficult to tell whether the respondent misunderstood the relationship question, or if he actually misplaced his responses. All other data from our respondents in the Matrix format appeared to have been placed appropriately in the box corresponding to the individual form whom it was intended.

However, one important navigation error led to missing data in this format. This navigation problem in the Matrix format occurs in the Age question, and represents the most common cause of missing data. In this format, the Date of Birth and Age entry fields are separated by an instruction in italic type reading:

Please report babies as age 0 when the child is less than 1 year old. Within the context of the box, this instruction takes up two lines, and seems to break the question into two separate parts.

Five of nine respondents who used this format did not enter age (for one or more of the listed persons) when they had entered a date of birth. When questioned about this omission, some told us that they either did not see the age box at all. Others saw the instruction and the age box, but they took the instruction to mean that age information was required only for babies. For example, one respondent recorded age for none of Persons 1-5, and then became puzzled when recording the name of Person 6 in the continuation roster. Person 6 happened to be the only baby in the family, and she was distressed that after seeing the instruction to have no box to record the baby's age.

It is important to note that this error does not occur in the Sequential format. There, the instruction is integrated into the question, and the Date of Birth and Age boxes appear side by side. This format apparently does not suggest to respondents that Age is only required for children less than one year old.

Recommendations for Matrix format:

Keep the changes in the green ground made to the key from image format. *This recommendation was accepted for the 2008 ACS.*

Eliminate the little arrows in the margin between Pages 2 and 3. *This recommendation was accepted for the 2008 ACS.*

Since respondents rely on question numbers at the top of columns to figure out the layout, make these as large as possible. *It was not possible to make these numbers larger*.

Move the "baby" instruction in the age question to the top of the form. *This recommendation was accepted for the 2008 ACS.*

Respondents do not use the instruction to turn the page: it can be eliminated. *This recommendation was not accepted.*

Findings – Micro-Navigation in the Sequential Format

General Layout in the Sequential Format:

In general, the Sequential Format is unproblematic for respondents. They often remark that it appears "easy" to do. They did not have difficulty in comprehending the general layout. Respondents are able to discover quickly that the questions are repeated, (which is somewhat more difficult in the Matrix format.) They are able to understand the layout merely by looking at the column headers (Person 1, Person 2, Person 3 etc.) These respondents often remarked that it is simple and natural to proceed vertically. Thus, the task may not look initially as daunting as it sometimes does to Matrix respondents.

Patterns of Navigation and Navigation Errors in the Sequential Format:

Navigation patterns are universally vertical, with no problems encountered. That is, respondents moved easily down each person column, and easily made the transition to the next person. We did not encounter any problematic patterns of navigation: that is, respondents did not skip between columns or travel down some columns and up others. Mixed navigation does not seem to occur.

As mentioned earlier, in this format there is no missing data for age when date of birth is supplied. Only once case of probable navigation error occurs in this format: Relationship, sex, date of birth, age and Hispanic origin are missing for Person 3, who was one of the respondent's children. It is not clear how this error occurred.

Other missing data do not appear to be the result of navigation error. In some cases respondents did not fill out a particular question deliberately, such as not including date of birth where it was not known (as in roommate houses) or not marking Hispanic origin because it was considered irrelevant.

Recommendations for Sequential Formats:

The demographic pages in the sequential format appear to be working well. There are no recommendations.

Findings: Respondent Understanding of Instructions.

Respondent Understanding of the Instructions following First and Second Arrows

No problems were encountered with the instructions following the first two arrows. All the respondents provided the date, their names, and their telephone numbers without difficulty. Respondents easily understood what information was being requested.

Respondent Understanding Instructions following the Third Arrow: Residence Rules and Household Count

The third arrow is followed by a question, "How many people are living or staying at this address?" The residence instructions are formatted in three bullets below this question. They read as follows:

- INCLUDE everyone who is living or staying here for more than 2 months.
- INCLUDE anyone else staying here who does not have another usual place to live.
- EXCLUDE anyone who is living somewhere else for more than 2 months, such as a <u>college student</u> living away.

Although respondents are successful in finding the third arrow, their reading of the residence instructions is far from complete. Many readers are aware of this incomplete reading and typically describe it as "glancing at" or "skimming" the bulleted material. This interchange is typical of respondent's description of the way readers describe "skimming" in this material:

Respondent: "Yeah I looked at it and then I looked and saw where it said, number of people. I glanced at it."

Interviewer: What were the instructions telling you?

Respondent: "How many people are living or staying with you at the address?

Interviewer: Did you read the bullets?

Respondent: "It said include, and about two months, you know. I speed read a little bit."

This respondent's main impression of the meaning of the entire sequence is governed mainly by the question at the third arrow. The only aspect of the instructions that seems to have registered was a passing notice of the two month rule. This suggests that reading may drop off rapidly after the initial instruction.

First bullet: INCLUDE everyone who is living or staying here for more than 2 months. The first bullet was usually read more completely than the succeeding bullets, but even casual or incomplete readers usually absorb the 2 month rule. It was our impression that even poor readers notice at least some of the first bullet and absorb the 2 month rule.

Analysis of the vignettes indicates that respondents do frequently use the two month rule in

reasoning about whether or not to list someone. Our vignettes included dates, and respondents used them to calculate whether or not the situation being described constituted a two month stay. This provides good evidence that the two month rule is salient for respondents.

However, the calculation of the two months is sometimes rather vague and permeable. The two month rule does not specify a reference period, and this allows respondents to calculate two months into the past or into the future, as required. Our vignettes included presence and absence in the household for different time periods. For example, vignettes described a husband deployed in Iraq for several years, a college student at home in the summer, and a child described as being in a rehabilitation program for 6 months. In the instances that represented long absences, many of our respondents found a way to use the 2 month rule in order to list them. It was possible to reason that the deployed husband or the daughter in rehabilitation had been living in the household for more than two months at some time in the past. For example, of the husband on deployment since 2005, one respondent decided to:

"[Include him] because he lived in that house for more than 2 months before he went to Iraq."

Similarly, another respondent decided to include the daughter in the rehabilitation program for 6 months because:

"This is her home address...She had stayed there longer than July, August, count back longer than 6 months."

Respondents also told us they would use a similar logic to list college students on the questionnaire even if they had not been there for more than 2 months at the time the questionnaire was received.

Respondents generally reason about the two months as if the relevant time period is entirely in the past. However, in some instances, they calculate into the future as well. The vignette about a family who recently moved to the sampled address illustrates this. Although they are described as only being there for a few days, most respondents thought it was appropriate for them to list themselves, because they would be there for two months into the future.

When the two month rule is carried into the future, there may be uncertainty as to whether the absence is going to last for two months or more. The vignette describing an elderly relative who "may" be in a nursing home for 3 months is an example of this. Some respondents thought she should not be listed because they assumed that the stay in the nursing home would be extensive. More respondents, however, used the reasoning that she had been present in the household for a longer time than the 2 months, at some time in the past. Thus, they opted to include her. (We were not able to establish what the residence rule implies for such uncertain instances.)

It is notable that whether or not these calculations result in correct answers (as in the case of the movers and college student vignettes) or incorrect answers (as in the military deployment, and rehabilitation vignettes) depends primarily on whether or not the rule and the amount of time portrayed allows respondents to list people at the place they consider them to be core residents. Where it does not permit that, the two month rule is likely to be rejected so that people can be listed at what is thought of as their homes.

Second bullet: INCLUDE anyone else staying here who does not have another usual place to live.

Many respondents did not understand this bullet as an exception to the two month rule. They did not think that *anyone* staying temporarily should be listed, and that the two month rule applied in all cases. Even if they had seen the qualification "who does not have another usual place to live" they would allude to the two month rule in their paraphrases of the second bullet. For example, one respondent's paraphrase was:

"Telling me to include anybody who is staying with you -- if they're there for two months."

It is not certain why this error occurred. If they read the statement incompletely, they may not have seen the qualification about not having another usual place to live. In practice for such readers, the statement becomes a reminder to include "anyone else staying here." But other respondents apparently had seen the end of the phrase, and merely assumed that the 2 month rule still applied. For example, one respondent discussed situations where she had allowed someone "in transition" (between apartments or moving to an new city) to stay with her, but concluded "I would exclude them if it's less than 2 months."

One of our vignettes was intended to test whether respondents would include persons who were temporarily present because their house had been flooded out. We deliberately made the period of time shorter than 2 months, to see if respondents would understand this as an exception. In fact, on the whole they did not think that the temporary flood victims should be listed. This was clearly because they do not qualify under the two month rule:

"Early July? You'd have to be there two months before you put them on there, so, no."

This vignette also illustrates another ambiguity in the second bullet. It is not entirely clear what constitutes the condition of not having "a usual place to live." For some respondents, a house that was temporarily unlivable did not meet this description, while for others it did. A few respondents reasoned from ownership: the temporary flood victims still own the house, even if it has been destroyed. Others reasoned from mail delivery: they thought that the home Post Office would still have the flooded address and would forward the residents' mail. (One respondent said he was sure that residents dispersed after Hurricane Katrina probably still had their mail forwarded from their New Orleans addresses.)

The ambiguity of what qualifies as a home or residence may be seen in the vignette regarding a boyfriend who is regarded as "staying most nights." (The intent of the rule is to include such persons, as "staying" in the household.) However, the vignette described the boyfriend as having an apartment of his own, and for many respondents, this was enough to indicate that he should not be listed:

"If he don't live with me, then I'm not putting him on. He got his own place."

"No, I wouldn't include him!...Cause he don't live there, he has his own apartment. That's not his residence, he just sleeps there sometimes."

Third Bullet: EXCLUDE anyone who is living somewhere else for more than 2 months, such as a college student living away.

Most respondents understood the wording of this bullet, and could paraphrase it accurately. They were also able to think of other examples of people who might be away for two months (such as members of the military or people away for work.)

The mention of college students in the rule may have an unwanted effect on some respondents: they treat college students as automatic "excludes" despite the length of stay. The college student vignette indicated a stay of longer than two months, which meant that she should have been listed. In fact, about half of the respondents who answered this vignette answered it incorrectly, despite the phrase in the instruction "somewhere else for more than 2 months.". The respondent quoted below is an example of someone who appears to be aware that time information is relevant, but is guided in his response entirely by the mention of "college students."

"I wouldn't include them for the mere fact that it said college student. I wouldn't even read any further, I wouldn't even look at the dates...this is the part that pops out because it is underlined."

This may indicate that the presentation of the instruction creates bias to exclude the reporting of college students, even when they should be listed. It is possible that the underlining of college students, combined with the capitalization of EXCLUDE in this rule, make these two elements more salient than anything else in the instruction. Especially for "skimmers," the effective interpretation may come to be "Exclude college students."

However, this is not likely to occur with great frequency, because college students are viewed as core household members, and their parents want to report them. Because our college student vignette was phrased so that the student should be listed, about half of the respondents were correct in their placement, but for reasons having little if anything to do with the rule:

"I would definitely put them on. The reason is, because he would be my son or daughter, their permanent residence is here. All the furniture they purchased is still upstairs..for them and they go on my income tax."

Household Count Box

Respondents have no difficulty in understanding the question, "How many people are living or staying at this address?" This question, combined with the heading above the write in box, (Number of People,) appear to have been sufficient to elicit responses for household count from all respondents.

In earlier research (Gerber and Landreth) it was observed that some respondents neglected to fill out demographic information for themselves after providing their names on the front page of the questionnaire. The error apparently occurred in processing the first page: in some cases the household count reflected the number of *others* in the household, excluding themselves. Respondents sometimes told us that they had "signed in" or "registered" and they did not think

their names were required a second time on the inside of the questionnaire. An alteration to the fourth arrow was made to address this problem, by adding the words "including yourself" to the instruction to fill out the rest of the form, and by putting EVERYONE in capital letters.

However, discrepancies between the number of people entered in the household count box and the number listed inside the questionnaire still exist. These discrepancies occurred in both the Sequential and Matrix formats. There were four cases in which this occurred. They include cases in which the household count (HHC) is higher than the number of persons for whom demographic information is included (which was previously observed.)

Figure 1: Case of Household Count/Person Page Discrepancy

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Sequential: HHC = 2, person pages = 3 (self left out of HHC.)
HHC = 3, person pages = 2 (self left out of person pages.)
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Matrix: HHC = 3, person pages = 4 (and self still left out of person pages)

HHC = 2, person pages = 3 (self left out of HHC.)

When probed about this, these respondents indicated that they felt they were "already on there" as did the respondents in the previous research. However, some of the current instances of count discrepancies also include cases in which the number of persons in the HHC is lower than the number of persons for whom demographic information is listed. Respondents sometimes leave themselves out of the household count, but restore their names to the demographic pages by following other cues. They were responding to the designation of Person numbers in the demographic pages: for example "It says Person 3, and I'm Person 3." These Person numbers may have also served as a stimulus for some respondents to add people to the roster that they had not previously considered. (This may also explain the case in the Matrix format where the respondent apparently added someone other than herself to the demographic section after leaving herself out of the HHC.) We also observed instances in which the Person 1 instruction prevented respondents from making the error of leaving themselves out of the demographics, since it calls for information about the renter or owner. If they were the renter or owner, this served as a reminder to include themselves in the demographic information.

Respondent Understanding of the Instructions Following the Fourth Arrow

The instructions following the first arrow contain two statements, as follows:

Fill out pages 2 and 3 for EVERYONE who is living or staying at this address, including yourself.

If no one is living or staying here for more than 2 months, complete only pages 4, 5, and 6 and return this questionnaire.

(The page numbers indicated here are for the Matrix format, are slightly different in the Sequential format. The demographic data is on Pages 2,3 and 4, and the Housing data on Pages 5, 6 and 7.)

The intent of the first statement is to direct respondents to the rest of the form, while reminding them to include themselves (as has been previously mentioned in the discussion of the Household Count instruction.) The intent of the second sentence is to instruct respondents to fill out only housing information and return the form, if the household is technically vacant (no one stays for more than 2 months.)

While respondents find the fourth arrow, the reading of this sequence is frequently very incomplete. Respondents report that they read only the first statement, or only part of the first statement. They told us that they had seen "Fill out pages 2 and 3 for EVERYONE who is living...." but reading drops off after that. (Again, these reports should be confirmed by eye movement research.) It is our impression that respondents saw this as bureaucratic language, telling them to do what they would have done anyway, which was to turn the page. As mentioned previously, they did not see any special significance in "EVERYONE" and frequently did not encounter "including yourself" in this abbreviated reading.

Perhaps because the preceding instruction is a call to action, respondents often do not see the second sentence at all. They admitted this to us in probing, and often seemed surprised when the second instruction is pointed out to them.

Some respondents told us that they did not understand the second sentence at all. Other respondents work out the meaning of the second sentence but express doubt about whether they have understood it correctly:

"It means, if no one is living there, fill out only 4, 5 and 6. Don't fill out the first two. Is that correct? Is that the way it was intended?"

Such respondents cannot think of reasonable examples of where this situation might apply, and thus the instruction seems, in the words of the following respondent, "weird:"

"...then you're saying – I guess I would be away? For – for months at a time? And so you don't want my, what is this, demographic information? You just want the [housing] information? That's kind of weird to me...I would think you'd still need somebody living at the house, the information. That's just me...Because you still want the information of the main person that owns the house."

In addition some respondents may have understood the two sentences after Arrow 4 as contradictory. The first tells the respondent to fill out pages 2 and 3, and the second sentence can be interpreted as an instruction to skip them. Respondents who process the sentences in this way can sometimes reach the conclusion (by using reverse logic) that if you do fill out pages 4, 5 and 6, you are not supposed to fill out pages 2 and 3. By the time this probing had occurred, our respondents had already filled out the demographic pages. This led at least one respondent to

conclude that she might have made a mistake in filling them out.

Because we were concerned with respondent understanding of this statement, we included two vignettes which bore on this situation. One vignette describes a family who receives the form at an inherited farmhouse where they spend one month a year. The other describes a family which receives the form at a timeshare. It is interesting to note that these two vignettes were almost always answered correctly, in that the respondents generally agreed that no names should be placed on the roster.

In some instances seeing the vignette had cued an understanding of what the instruction meant:

"There's the answer to the question! If no one is staying here for more than two months, fill out pages 5, 6 and 7!"

However, respondents generally were not using this instruction to construct their answers. They were instead attending to the amount of time specified in the vignettes, which was less than two months.

"I'd say no, it doesn't meet the two month criteria."

They were sure that no one belonged on the roster, but this appeared to mean to them that the questionnaire should not be filled out at all. When probed about whether there was any other part of the questionnaire to be filled out, they often could not find one, even after a somewhat prolonged search through the questionnaire.⁴

"I don't think they should be included in this particular household because they're not there the entire year. They're just there for a month, like a vacation." Is there anything they should fill out? "I don't think so."

Other respondents used a heuristic of ownership, assuming we would want demographic information about the owners of the vacation home or time share. In fact, some respondents told us that if they received a questionnaire in such a situation, they would probably fill in the demographic information and send it back. They would let the decision about the demographic information rest on the Census Bureau.

These patterns appear to indicate that respondents miss seeing, do not understand and are unlikely to follow the instruction for vacant units. The implicit skip for the demographic and personal information is therefore not working as intended. It appears that respondents who receive the questionnaire at vacant units are likely fail to send the questionnaire back or to send it back with all of the pages filled in. The latter may make the identification of vacant units difficult.

⁴ The vignettes were administered after probing, during which we had generally pointed out this instruction to the respondents. But by the time they encountered the vignettes, they had forgotten it, and searched as if looking for the first time for something relevant in the questionnaire.

Recommendations for Page 1 Instructions:

- Second roster instruction: Add "even if they are here for 2 months or less." *This change has already been made, to address over-generalization of 2 month rule.*
- Third roster instruction: This instruction focuses respondent attention on college students, and may cause they to over-exclude this category of persons Removing the underlining under the phrase "college student" may help in this regard. At least one more example might help to stress that the instruction is not exclusive to one situation. Members of the military are another large category of persons frequently listed when they should not be. They might be added to the instruction: "Do Not Include anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment." *This recommendation was accepted for the 2008 ACS*.
- There should be reinforcement for the idea of including yourself in the Household Count. The logical place to put this information would be in the include list. Ideally (if space allows) an additional bullet could be:

"Include yourself if you are living here for more than two months." *This recommendation was accepted for the 2008 ACS.*

Arrow 4 currently includes a final statement "including yourself." If the additional include bullet is not possible, this statement should be reworded as "Fill out pages 2, 3 and 4 for EVERYONE, including yourself, who is living or staying at this address for two months. This would bring the idea of "including yourself" into the likely visual range of inattentive readers. *This recommendation was accepted for the 2008 ACS*.

- Another option would be to relocate the respondent's name so that it would be less likely to interfere with the household count. One way to do that would be to move the household count to the first arrow, before the respondent records his or her name. Another option would be to collect the respondent's name and telephone number on the back of the questionnaire.
- The final instruction to identify vacants is confusing and unlikely to be followed correctly even if it is seen. In order to improve understanding, the statement needs an explanation of the purpose of this extremely strange procedure that the respondent is being asked to follow. This wording could be:

"If no one lives or stays here for more than two months, we still need information about this structure. Complete ONLY the Housing information on pages 5, 6, and 7 and return this questionnaire." If this is adopted, it might clarify the respondent's task to add a sentence to the previous instruction: "Then complete the rest of the form." Only the last sentence of this recommendation was accepted for the 2008 ACS.

Suggested Wording for Revised Page 1 Instructions:

How many people are living or staying at this address?

Include everyone who is living or staying here for more than 2 months.

Include yourself if you are living here for more than two months.

Include anyone else staying here who does not have another usual place to live even if they are here for 2 months or less.

Do Not Include anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

Number of people

Fill out pages 2, 3 and 4 for EVERYONE (including yourself) who is living or staying at this address for two months. Then complete the rest of the form.

If no one is living or staying here for more than two months, we still need information about this structure. Complete ONLY the Housing information on pages 5, 6, and 7 and return this questionnaire.

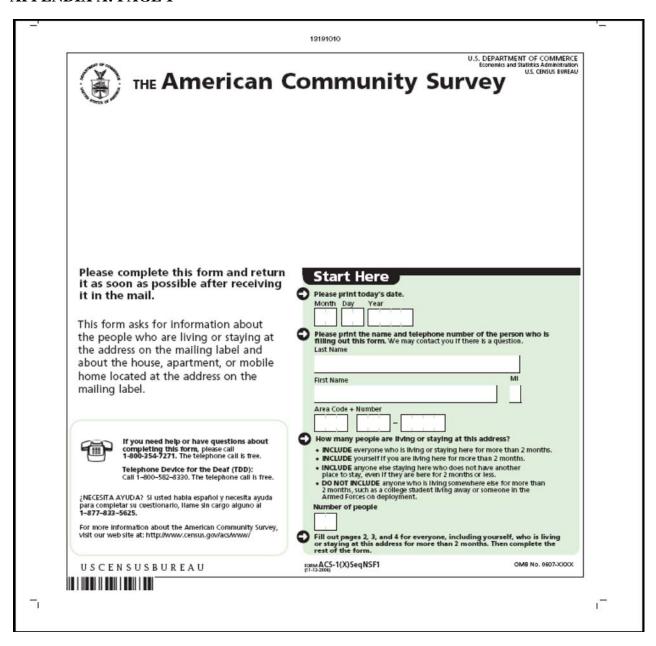
Space to accommodate this longer text could be found by moving the "PLEASE COMPLETE THIS FORM AND RETURN IT AS SOON AS POSSIBLE AFTER RECEIVING IT IN THE MAIL" statement to the text on the right. It might go between the informational paragraph and the help box.

References Cited:

Gerber, Eleanor and Ashley Landreth (2005) "Formats and Instructions in the American Community Survey: Results of Cognitive Interviews for the 2006 Test." Report for the Statistical Research Division, December 28, 2005.

Tersine, Anthony (2007) "2007 American Community Survey Research Memorandum Series, #ACS07-R-5. Draft Memorandum, March 9, 2007.

APPENDIX A: PAGE 1



APPENDIX B: MATRIX

person 2 Last Name (Please print) First Name MI First Name MI First Name MI Person 2 Last Name (Please print) First Name MI	☐ Biological son or daughter☐ Adopted son or daughter☐ Stepson or stepdaughter☐ Brother or sister☐	re is no such person, re.	☐ Male ☐ Female	Print numbers In boxes. Month Day Year of birth Please report bables as age 0 when the child is less than 1 year old. Age (in years) Print numbers In boxes. Month Day Year of birth
Last Name (Please print) First Name MI Person 3	Husband orwife Biological son or daughter Adopted son or daughter Stepson or stepdaughter Brother or sister	Parent-in-law Son-in-law, daughter-in-law Other relative		
And a second section land and a second section is		Housemate or roommate Unmarried partner Other nonrelative	☐ Male ☐ Female	Please report bables as age 0 when the child is less than 1 year old. Age (in years)
Last Name (Please print) First Name MI	Biological son or daughter Adopted son or daughter Stepson or stepdaughter Brother or sister Father or mother	3 to Person I. Parent-in-law Son-in-law, daughter-in-law Other relative Roomer or boarder Housemate or roommate Unmarriad partner Other nonrelative	Male Fernale	Print numbers in boxes. Month Day Year of birth Please report bables as age 0 when the child is less than 1 year old. Age (in years)
Last Name (Please print) First Name MI	Biological son or daughter Adopted son or daughter Stepson or stepdaughter Brother or sister Father or mother	4 to Person 1. Persont in-law Son-in-law, daughter-in-law Other relative Roomer or boarder Housemate or roommate Unmarried partner Other nonrelative	☐ Male ☐ Fernale	Print numbers in boxes. Month Day Year of birth Please report bables as age 0 when the child is less than 1 year old. Age (in years)
Last Name (Please print) First Name MI	Biological son or daughter Adopted son or daughter Stepson or stepdaughter Brother or sister Father or mother	Parent-in-law Son-in-law, daughter-in-law Other relative Roomer or boarder Housemate or roommate Uhmarried partner	☐ Male	Print numbers in boxes. Month Day Year of birth Please report bables as age 0 when the child is less than 1 year old. Age (in years)
Person 6 If there are more tha	Grandchild In five people, list them here, ore information about them.	Person 7 Last Name (Please print)		Person 8 ast Nerno (Please print)

1_

No, not of Hispanic, Latino, or Spanish origin Yes, Mexican, Mexican Am., Chicano Yes, Fuarto Rican Yes, Cuban Yes, Cuban Yes, another Hispanic, Latino, or Spanish origin - Print origin, for example, Argentinean, Columbian, Dominican, Micaraguan, Salvadorari, Spanisrd, and so on-	☐ White ☐ Black, African Am, or Negro ☐ American Indian or Alaska Native — Print name of arrolled or principal tribe. ⊋	Asian Indian Chinasa Filipino Japanasa Korean Vietnamasa Other Asian — Printrace, for exemple, Hinong, Leodan, Thai, Pakitani, Cambodien, and so on.	Native Howaiian Guamarian or Chamorro Samoan Other Padific Islander — Printr example, Fijien, Tongen, and se Some other race — Printrace
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Person 9 Person Last Name (Please print) Last Name		Name (Please print)	Person 12 Last Name (Please print)
First Name MI First Name	e MI First	Name MI	First Name

APPENDIX C: SEQUENTIAL

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	Person 1	Person 2
	(Person 1 is the person living or staying here in whose name this house or apartment is owned, being bought, or rented. If there is no such person, start with the name of any adult lining or staying bere.)	What Is Person 2's name? Last Name (Please print) First Name MI
0	What Is Person 1's name? Last Name (Please print) First Name MI	How is this person related to Person 1? Mark (X) ONE bax. Husband or wife
0	How is this person related to Person 1?	Stepson or stepdaughter Housemate or roommate Brother or sister Unmarried partner Father or mother Foster child or foster adult Grandchild Other nonrelative
Ð	What is Person 1's sex? Mark (X) ONE box. ☐ Male ☐ Female	B What is Person 2's sek? Mark (X) ONE box. Male Female
0	What is Person 1's age and what is Person 1's date of birth? Please report bables as age 0 when the child is less than 1 year old. Print numbers in boxes Age (in years) Month Day Year of birth NOTE: Please answer BOTH Questions 5 and 6.	What is Person 2's age and what is Person 2's date of birth? Please report bables as age 0 when the child is less than 1 year old. Print numbers in boxes Age (n years) Month Day Year of birth NOTE: Please answer BOTH Questions 5 and 6.
6	Is Person 1 of Hispanic, Latino, or Spanish origin? Mark (X) "No" if not of Hispanic, Latino, or Spanish origin. No, not of Hispanic, Latino, or Spanish origin Yes, Maxican, Mexican Am., Chicano Yes, Puerto Rican Yes, Cuban Yes, Ouban Output No, another Hispanic, Latino, or Spanish origin – Print origin, for example, Argentinean, Columbian, Dominican, Alicaraguan, Salvadoran, Spaniard and so on.	
0	What is Person 1's race?	What is Person 2's race? Mark (X) one or more races to indicate what this person considers himselfitherself to be. White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe.
	Adan Indian Japanese Summarian or Charmorro Chinese Summarian or Charmorro Filipino Samoan Samoan Other Adan - Print race, for example, Primary Samoan Other Adan - Print race, for example, Print r	Asian Indian Japanese Native Hawalian Guamanian or Chamorro Filipino Vietnamese Samoan Other Pacific Islander - Print race, for example, Hmong, Laction, That, Pakistani, Cambodian, and so on. 7
	Some other race – Print race.	Some other race – Print race.

What	Perso	on 3		Pe	rson 4	
Lest	t is Person 3's name? Name (Please print)	First Name	, M	What is Person 4's name? Last Name (Please print)	First Name	MI
low	is this person related to Person 3?	Mark (X) ONE box.	q	How is this person related to Perso	n 4? Mark (X) Of	NE box.
	Husband or wife Blological son or daughter Adopted son or daughter Stepson or stepdaughter Brother or sister Eather or mother Farandchild Parent-In-Jaw	Son-In-law or daughter-In- Other relative Roomer or boarder Housemate or roommate Unmarrised partner Foster child or foster adult		Husband or wife Biological son or daughter Adopted son or daughter Stepson or stepdaughter Brother or sister Father or mother Grandchild Parentin-law	Other Room House Unma	n-law or daughter-in-law relative er or boarder mate or roommate rried partner child or foster adult nonrelative
	tis Person 3's sex? Mark (X) ONE bo	DK.	e	What is Person 4's sex? Mark (X) O	NE box.	
⊒ ∧ Vhat	Male Female t is Person 3's age and what is Person 0 when the child is less than 1 year o	on 3's date of birth? Please rep	ort bables 🙆	Male Female What is Person 4's age and what is as age 0 when the child is less than 1 y		of birth? Please report bables
NOTE S Per satilation	in years) Month Day Year of brti E: Please answer BOTH Questions 5 rson 3 of Hispanic, Latino, or Spanit o, or Spanith origin. No, not of Hispanic, Latino, or Spanish Yes, Mexican, Mexican Am., Chicano Yes, Puerto Rican Yes, Cuban	and 6. shorigin? Mark(X) "Wo" if not o		Age (n years) Month Day Year o NOTE: Please answer BOTH Questio Is Person 4 of Hispanic, Latino, or S Latino, or Spanish origin. No, not of Hispanic, Latino, or Spa Yes, Mexican, Mexican Am., Chicar Yes, Puerto Rican Yes, Quban	ns 5 and 6. panish origin? A	Aark(X) "No" if not of Hispanic,
_	res, another Hispanic, Latino, or Spanish of Columbian, Dominican, Nicaraguan, Salvac t Is Person 3's race? Mark (X) one of	doran, Spanlard and so on. д	<u> </u>	Yes, another Hispanic, Latino, or Spa Columbian, Dominican, Nicaraguan, 5	Salvadoran, Spaniaro	d and so on. 7
onsk	White Black, African Am., or Negro Amerikan Indian or Alaska Native — R			considers himselfiherself to be. White Black, African Am., or Negro American Indian or Alaska Native		
	Asian Indian Japan Chinese Korea Filipino Vietn: Other Asian – Print race, for secample, Hmong, Lactian, That,	n Guamanian or G	hamorro	☐ Chinese ☐ N	apanese Korean Metnamese	Native Havailan Guamanian or Chamorro Samoan Other Padfic Islander – Print race, for example, fillan, Tongan, and so on.
	Pakistani, Cambodian, and so on. 7					

	Person 5			eople who live or stay at this pour for more information about the	
What is Person 5's nan Last Name (Please print)		arne MI	Person 6 Last Name (Please print)	First Name	MI
How is this person rela	ited to Person 5? Mark (X) ONE box.	Last Name (Fresse pung	Pristrianie	1 "1
Husband or wife Biological son or dau Adopted son or dau	ughter 🔲 o	on-In-law or daughter-In-law Other relative Doomer or boarder	Sex Male Female	Age (In years)	
Stepson or stepdaug Brother or sister Father or mother Granddvild Parent-in-law		iousemate or roommate Inmarried partner oster child or foster adult other nonrelative	Person 7 Last Name (Plesse plint)	First Name	
What is Person 5's sex ☐ Male ☐ Fe			Sex Male Female	Age (In years)	
What is Person 5's age as age 0 when the child i		ate of birth? Please report bables numbers in boxes	Person 8 Last Name (Plesse print)	First Name	MI
NOTE: Please answer B	OTH Questions 5 and 6.		Sex Male Female	Age (In years)	
Latino, or Spanish origin. No, not of Hispanic, Yes, Mexican, Mexica Yes, Puerto Rican	Latino, or Spanish origin	17 MarkOO *No" if not of Hispanic	Person 9 Last Name (Please plint)	First Name	MI
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What is Person 5's race	e? Mark (X) one or more r	oces to indicate what this person	Last Name (Plesse plint)	First Name	MI
considers himself therself White Black, African Am., American Indian or	or Negro	of entolled or prindpal tribe.	Sex Male Female	Age (In years)	
			Person 11 Last Name (Please plint)	First Name	MI
Asian Indian Chinese Filipino Other Asian - Print I	☐ Japanese ☐ Korean ☐ Vietnamese	□ Native Hawailan □ Guarnanian or Chamorro □ Samoan □ Other Pacific Islander = Pri	, Sex Male Female	Age (In years)	
example, Hmong, La Pakistani, Cambodia	otian, That, n, and so on	Other Pacific Islander – Prin race, for example, Fillan, Tongan, and so on.	Person 12 Last Name (Please plint)	First Name	М
Some other race - A	Fint race. 7				
			Sex Male Female	Age (In years)	

APPENDIX D: Vignette Text and Results:

We included a series of 9 vignettes in the cognitive protocol, which were designed to examine how well respondents absorbed and were able to apply the residence instructions in particular cases. They tested a variety of situations which related to the three residence bullets presented on Page 1. Because inclusion in the ACS depends on the specific date the questionnaire is filled out, we instructed respondents to assume that the form had been received on July1, and then included dates in some of the vignettes, where it was relevant.

The vignettes tested whether the information presented was adequate to allow the respondents to generalize. For example, we included a nursing home vignette and a husband on deployment in the military to see if respondents generalized from the example of "college student" given in the rule. We also included several vignettes which were intended to test the respondents' understanding of the two month rule. Thus, for some vignettes, such as the daughter in a rehabilitation program, the in-movers and two vignettes about vacation homes, in order to answer correctly, the respondent had to attend very specifically to the amount of time that the respondent was described as being there or away. One of these vignettes examined an exception to the two month rule. People who are staying in the household but do not have another ususal place to stay are intended to be included even if they will not be there for two months. The vignette reflecting this rule presented a family whose house had been flooded out. An additional vignette posited a possible stay in a nursing home that might extend for three months, but had not yet met the two month rule. This vignette was intended to allow us to look at how respondents think about absences of uncertain duration. The two vignettes about the vacation homes were a family farmhouse occupied for only 1 month a year and a timeshare. The full correct answer in both of these cases was that no persons should be listed but that the Housing information should be filled out and the form returned. In the tabulation below, however, we have recorded the respondent's answer only to whether or not any people should be put on the roster.

Because of the limitations of time, the vignettes were not always administered, or the set of vignettes was shortened for particular respondents. The results are of interest primarily as a support to our qualitative understanding of how respondents absorb and process the residence instructions which are presented to them.

Vignette	Responden	Total	
	Yes	No	
College Student	8*	9	17
Deployed Husband	10	7*	17
Nursing Home	11	6	17+
Daughter in Rehab	8	7*	15
Flooded Relative	5*	11	16
Stays Most Nights	3*	14	17
Recent In-Mover	12*	5	17
Vacation farmhouse	3	14*	17
Timeshare	4	12*	16

^{*} Correct answer is starred.

Text of vignettes:

A college student who came home on June 1, and will return to school on August 15. Correct answer: Yes.

A husband on deployment in Iraq since 2005, with no clear date of return Correct answer: No

An elderly relative in a nursing home recovering from surgery. She went into the nursing home on July 1 and may stay for 3 months.

Correct answer: Since there is uncertainty about the length of stay, a definitive answer is not possible.

A daughter in a rehabilitation program for 6 months, who will return here in September Correct answer: No

A relative whose house was flooded in early July, and is here until the house is repaired, some time in August

Correct answer: Yes

A boyfriend who has an apartment of his own, but sleeps at this place most nights.

Correct answer: Yes

A family who moved into the place listed on the form on July 10

Correct answer: Yes

⁺No definitive answer

A family who stays at the farmhouse they inherited from a grandmother during July each year.

The house is not occupied the rest of the year.

Correct answer: No people, only Housing Pages

A couple who receives the form at a timeshare. They stay at the time share for 6 weekends during the year and for 2 weeks during July.

Correct answer: No people, only Housing Pages